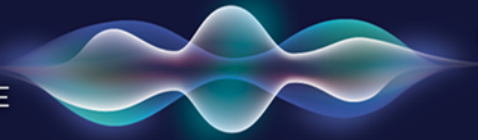




Conference **PROCEEDINGS**

35th ISME WORLD CONFERENCE
JULY 17-22, 2022

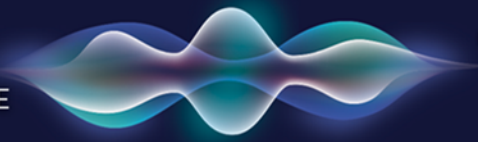
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INTERNATIONAL SOCIETY
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Full Papers from the 35th ISME World Conference

Online
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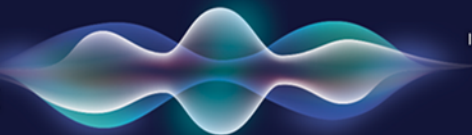
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- Sara Hood - Communications Officer
- Annette Pearce – Administrator
- Kerry Rees – Administration and Support

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Community Music and Music and Leisure
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Education in Music Professions
Music Teacher Education and Professional Development
Music Education Policy and Social Justice Education
Early Childhood Music Education
Music in Therapeutic and Special Education Contexts
Music, Health and Wellbeing
Popular Music and Jazz in Education
Music, Media and Technology
Cross Curricular and Integrated Music Practices
Decolonising and Indigenising Music Education (DIME)
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The 35th World Conference of ISME was planned to take place in Brisbane, Australia. An enormous amount of work went into the planning process. Accordingly, ISME wishes to recognise, in particular, Alessandra Damant and the management and staff of Arinex, the 2022 Conference organisers.

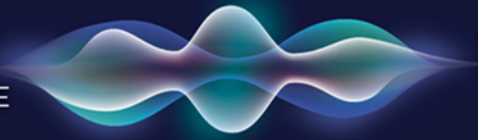
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NAMM (National Association of Music Merchants)

SEMPRE (Society for Education and Music Psychology Research)



The Conference theme **A Visible Voice** speaks to diverse situations in community engagement, of which (music) education is a key facilitator.

Voice – Music is sound, and hence audible. The voice is also a reference for opinion, position, perception. Through this, ISME provides its members, no matter their station, an opportunity to be heard, because every experience is valid and has something to contribute to ISME's global agenda of enhancing human lives through quality music education.

Visibility – This provides continuity from the previous biennium's 'Making the work we do visible'. This will be unpacked globally and at personal levels. How does what we do make a difference to both the university professor and the kindergarten teacher, whose application of or approach to music in class are as different as day and night? Can we find space for a traditional folk song and narrative in the classroom the way we do with high art orchestral pieces of music?

If we are to attain intercultural understanding, we must be willing to 'see' the different voices that 'music' presents.

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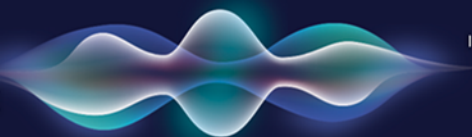
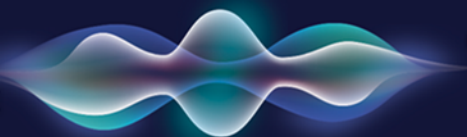
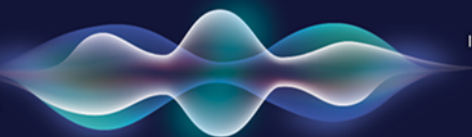


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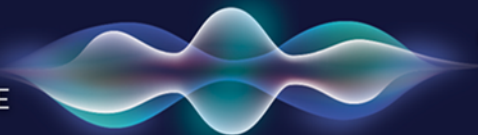
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(Abstract 27)

Musical education and training in Spain: new views for educational quality

Ana M Vernia-Carrasco

Jaume I University

Introduction:

Music education in Spain is suffering different setbacks since the figure of the specialist in the university was lost, added to the modifications of the Wert Law, which left freedom to the different autonomous communities so that they could increase, decrease or even eliminate music education in the educational system. The SEM-EE (Society for Musical Education in Spain), together with other associations, has been organizing events, reports and other documents that have been presented to the Ministry of Education, demanding an educational model throughout the Spanish territory, which consider music education as a core subject, within the official primary and secondary curriculum. It is also necessary to train teachers with greater relevance in music education and training, especially in didactics and pedagogy. On the other hand, the recovery of the figure of the specialist is key for educational quality, not only for music. Regarding music conservatories, both in professional and higher education, a curricular revision is necessary, which meets the new demands and employability, with a major revision of degrees and a greater offer of professional itineraries, ranging from musical instrument builders to health, through cultural management or professional training.

Method: Information has been collected through articles, reports, laws and other documents that make mention of music education in the Spanish context and refer to the current situation of music education in different areas and educational contexts, both in the field formal, such as informal and non-formal.

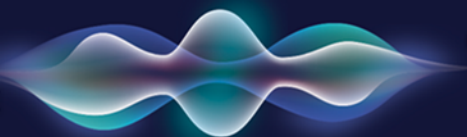
Results: The results show that the information provided by the Ministry of Education leaves out the Universities with respect to the Masters related to the arts, although many Spanish universities offer this type of studies. On the other hand, the majority of postgraduate education and training is aimed at interpreting, on the other hand, it is known that the majority of graduates have their professional dedication to teaching.

Conclusion: Given the results obtained and the information collected, an in-depth review of the current curriculum is considered necessary, as well as teacher training, related to the field of music education and training. The recovery of the figure of the specialist in the field of compulsory education is considered necessary, as well as greater rigor in music teaching profiles also for music schools, conservatories and universities, where there should be a greater presence of didactics and the pedagogy. Finally, it is worth considering the opening of new training lines for higher music conservatories aimed at didactics and pedagogy, cultural and project management, health or music therapy, among others.

Keywords: music education and training, employability, curriculum, music teaching and pedagogy.

1. Introduction

Music education in Spain is suffering different setbacks since the figure of the specialist in the university was lost, added to the modifications of the Wert Law, which left freedom to the different autonomous communities so that they could increase, decrease or even eliminate music education in the educational system. The SEM-EE (Society for Musical Education in Spain), together with other associations, has been organizing events, reports and other



documents that have been presented to the Ministry of Education, demanding an educational model throughout the Spanish territory, which consider music education as a core subject, within the official primary and secondary curriculum. It is also necessary to train teachers with greater weight in music education and training, especially in didactics and pedagogy. On the other hand, the recovery of the figure of the specialist is key for educational quality, not only for music. Regarding music conservatories, both in professional and higher education, a curricular review is necessary, which meets new demands and employability, with an important revision of degrees and a greater offer of training and professional itineraries, ranging from luthiers to health, through cultural management or professional training, and mainly reinforcing didactics and pedagogy.

As Hemsy de Gainza (2004) commented a few years ago, music educators have a great diversity of pedagogical models, the teaching-learning of rhythmic-body games and ethnic dances being fashionable, the remarkable thing is that it will be taught by a specialist. This author gave great importance to the figure of the specialist in the classroom, but currently universities train general teachers, whose musical training is not enough to be able to develop the subject with the same rigor as other subjects.

In the opinion of Martos Sánchez (2013), although the LOGSE (General Organic Law of the Educational System, 1990), music will be included in early childhood education and in primary education the figure of the specialist will also be included.

Vernia-Carrasco (2020) makes a brief review on the musical educational panorama in Spain. According to this author, music went, in a few years, from occupying a playful space to becoming a curricular subject, and once again losing importance in compulsory education. This meant a loss of educational quality in a generalized way, losing the figure of the specialist in primary education, and therefore the university also had to lower the demand and rigor in the education and musical training of future teachers. Gustems and Calderón (2014) point out that scientific publications make music research visible in conservatories, music schools and universities, which indicates an upward concern in music, corresponding to the need to increase the presence of music education in the education system. On the other hand, and as Vernia-Carrasco (2020) points out, Music Education also needs a reflection regarding training and employability, since music today can be found in many fields and contexts, not only educational, but also social and business.

Music training and education, in its formal scope, is divided into early childhood education, primary, secondary and high school, University and Conservatories. On the other hand, non-formal education includes music and dance schools, academies or institutes and Adult Training Centers. As for the informal sphere, spaces where people learn, interact, train and educate freely and easily, without following the rigorous official curriculum, represent an important contribution, although they lack official recognition (title or certificate). This last area implies a greater interaction and social commitment, and that is directly involved in culture and society, without going through academic rigor.

In the following figure, we collect the different areas of music education and training in the Spanish territory:

Formal	No formal	Informal
early childhood education, primary school	music and dance schools	The street
secondary and high school	academies	The schoolyards

academies or institutes	Institutes	The media
Conservatories	Adult Training Centers	On social media

Figure 1: Areas and contexts of Music Education in Spain

2. Music Education and Training

In recent years, an increase in music graduates has been observed; on the other hand, very few come to carry out jobs directly related to their training.

As Bellver (2017) says, professional guidance already appears in the 1970 education law, establishing the right to educational and professional guidance, in order to guide students about their employability possibilities and adapt the study plans to their skills and vocations. Instead, educational administrations forgot this need for guidance in professional conservatories.

In the report presented to the ISME (International Society for Music Education), by Vernia (2017), on Music Education in Spain, teacher training in universities does not have the necessary rigor for both future nursery and primary school teachers, due to the lack of hours and the specialization of the students, ending up with little or no level in both musical knowledge and teaching. This report explains that a significant percentage of students who finish their professional studies will end up as a teacher in music schools, without having any didactic or pedagogical preparation. In addition, of the 23 superior music conservatories in Spain, its main function is to prepare future music professionals, regardless of the current job market, they continue to fight to be recognized as university superior studies.

3. Method

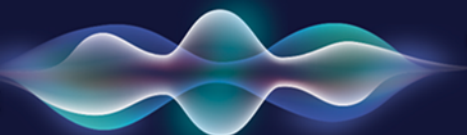
Information has been collected through articles, reports, laws and other documents that make mention of music education in the Spanish context and refer to the current situation of music education in different educational settings and contexts, both in the formal sphere, like the informal and the non-formal. The search was carried out in google, with the keywords: musical; education; Spain; Master in music education;

4. Results

The results show that the information provided by the Ministry of Education leaves out Universities with respect to Master's degrees related to the arts, although many Spanish universities offer this type of study. On the other hand, the majority of postgraduate education and training is aimed at performance, on the other hand, it is known that the majority of graduates have their professional dedication to teaching.

The Master's degrees approved by the Ministry of Education and Professional Training (2021), related to artistic teachings, have been collected in Table 1, grouped by categories to facilitate their classification according to their content, applying a code:

- I = Interpretation
- D = Didactics and Pedagogy
- C = Composition
- S = Social scope
- A = Audiovisual
- M = Musicology
- R = Research



G = Management

Table 1

Master's degrees grouped by training categories

Code	Title	Center
I	Máster en enseñanzas artísticas de Interpretación Musical e Investigación Performativa.	Conservatorio Superior "Joaquín Rodrigo". Valencia
I	Máster en enseñanzas artísticas de Interpretación e Investigación de la Música	Conservatorio Superior "Óscar Esplá". Alicante
I	Máster en enseñanzas artísticas de Interpretación Musical e Investigación Aplicada	Conservatorio Superior "Salvador Seguí". Castellón
I	Máster en enseñanzas artísticas en Estudios Avanzados en Interpretación Musical: Instrumentos de la Música Clásica y Contemporánea	Centro Privado Autorizado de Enseñanzas Superiores de Música "Escuela Superior de Música de Cataluña". Barcelona.
I	Máster en enseñanzas artísticas de Interpretación Operística	Conservatorio Superior de Música "Joaquín Rodrigo". Valencia
I	Máster en enseñanzas artísticas de Interpretación Solista	Centro Privado Autorizado de Enseñanzas Superiores de Música "Katarina Gurska". Madrid
C	Máster en enseñanzas artísticas de Composición Electroacústica	Centro Privado Autorizado de Enseñanzas Superiores de Música "Katarina Gurska". Madrid.
C	Máster en enseñanzas artísticas de Composición para Medios Audiovisuales	Centro Privado Autorizado de Enseñanzas Superiores de Música "Katarina Gurska". Madrid.
C	Máster en enseñanzas artísticas de Composición Instrumental Contemporánea	Centro Privado Autorizado de Enseñanzas Superiores de Música "Katarina Gurska". Madrid.
I	Máster en enseñanzas artísticas de Estudios Orquestales (Instrumentos de cuerda)	Centro Privado Autorizado de Enseñanzas Superiores de Música "Musikene". San Sebastián

S	Máster en enseñanzas artísticas: las artes escénicas en y para la discapacidad	Real Escuela Superior de Arte Dramático, Escuela Superior de Canto y Conservatorio Superior de Danza "María de Ávila. Madrid.
A	Máster en enseñanzas artísticas en Composición Musical aplicada a los medios audiovisuales y escénicos	Centro Privado Autorizado de Enseñanzas Superiores de Música "Liceu" de Barcelona
I	Máster en enseñanzas artísticas en Interpretación de Jazz y Música Moderna	Centro Privado Autorizado de Enseñanzas Superiores de Música "Liceu" de Barcelona
I	Máster en enseñanzas artísticas en Interpretación de Música Clásica y Contemporánea	Centro Privado Autorizado de Enseñanzas Superiores de Música "Liceu" de Barcelona
I	Máster en enseñanzas artísticas en Interpretación de Ópera	Centro Privado Autorizado de Enseñanzas Superiores de Música "Liceu" de Barcelona
I	Máster en enseñanzas artísticas en Interpretación Musical	Conservatorio Superior de Música de Castilla y León
I	Máster en enseñanzas artísticas en Interpretación de Jazz y Música Moderna en Estudio	Centro Privado Autorizado de Enseñanzas Superiores de Música "Berklee Valencia" de la Comunitat Valenciana
I	Máster en enseñanzas artísticas en Interpretación de Música de Cámara	Centro Privado Autorizado de Enseñanzas Superiores de Música "Liceu" de Barcelona
M	Máster en enseñanzas artísticas de Estudios Avanzados en Flamenco	Centro Privado Autorizado de Enseñanzas Superiores de Música "Escuela Superior de Música de Cataluña" de Barcelona
I	Máster en enseñanzas artísticas de Estudios Avanzados en Interpretación y Composición Musical de Jazz y Música Moderna	Centro Privado Autorizado de Enseñanzas Superiores de Música "Escuela Superior de Música de Cataluña" de Barcelona
I	Máster en enseñanzas artísticas de Estudios Avanzados en Interpretación: Lied, Canción Española y Canción Catalana	Centro Privado Autorizado de Enseñanzas Superiores de Música "Escuela Superior de Música de Cataluña" de Barcelona
R	Máster en enseñanzas artísticas en Investigación musical	Centro Privado Autorizado de Enseñanzas Superiores de Música "Escuela Superior de Música de Cataluña" de Barcelona
M	Máster en enseñanzas artísticas en Música Contemporánea	Conservatorio Superior de Música de Aragón
I	Máster en enseñanzas artísticas en Música de Conjunto	Conservatorio Superior de Música de Aragón
I	Máster en enseñanzas artísticas de Dirección Sinfónica, Instrumental y Vocal	Centro Privado Autorizado de Enseñanzas Superiores de Música "Katarina Gurska" de Madrid
I	Máster en enseñanzas artísticas de Interpretación Musical	Centro Privado Autorizado de Enseñanzas Superiores de Música "Escuela Superior de Música Reina Sofía" de Madrid
I	Máster en enseñanzas artísticas en Interpretación Solista de Música Española moderna y contemporánea	Centro Privado Autorizado de Enseñanzas Superiores de Música "Katarina Gurska" de Madrid
M	Máster en enseñanzas artísticas de Estudios Avanzados en Flamencología	Centro Privado Autorizado de Enseñanzas Superiores de Música "Escuela Superior de Música de Cataluña" de Barcelona.
I	Máster en enseñanzas artísticas de Nuevas Tecnologías de la Música Actual: Creación e interpretación	Real Conservatorio Superior de Música de Madrid.
I	Máster en enseñanzas artísticas de Interpretación e Investigación Performativa de Música Española	Real Conservatorio Superior de Música de Madrid.
I	Máster en enseñanzas artísticas de Pianista Acompañante y Repertorista	Real Conservatorio Superior de Música de Madrid.

C	Máster en enseñanzas artísticas de Creación de la Música Contemporánea	Centro Privado Autorizado de Enseñanzas Superiores de Música "Musikene" de San Sebastián.
I	Máster en enseñanzas artísticas de Interpretación Musical	Centro Privado Autorizado de Enseñanzas Superiores de Música "Musikene" de San Sebastián.
I	Máster en enseñanzas artísticas de Interpretación-Jazz, Musikene Jazz Máster Enlace extemo, se abre en ventana nueva	Centro Privado Autorizado de Enseñanzas Superiores de Música "Musikene" de San Sebastián.
G	Máster en enseñanzas artísticas de Mediación, Gestión y Difusión Musical	Centro Privado Autorizado de Enseñanzas Superiores de Música "Musikene" de San Sebastián.

We can observe, taking into account the table above, that the information provided by the Ministry of Education leaves out the Universities, regarding postgraduate training in music. The following figure shows the number of Master's degrees according to training category, with performance being the majority offer, followed with much less presence in composition or musicology, while for didactics and pedagogy, no results were found:

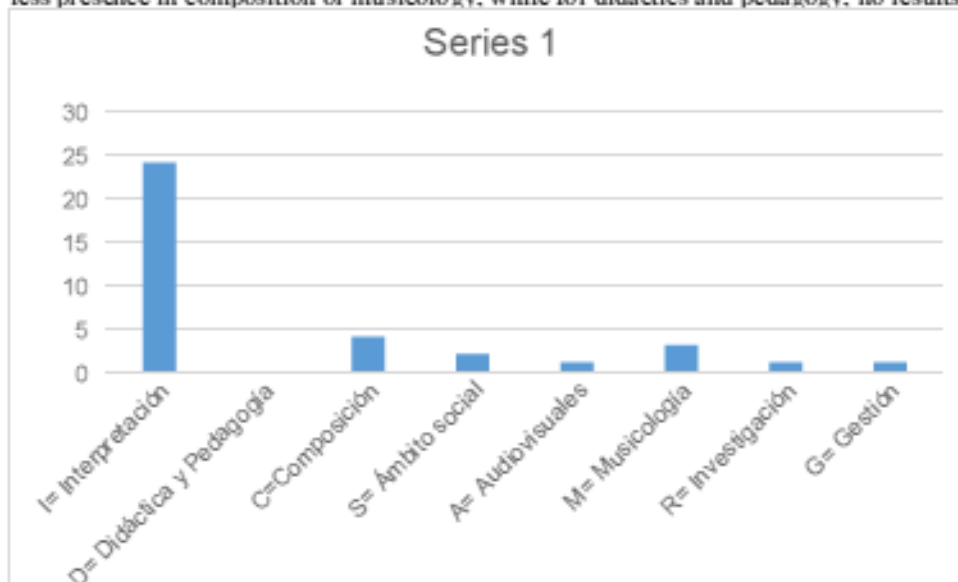


Figure 1: Number of Masters according to categories

We are concerned about the number of master's degrees aimed at didactics and pedagogy, on the other hand, graduates end up developing their professional work as teachers in different areas (conservatories, music schools, etc.), without specific didactic training according to the profile of the student body.

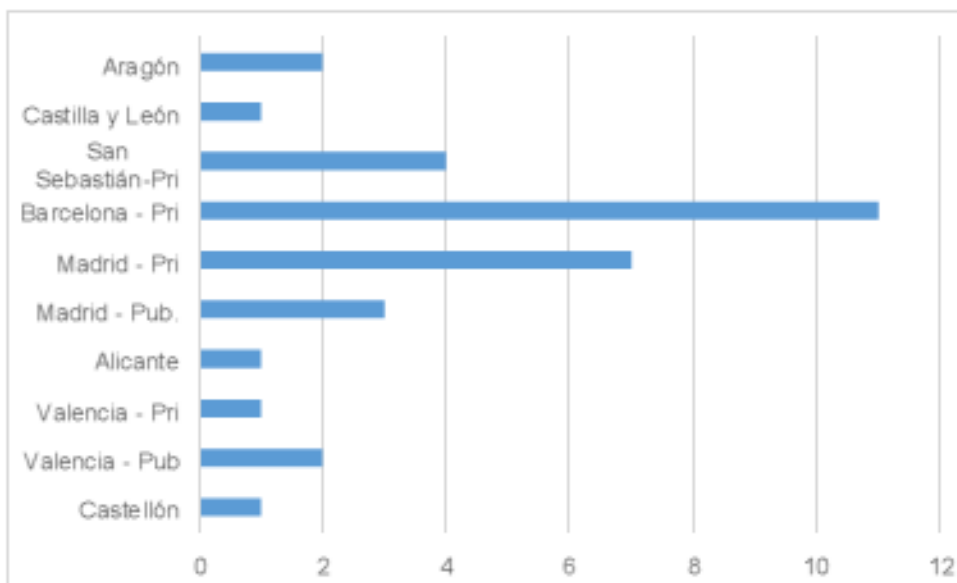


Figure 2: Number of Masters by Superior Conservatories by Cities

As can be seen in figure 2, the greatest offer of training is found in the private sphere, between Madrid and Barcelona.

3. Itineraries and employability opportunities

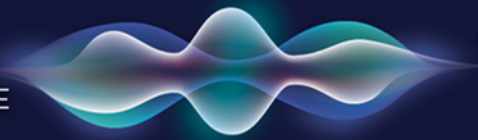
The employability that a music graduate can enjoy today ranges from teaching to the fields of health or cultural management. However, the greatest employability occurs in teaching, whereas training in higher degrees, such as Master's, is practically nil.

4. Conclusions

The information shown by the Ministry on Master's degrees is shown fractioned and not grouped by content categories but by centers or conservatories, leaving aside the Universities. In our search, we know that there is a Master's Degree related to Music Didactics at the University of Granada, and the Master's Degree in Music Didactics, from the Jaume I University (Castellón) disappeared. Non-formal education makes its way into music schools, with a wide range of courses and workshops, but if one investigates in depth, it can be discovered that much of this training offer is not taught by specialists. The serious situation of music has a negative impact on informal education, on the street, in society, in the media and social networks, prevailing the musical tastes of adolescents who follow the fashions of the moment and losing knowledge about the value of the music. Fortunately, we see that research on the importance and benefits of music continues to grow.

As a final conclusion, it is necessary to emphasize the importance of teacher training in all areas and educational levels, taking into account current social and professional demands. Therefore, it is necessary that the guidance and tutoring of students be a figure within music educational centers, and therefore specific training is also necessary for counselors in conservatories and music schools.

Postgraduate studies must take into account the modality of didactics and pedagogy, since it is the greatest professional demand today. The offer of master's degrees is not well distributed in the Spanish space either, since most of them are offered in Madrid and Barcelona and in the private sphere, in this sense, it would be possible to increase both the offer by Autonomous Communities and also the public space.



(Abstract 29)

Musical competences in future primary school teachers

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Jaume I University

Summary:

Musical education in Primary School has the objective of introducing students to the artistic world, also enhancing the critical spirit and motivation, and focusing on basic skills through music, but also attending to specific content or skills such as listening, performance and musical creation. Regarding the training of teachers, we are aware of the need to acquire basic skills in music, which allow them to use this art, not only as entertainment but also as a matter that enriches emotions, attitudes, as well as the acquisition of new learning.

Objectives: The objectives of this proposal are to know the training needs of general teachers and their relationship with musical skills for primary education. As a secondary objective, a small list of musical skills is proposed that could be considered for future primary school teachers.

Method: Information is collected from indexed articles and other relevant publications, to substantiate the need for musical teacher training.

Results: The articles and other documents reviewed show the need to train primary school teachers regarding music education.

Conclusion: as a conclusion, the importance of music in primary education and the need for training of future teachers should be pointed out. In this sense, the need to establish specific music competencies in teaching is considered in teacher training.

Keywords: musical competitions; primary education; teachers; musical education; musical training.

1. Introduction

When the approach to competences from the European framework began, it was thought of training and education for the 21st century. The learner had to acquire competencies and abilities to acquire new capacities or enhance them. Years have passed and there is still a commitment to competencies in teaching guides and official curricula, however, it seems that it has not reached all areas and / or subjects.

We talk about music education in the classrooms and the training of general teachers. It can be accepted that music in primary education is, in addition to entertainment, a tool to enhance other abilities, such as concentration, critical spirit, emotions, etc. but those who teach or use this subject should not be allowed to have no knowledge of it, and for this it is only necessary to give a brief review of the university degrees in teachers.

Our proposal is based on a brief theoretical review on musical training and musical competencies that future primary school teachers should acquire, in order to propose a listing of musical competencies, within the framework of teacher degrees in Spanish universities.

Different sources of information such as SCOPUS, Web of Science and Google Scholar have been consulted, selecting, through keywords, different articles and documents.

2. Theoretical foundation

López García, Madrid Vivar and Valle De Moya Martínez. (2017). consider that the current curricula regarding teacher training, adapted to the European Higher Education Area, have meant, with regard to music education, an important setback, since hours of training have been lost, subjects disappearing, which also means a loss of prestige or devaluation of music with respect to other subjects. Qualifying mentions do not fix the situation as they only offer complementary training, which in no case can replace the rigor of the specialists.

Also, Cremades-Andreu and García-Gil (2017), comment on the regulation of the teacher's degree in primary school started in 2007, which opens the possibility for general teachers to teach the subject of music, without any specific qualification. In their research, these authors demonstrate how unprepared future generalist primary school teachers feel with regard to music knowledge.

Rosa, Seijo, González-Sanmamed, Muñoz and Romero (2020), conducted an investigation on the perception that primary school teacher's degree students have about their musical training, specifically before entering university. Among the results found, the little social recognition that music education has, the low level of knowledge acquired by the student body stands out, although the music subject is highly valued. On the other hand, the need to adapt the musical training of future primary school teachers is highlighted.

Acquire practical knowledge in the area of music, according to Hernández-Bravo et al. (2014), both in teachers and students is fundamental. According to these authors, music, by its nature, is more part of the competence work than other subjects or subjects, citing the competences proposed by the European Council:

- a. Competence in linguistic communication.
- b. Mathematical competence.
- c. Competence in knowledge and interaction with the physical world.
- d. Information processing and digital competence.
- e. and. Social and civic competence.
- f. F. Cultural and artistic competence.
- g. g. Competence to learn to learn.
- h. h. Autonomy and personal initiative.

Rosa Napalos's doctoral thesis (2015) reveals the important shortcomings regarding musical knowledge in primary education teachers. This author points out the need for an important change in music education in primary school, as well as the musical didactic training of future teachers. These changes are demanded by undergraduate students in primary education, who recommend the involvement of educational institutions of all levels, primary school teachers and the faculties that teach the degree, as well as those responsible for designing the curriculum that regulates the subject of musical expression.

For Vernia (2019) the music competencies should be:

1. Rhythmic Competition
2. Auditory / perceptual competence
3. Vocal Competence
4. Competence in Literacy Comprehension

5. Interpretive / Communicative Competence
6. Body Expression Competence (expression)
7. Personal and Emotional Competence (relationship with oneself and with others, group work, etc.
8. Competence to Learn to Learn
9. Technological Competence
10. Cultural, Artistic Competence (learn about other artistic manifestations) and Musicology.

Some of these competencies are taken directly from the key competencies, which does not detract from credit since they are also understood to be important for music teachers and students. These competencies could be adapted, from our point of view, to the profiles of students and teachers of training in the degree of teacher in primary school in universities, thinking about the didactics and the educational level to which it refers. Therefore the requirement in the exchange interpretation for quality in pedagogy.

Uniting musical competencies and key competences, Vicente-Yagüe Jara and Guerrero Ruiz (2015) propose the musical story as an effective tool to influence the latter. These authors highlight the value of music as a didactic resource in primary education classrooms, from its multiple and different tasks that can be carried out to develop skills, and abilities that will allow a greater and better acquisition of competences, both musical and basic competences

The work of Vicente Nicolas (2013) aimed to propose methodological guidelines taking movement and dance as a basis, in addition to listening, reading and writing music, singing or playing instruments, for the development of musical activities in primary education. In this research, the musical contents were divided into six basic competences:

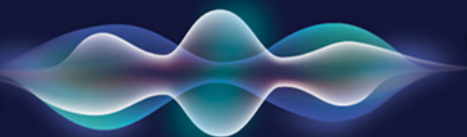
1. musical language,
2. listen,
3. sing,
4. touch,
5. dance,
6. know and be.

In any case, we take the competences of Vernia (2019) and the competences proposed by Vicente Nicolas (2013) the importance of musical language and interpretation through the body, song and instrument, without forgetting the importance of knowledge and own student.

Nikolić, Ercegovic-Jagnjić and Bogunović (2013) carried out an investigation questioning the level of competence of primary school teachers, providing the conclusion that a higher quality music education is necessary in universities. In addition, teacher training should offer future teachers not only knowledge but also skills to implement quality music education in primary classrooms.

3. Methodology

Following the proposal of Peñalba (2017), publications with the criteria “competencias musicales” “educación primaria” or “musical skills” "primary education" were searched in relevant databases such as Web of Science, SCOPUS, and Google Scholar. Documents in English and Spanish were searched. A significant response of articles was obtained, so the



final search discriminated by years and by the direct relationship of the keywords (see table 1).

The contributions of Sandelowski (1995) have been considered, regarding the value of a small sample that is more appropriate in qualitative methodology, however, the size must respond to the objective of the study and allow in-depth analysis. Also Martín-Crespo Blanco and Salamanca Castro (2007), consider that small samples are common in qualitative research.

Figure 1: Bibliographic search process

The selection of the articles was carried out with a second search that related musical competencies with primary education.

4. Results

The following table shows us the documents found and selected in order to draw conclusions.

Table 1:

Documents and databases

Source	Keywords	Núm.	Selected	Ref.
Google Scholar	"competencias musicales" "educación primaria"	36.000	4	Cremades-Andreu, R. y García-Gil, D. (2017).
				Hernández-Bravo, J.A., Hernández-Bravo, J.R., Moya-Martínez, M.V. y Cózar-Gutiérrez, R. (2014).
				López García, N., Madrid Vivar, D y del Valle De Moya Martínez, M. (2017)
				Vernia, A.M. (2019)
Scopus	"musical skills " "primary education"	1	1	Vicente-Yagüe Jara, MM y Guerrero Ruiz, P. (2015)
WoS	"musical skills " "primary education"	113	2	Vicente Nicolas, G. (2013).
				Nikolić, L., Ercegovac-Jagnjić, G. & Bogunović, B. (2013)

Considering the documents found, we can understand that, in the most relevant databases, the response has been very scarce, in addition, only 7 articles were selected, which showed a more direct relationship with the objectives of our study. Studies that mentioned skills and abilities related to music and technology in primary education were discarded. Studies that did not refer to musical competences were also discarded, instead if the studies that used music as a tool to improve key competences from musical competencies were taken into account.

On the other hand and taking into account the competences collected in the different articles, a brief relationship or coincidences can be established with the skills related to musical language, musical interpretation and corporal expression.

4.Proposal of musical competitions for teacher training

Learning by competencies, proposed from the European Framework, considers the need not to duplicate content, therefore, one of its principles is interdisciplinarity. However, it should be noted that artistic teachings like music have their own idiosyncrasies, which means thinking about specific competences that mark and define their own elements.

Taking as a reference the different competencies proposals and their relationship with music education and training, our musical competences proposal for future primary school teachers would be:

1. Competence in Musical Language (related to all the musical theoretical elements from practice)
2. Interpretive / Communicative Competence (understanding interpretation and communication through any musical instrument, also the voice and the body).
3. Rhythmic and Body Expression Competence (related to perception, learning and communication through the body as a tool)
4. Personal and Emotional Competence (through personal abilities and capacities, relationships with oneself and with others and attending to emotional education).
5. Competence in Music Didactics and Pedagogy (knowledge of the different methodologies or active pedagogies, as well as updated musical resources).

These five competences have been designed to take the song as the guiding axis in primary education, structuring the curriculum with the different subjects (natural sciences, social sciences, Spanish language and literature, mathematics, first foreign language). The idea of interdisciplinarity rough music can be a reality from the song as a musical learning tool and for the reinforcement or improvement of other subjects. However, the competence related to didactics and pedagogy is considered fundamental, for this reason it is necessary that the future teacher be well formed and trained in musical theoretical practical knowledge, which allows him to develop a music class, fun without losing the scientific rigor.

5. Conclusions and discussion

Taking into account the different investigations, it is necessary to work in primary education classrooms looking towards musical competences. The training of future teachers needs more rigor in terms of their music education, since music can improve key skills in the classroom, through tools such as the musical story. In this sense, and as Nikolić et al. (2013) teacher training should offer future teachers, knowledge and musical abilities and skills to improve quality music education in primary classrooms. Among the different studies selected, it is possible to reflect on generalist teachers and their musical didactic training, which leads us to think about a change or teaching model in universities that recovers the figure of the specialist teacher. It is considered that, if there is a malpractice in terms of music education in primary school, which is one of the most important levels, since it is when the child begins to mature in different aspects, this will mean a deficient comprehensive training of the person, who will be affected throughout their entire training. On the other hand, devaluing music in education has a negative impact on society, in the loss of concerts, auditoriums, musical groups, students in music schools and conservatories, since formal education is the one that lays the foundations of a training comprehensive quality.

On the other hand, and following the recommendations of experts, competency learning supposes interdisciplinarity, therefore, music must also follow a competency teaching and learning, from its own essence. In this sense, teachers must also be involved in what they are going to teach.

As a final conclusion, it should be noted the need to increase research and publications in this field of education and training of teachers in music, because specifically, musical skills in primary schools, it is necessary that they be acquired first by teachers.

(Abstract 32)

Vocal Jazz Improvisation: Strategies and Factors that Effect Development

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Abstract

Vocal Jazz improvisation is exciting, but it can also be intimidating for singers who have not done it before or worked specifically on jazz improvisation. The purpose of this study is to determine strategies in the Vocal Jazz curriculum to support improvisational skills, how the strategies affect ability to improvise, and what factors interfere with skill development. Working on their own in partners was the most the most effective strategy. The most significant factor to negatively impact development was anxiety: related to singing in front of their peers or about “doing it correctly”.

Keywords: vocal improvisation, strategies, anxiety, confidence

Introduction

Vocal jazz improvisation can be intimidating and produce anxiety in singers who have not had training or experience in jazz improvisation. Furthermore, teachers who do not know the pedagogy teach vocal jazz improvisation may not have the time or inclination to learn how to improvise and teach vocal jazz improvisation. There are some useful pedagogical materials related to teaching vocal jazz improvisation (Bell, 2013; Madura Ward-Steinman, 2004; Spradling and Binek, 2015; Weir, 2003, 2015a and b; Zegree, 2002); however, there is very little research related to vocal jazz improvisation.

Vocal jazz ensembles are often made up of students who have had choral music training. Improvisation, however, is not often taught in the traditional choral setting. When students join a vocal jazz ensemble, therefore, they often experience anxiety related to their inexperience improvising (Wehr-Flowers, 2006). Furthermore, many choral teachers have had very little instruction in vocal jazz music pedagogy and improvisation (Bernhard, 2012; Madura Ward-Steinman 2007 & 2014a; Watson, 2010). Choral teachers who do not feel comfortable

improvising or teaching improvisation are likely to avoid it (Bernhard, 2012 & Madura Ward-Steinman 2007 & 2014a; Watson, 2010). This cycle, then, has created a pattern in which teachers do not feel comfortable to teach improvisation, so they choose not to. Their students do not learn how to improvise, and so on (Watson, 2010).

There are some studies that inform vocal jazz improvisation strategies. For instance, according to Hargreaves (2012) there are three primary ways people generate ideas for improvisation, including 1) strategy-generated ideas (use of sequences, patterns, etc.), 2) audiation-generated ideas (hearing it in your head first), and 3) motor-generated ideas (letting your hands start the improvisation). Audiation seems to be the most commonly used and

accessible to vocalists. In a study by Watson (2010) he found that vocal jazz singers benefitted more from an aural instructional approach to improvisation than students who only learned improvisation based on notation.

A systematic approach to learning how to improvise enables students to develop their improvisational skills. According to Madura Ward-Steinman (2014a) pre-service choral educators demonstrated significant growth in achievement and confidence to improvise and teach improvisation following an eight-session workshop on vocal jazz singing, improvisation, and jazz background. In a short time, with a systematic curriculum, pre-service teachers grew enough in their knowledge and skills to determine they could teach improvisation. In a subsequent study, Madura Ward-Steinman (2014b) suggested strategies that are common to accomplished vocal jazz singers, including: 1) listening repeatedly and closely to good jazz recordings, including instrumental jazz players; 2) transcribing favorite solos; and 3) internalizing music theory knowledge through singing and memorization of chord roots, chord tones and extensions, scales, and melodies of a standard “200” songs. Other practical strategies for jazz improvisers include: learning about jazz styles and being creative in the use of other music elements besides melody and rhythm - like dynamics, range, or scat (Madura Ward-Steinman, 2015).

When singers experience anxiety, their anxiety negatively impacts their technique. They may produce a shaky or strained tone, use poor breath support, and demonstrate uncharacteristic performance demeanor – further impacting their confidence and improvisational successes. Improvising in public can bring feelings of anxiety due to a lack of experience and knowledge, the public format in which we learn to improvise, and the “rightness” and “wrongness” of their performances. The purpose of this study, therefore, is to determine ways to structure the

Vocal Jazz Ensemble curriculum to support learning to improvise in front of peers and strategies that support development. The research questions addressed are:

- 1) How does structuring the curriculum affect students' ability to improvise by themselves in front of their peers?
- 2) What teaching strategies are helpful in the development of vocal jazz improvisational skills?

Method

The design of the study is a mixed methods approach to research in an embedded design (Creswell & Plano Clark, 2007). Participants were undergraduate students (N = 20) in the Vocal Jazz Ensemble at a medium-sized university in the upper Midwestern region of the United States. A pre- and post-test survey was administered that included demographic items, practice time and strategies, and dispositions toward improvisation. Using the Confidence in Learning Jazz Improvisation Scale (Wehr-Flowers, 2006) as a model, survey items were constructed. Due to a violation in normality of some of the variables non-parametric statistical tests were used to determine how factors affected ability and disposition to improvise, which strategies were helpful, and how students felt throughout the process. Quantitative data was analyzed using SPSS, and the statistical tests used include: frequencies, descriptive statistics, Spearman rho Correlation Coefficient, and Wilcoxon Signed Rank Test. Qualitative data were collected from open-ended questions on the surveys and student journals. Field notes were also gathered from observations during rehearsals. The qualitative data was analyzed with Hyper Research using open and axial coding techniques. Conclusions were drawn based on both forms of data.

The treatment was an alignment of strategies in two settings – one setting was during ensemble rehearsals and the other setting was in students' individual practice sessions. During each rehearsal (two days each week for an hour each time), students participated in a series of improvisational activities including simple rhythmic patterns, call and response patterns, 12-bar blues improvisation, trading 4s, and improvisation over the changes in their literature. Improvisation instruction took approximately 10-15 minutes in each rehearsal. Students also engaged in a weekly assignment – to improvise with a partner for 30 minutes and journal about it. They could use their time improvising over recordings or live music, trading 4s, using a 12-bar blues, or singing over the changes in one of their songs. Their journals were submitted mid-semester and at the end of the semester.

Analysis

Using a Spearman rho correlation test, it was discovered that there were medium to large correlations between many of the dispositions and students' perceptions of their skill to improvise. For instance, there was a large positive correlation between the number of solos a student sang in the semester and confidence to improvise "trading fours" with another person during a performance, $r = .548$, $n = 20$, $p = .012$. Table 1 includes all of the correlations and their related factors.

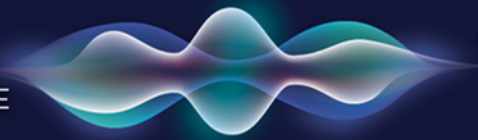
The participants indicated that their improvisation skills improved over the semester. Rating their ability to improvise on 1-5 point Likert-type scale, 90% of the participants indicated their improvisation skills had improved by selecting either a 4 or 5 on the post-test survey.

Participants also ranked their comfort to improvise in rehearsal based on a Likert-type scale from 1-5 on the post-test survey. 64% of the participants indicated they were comfortable at the level of a 4 or 5.

Using a Spearman rho correlation test, it was discovered that there were large correlations on the post-test between the participants' level of comfort to improvise and several factors. For instance, there was a large positive correlation between confidence to improvise alone with the rest of the group doing an a cappella circle and dispositions to improvise, $r = .779$, $n = 20$, $p \leq .001$. Table 2 includes all of the correlations and their related factors.

According to the participants' responses to the open-ended questions on the post-test survey, they felt more confident and comfortable to improvise at the end of the semester. For instance, Tad wrote, "I don't feel as nervous anymore." Bre wrote, "I feel that at first improvising was a step outside of the comfort zone, then it became a great avenue of self expression." Jessica indicated she thought it was fun to improvise, "I think it is a fun way to express a different part of music, and it's okay to "mess up" in class." Sarah mentioned that she has gained confidence to "improvise in front of my peers and an audience."

From the open-ended questions in the surveys, participants also noted that anxiety was one of the greatest deterrents to their enjoyment and their willingness to improvise. On the pre-test survey Sarah wrote, "I feel like when I'm alone I improvise better because I get sort of anxious in front of my peers. But I do enjoy doing it!" On the post-test, Sarah noted that she felt more comfortable improvising in front of her peers and the audience. On the pre-test Bre indicated she liked to improvise but worried that others were judging her. On her post-test, Bre still felt anxious prior to volunteering to improvise in rehearsal, writing, "I feel like I know it would go well, but before doing it I get nervous." Several noted that their anxiety



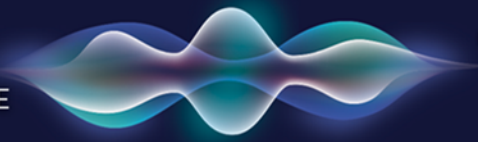
stemmed from wanting to “get it right” in front of their peers. Alicia wrote, “I just don’t want to get it wrong, but it’s hard to know I can do it right.” This indicates Alicia has an awareness of “rightness” or “wrongness” of musical choices with poor choices leading to negative consequences from her peers. On the pre-test Matt noted, “I always feel intimidated & scared, because so many people here are really talented & I feel like if I scat and fail, that others will judge me for it.” On the post-test he was more comfortable, “I feel pretty confident now, but I know I still have a lot of room to improve.”

According to student responses, there were several activities and strategies that were helpful in their development. Several of the class activities were mentioned by nearly every participant, including improvising over a 12-bar blues and the chord changes in their repertoire. Many participants noted that working on call-and-response during rehearsal was helpful, quick, and was not intimidating to beginners. All of the participants enjoyed the a capella circle, although the participants who volunteered to improvise tended to be the same three to four students each time. The strategy that seemed to be the most helpful and the most challenging was the requirement to practice improvising in partners for 30 minutes each week. Samantha wrote that she was so excited to “improvise with Sarah because she is so good. I am learning so much from her!” Jessica noted that she was improving and planned to volunteer to improvise in class. Jamie was particularly pleased that he was learning to improvise as a duet, not only trading. After Jamie and his partner demonstrated the duet improvisation in rehearsal, nearly all of the other participants began improvising duets in their individual practice sessions as well as during rehearsal.

Conclusions

According to the analysis, intentional and regular inclusion of improvisation activities and strategies had a positive impact on improvisation skill development. The regular inclusion of improvisation activities and strategies also had a positive effect on participants’ confidence to improvise both in rehearsals and in performances. The findings indicate confidence and comfort are related to successful development of skills and desire to improvise. Several of the returning students mentioned how much they enjoyed and appreciated the addition of improvisation warm-ups each rehearsal. The researcher documented each participant who volunteered to improvise in rehearsal. As the semester progressed more of the students volunteered to improvise, some of whom had never done so before. Most of the new singers in the ensemble gained the confidence to volunteer on the activities used most often, like trading fours over the 12-bar blues.

The most effective curricular strategy was the weekly practice in partnerships. In addition, the number of minutes participants spent practicing improvisation each week went from 19 minutes on the pre-test survey to 44 minutes on the post-test survey. Required practice is likely to have a positive impact on skills; however, the reflective piece was important to the development process, as well. Student journals often included notes like, “I hope I can ... like Sarah does by the end of the semester.” This was often followed at some point by an entry indicating that the participant “got it!” Their intention to improve and set goals in their journals, even if it was only in an informal way, kept their individual practice times focused and fresh, and the musical results in rehearsal and performance were clear. Several participants indicated just “doing it” was the best way to learn how to improvise. The required partnerships guaranteed participants were practicing regularly. Furthermore, participants noted that they got less fearful as they practiced, and that they enjoyed improvising in both rehearsal and performance.



The findings indicate medium to strong relationships between confidence, comfort, and desire to improvise – both in rehearsals and for performances. From pre-test comments, it was clear a majority of the participants had some fears about improvising in front of their peers. Those who were new to the group or those who were particularly worried about how others would judge them were most anxious and unwilling to volunteer to improvise during rehearsals. As the semester progressed, however, nearly all of the participants had volunteered to improvise during rehearsal. There were two participants who noted they still got nervous or anxious to improvise at the end of the semester, but it should be noted that they both volunteered to improvise in at least one rehearsal. Several said that they appreciated working with their peers, doing duets and trading with them, and how their peer’s encouragement motivated them. Bre wrote that the best way to develop her improvisation skills was simply to “do it, and to do it often.”

Some of the other benefits of both the rehearsal improvisation activities and partner practice sessions was also the growth in the singers’ relationships, the musical growth, and the commitment to the ensemble. The participants loved working in their partnerships and were excited to share in rehearsals what they were doing in their partner practice sessions. Many were listening to great improvisers as part of their practice time, and it was the first time most of them were listening to excellent jazz singers. They began trying out vocal jazz stylings in other parts of their repertoire, not just in the solo sections. An unexpected development was their fierce loyalty to each other and the excellence of the group. The more time they spent working on their music and in their partnerships, the more passionate they were about jazz and the ensemble and how to improve. Their successes, therefore, were reflected in all of the full-group repertoire, too.

Future Research

Future study could be specifically designed to investigate how to address anxiety to improvise in rehearsals. The most effective strategy seemed to be the partnership practice sessions. It would be good to know if this proved most effective because the participants were only improvising/singing with one person. Perhaps the primary reason is that the additional partner practice gave them more experience, ideas, and therefore, confidence to improvise in the full group. Future research could address if performance anxiety is the issue, and if so, what strategies can be used to combat it. Several participants mentioned a fear of judgment from their peers. Future research on combatting the fear of judgement would be beneficial in an effort to combat anxiety and develop an encouraging and safe environment for students to learn.

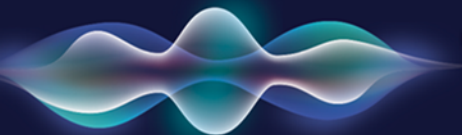


Table 1: Correlations between “feeling” factors and Improvisation Dispositions

Improvisation Dispositions	N	r	p
<i>Correlations between the number of improv solos students have sung in performance and Improvisation Dispositions</i>			
Confidence to improvise “trading fours” with another person during a performance	20	.548*	.012
Comfort level to improvise in performance in front of an audience	20	.711**	≤.001
Enjoy improvising in rehearsal in front of peers	20	.465*	.039
Enjoy improvising in performance in front of an audience	20	.644**	.003
<i>Correlations between the number of improv solos students have sung in class and Improvisation Dispositions</i>			
Confidence to improvise alone in an a cappella circle	20	.525*	.017
Confidence to improvise alone over a 12-bar-blues or similar chord progression in performance	20	.553*	.011
Confidence to improvise “trading fours” with another person during a performance	20	.515*	.020
Comfort level to improvise in performance in front of an audience	20	.692**	≤.001
Enjoy improvising in rehearsal in front of peers	20	.499*	.025
Comfort level to improvise in rehearsal compared to the beginning of the semester	20	.484*	.031
Comfort level to improvise in a performance compared to the beginning of the semester	20	.490*	.028
Number of scat solos improvised in a concert	20	.811**	≤.001
<i>Correlations between the level of anxiety to improvise (“very anxious” to “not anxious at all”) & Improvisation Dispositions</i>			
Confidence to improvise alone over a 12-bar-blues or similar chord progression in rehearsal	20	.641**	.002
Confidence to improvise alone during the a cappella circle	20	.539*	.014
Confidence to improvise alone over a 12-bar-blues or similar chord progression in performance	20	.567**	.009
Confidence to improvise “trading fours” with another person during a performance	20	.639**	.002
Stronger improvisation skills	20	.627**	.003
Comfort level to improvise in performance in front of an audience	20	.535*	.015
Enjoy improvising in performance in front of an audience	20	.453*	.045
<i>Correlations between the how students feel about improvising & Improvisation Dispositions</i>			
Confidence to improvise alone over a 12-bar-blues during rehearsal	20	.505*	.023
Confidence to improvise “trading fours” with another person during a performance	20	.480*	.032
Comfort level to improvise in performance in front of an audience	20	.469*	.037
Enjoy improvising in performance in front of an audience	21	.729**	≤.001

*Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

Table 2: Spearman’s rho medium to large correlations between comfort to improvise and other factors

Variable: Improvisation skills have improved	r	n	p
Comfort level improvising in rehearsal	.779**	20	≤.001
Comfort level improvising in performance	.684**	20	.001

Spearman’s rho correlations between the number of scat solos in rehearsal, comfort to improvise, and enjoyment

Comfort level has increased improvising in rehearsal	.484*	20	.031
Comfort level has increased improvising in performance	.490*	20	.028
Number of scat solos in performance	.811**	20	≤.001
Enjoy improvising in rehearsal	.499*	20	.025

Spearman’s rho correlations between the number of scat solos in performance and enjoyment or desire to improvise

Variable: Number of scat solos in rehearsal	r	n	p
Desire to improvise in class	.594**	20	.006
Enjoy improvising in rehearsal	.465*	20	.039
Enjoy improvising in performance	.634**	20	.003
Number of scat solos in rehearsal	.811*	20	≤.001

** Correlation is significant at the 0.01 level (two-tailed)

* Correlation is significant at the 0.05 level (two-tailed)

(Abstract 38)

Assessment and its impact on students performance and learning in music -- A review of literature

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Abstract: Based on the definition of assessment, this paper sorts out the types of assessment related to music disciplines mainly from the past 30 years, analyzes the relationship between assessment strategies and teaching objectives, and how to impact on students' performance and learning in music. The following conclusions were drawn: 1. The assessment designers can combine different types of assessments according to the needs of the teaching objectives. 2. Well-defined criteria can ensure the validity and fairness of the assessment. 3. Assessment is a tool whose function and meaning can be effectively adjusted as the goals of the 21st-century educational reform. Future research is also discussed.

Keywords: assessment, measurement, music performance, music learning

“Assessment = Measurement + Evaluation”

In most people's minds, exams usually give people three negative impressions: 1. Assessment - Error - Punishment: Assessments mean checking students' mistakes. While making a mistake means being punished. So the biggest concern for students in the face of assessment is how to reduce mistakes as few as they can. Therefore, the primary consideration is from "how should I learn" to "how should I cater to the assessors' criteria to make fewer mistakes and even no mistakes. 2. Assessment - Limitation - Uncreative: If an assessment sets a quantitative goal by taking a specific person or event as a model (e.g. The performance of a famous pianist could be considered as a reference model for your performance), students might reasonably believe that this is what the assessment wants me to do, then making his performance as close as possible to the performance of that pianist. To a certain extent, this is equivalent to saying that in the assessment, the students' own style and understanding are not so important. This standard is easy to set on the surface, but it does curb students creativity. If students participate in a competition named after Chopin, is it necessary to make themselves look like Chopin? 3. Assessment may be mismeasured or measured inaccurately, which will inflate or deflate the data and give us misleading interpretations.

It seems that there is a lot of work to do to make people understand and accept assessments positively. Educators believe that assessment is a strategy to help them to understand the students' learning, but students do not think so. The three negative impressions hinder the students' performance in music learning. If assessments can promote rather than hinder teaching, how do the educators change the negative impressions of assessments in people's mind? First and foremost, we need to know the definition of assessment? Which elements are the assessment composed of? And how does it work in students performance in music? In this article, students performance in music is not limited in the definition of students music performance, but also includes composition, improvisation, music teaching and learning and so forth.

In definition, assessment aims to collect, analyze, interpret and apply student performance information to give suggestions, offer selections, impact teaching-learning process or make decisions in education (Asmus, 1999; Payne, 2003, p. 9; S. Scott, 2004). Among them, the process of data collection is measurement, and the interpretation and judge process are collectively referred to as an evaluation. Therefore, the definition of assessment can be expressed by this equation: “Assessment = Measurement + Evaluation” (Payne, 2003, p. 9). For this reason, it is easy for students to think of assessment as a diagnosis and fear to be punishment by mistakes in taking the assessment. Even in the absence of specific

punishment, it can still have an impact on students' feelings. But mistakes do not directly mean punishment. It can also be the distances between the result of their attempts and their intended outcomes. It can be a chance to adjust their behavior to accommodate these discrepancies (Hamilton, 2017). But not all things can be measured, some are limited to less definable definitions (for example, it is hard to define "infant singing" in music measurement) (Costa-Giomi & Davila, 2014), and some are due to the measurement tools limitations (for example Use IQ value to measure human intelligence) (Richerme, 2016). So, the first thing assessors should consider is how to measure students performance in music successfully? According to the Taxonomy of Musical Behaviors (Boyle & Radocy, 1987, p. 87; Gutierrez, 2005), four categories in music teaching and learning are measured and documented in current literature, including music performance, reading and writing, listening behaviors, and cognitive behaviors by measuring aural discrimination, aural identification, aural recognition, background knowledge, composition, emotion, note reading, playing proficiency, and preference (Boyle & Radocy, 1987, p. 88-89), which also defines the scope of music behavior of this article. Thorndike and Thorndike-Christ (2010) explained: Measurement in any field involves three common steps: (1) identifying and defining the quality or the attribute that is to be measured, (2) determining the set of operations by which the attribute may be isolated and displayed for observation, and (3) establishing a set of procedures or definitions for translating our observations into quantitative statements of degree or amount (Richerme, 2016; Thorndike & Thorndike-Christ, 2010, p. 10). In short, this is the basic principle of measurement in the existing literature. But measurements and assessments are different. The purpose of measurement is to obtain data, which is collected from the students rich performance tasks. Whereas the assessment is to evaluate the obtained data to alter and produce students professional experiences. So the purpose of the evaluation is to explain, which is the meaning of evaluation in Payne's assessment equation: making judgment, giving advice or adjusting existing programs to motivate students to self-reflect, adjust, and work towards the goal for their growth, development, and becoming. So, the main job is to how to determine the goal of teaching, choose tasks, set time frame, how to ensure that the evaluator has enough evaluation ability and how to collect and analyze all kinds of information (Nichols, 2017; Wesolowski, 2015; Wesolowski et al., 2018). How to judge the information collected effectively, fairly and equally? Should assessments be taken only at the end of teaching? Educators are expected to answer these questions from the definition and functions of an assessment.

Categories, definitions and functions of Assessments

According to the teaching process, placement assessment, formative assessment, and summative assessment are the examples. According to the difference in the role of assessors, self-assessment and peer assessment are representations. According to the teaching objectives and criteria, rubrics, checklists, and rating scales are instances. And finally, according to the teaching situation, portfolios and authentic assessment are the cases. These are various forms of assessments used by the assessors in different situations and goals. In the past 30 years, either in the East or the West, the music education community has always focused on these strategies and evaluated students according to different teaching purposes. Gradually, two contradictions began to surface. First, many teachers and even schools were in assessment-oriented teaching and learning and overused assessment (e.g. China college entrance exam, or the NCLB Act). Second, the teaching itself is changing with social development and needs. However, there is no change in assessments, so that the reforms have limited effect (e.g. reforms which happened before Manifesto).

The first contradiction usually stems from the idea that assessments should be placed after the teaching as assessment results and based on it as double evidence for evaluating both the teachers and the students. This rough and irresponsible accountability has changed the role of the assessment from helping to controlling teaching and has made "assessment for teaching" to "teaching for assessment". The focus of teaching is not on how to help students to grow up, but on how to help students to master the subject knowledge for the assessment. When assessments equal to assessments, with the grade and predictable benefits and punishment, teachers and students are responsible for the results of the assessment, not for the teaching objectives because the final scores decide many actual interests and the allocation of teaching resources. In order to get good results, schools and teachers spend more time and energy on analyzing assessments and teach the students how to pass the exams. The pros and cons of students' performance will also be judged according to the requirements of the assessment.

The second contradiction comes from the disconnection between assessments and teaching. When teaching began to focus on holistic education, the role of assessments in people's mind still hangs on music as an artistic skill consisting of performance, history, and theory. Many assessment designers still take music as the sum of several isolated skills. For example, today, although American public schools teaching music through performance (Blocher, 2008), the focus is still on content knowledge (e.g. rhythm, melody, harmony, form, timbre, textures, and dynamics). If we assess these things for students, how do we expect students to be creative and artistically acclaimed? I think this might be one of the reasons why the teaching reforms have had little effect. Therefore, to change this situation, we are expected to think of how to assess musical progress by using the instrument as a means of understanding music (Johnson & Fautley, 2017). In response to this phenomenon, researchers believe that teachers should change assessments from content knowledge learning (e.g. music timbre, melody, harmony) to procedural knowledge learning (how to make music). For another example, Leung discovered in his research that, when doing peer assessment to evaluate pre-service music teachers' composition, if the student assessors focus on content knowledge, they usually weighed heavier on micro-skills of composing (e.g. technical skills: melody, harmony, counterpoint, and so forth), much more than macro skills (e.g. such as logicity, extensiveness in the development of materials, and aesthetic value) (Leung, Wan, & Lee, 2009). To this end, he proposed that assessments should be designed before teaching. In other words, teachers should first understand what students should know and what they should learn, and then using assessment to monitor student learning, inform future learning and even set posttest goals (Ferm Almqvist, Vinge, Väkevä, & Zandén, 2017; S. J. Scott, 2012; Wesolowski, 2015; Wong, 2014).

How do we assess students in the 21st century?

How should the 21st-century assessments develop in parallel with the development of teaching? How should we use assessments to promote rather than hinder the new teaching reform and curriculum reform?

In Manifesto (2014), the experts in Task Force of University Music Majors pointed out that the top-down core curriculum reform needs a core proficiency assessment protocol. It could be administered at the end of the second year of college study. Students would need to demonstrate knowledge and skills in a variety of areas corresponding to the reformed framework. Areas could include improvisation, composition, aural skills, modal-tonal pitch languages, rhythmic languages (construed broadly), music technology, and movement. Musical inquiry aptitudes (such as history, cultural understanding, aesthetics, and cognition)

could be measured by reflective writing or other protocols. Curriculum reform in the new era requires updated assessment strategies. With the development of psychometric theory and technology, the reform of assessment technology is gradually developing (e.g. Many-Facet Rasch model is a linking and equating model that aims to measure student musical achievement, item difficulties, and rater severity on the same linear continuum) (Wind, Engelhard, & Wesolowski, 2016). On the other hand, assessors should change their recognition of assessment content, from content knowledge to procedure knowledge, even from subject knowledge to pan-human development. Since assessment is a tool to promote the development of teaching and learning, it should function as what the assessors and educators hope it to do.

Can we promote teaching reform by reforming assessments? Denis (2017) believes that good teaching behavior plus appropriate assessment strategies can make assessments in line with educational development (Denis, 2017). In the existing assessments, the content and tasks selected for measurement are concentrated in knowledge points in music performance, music history and music theory. This kind of assessment itself is contrary to the direction of education reform. Even in this case, the researchers still believe that as long as assessment is understood as part of learning, it can both motivate learning and improve instruction (Pellegrino et al., 2015; Russell & Austin, 2010). If the 19th-century music subject teaching thought is centered on content knowledge, then the 21st-century teaching thought is holistic education and pan-human experience with creativity, diversity, and integration as the core. Then, the reformed music assessments should also be from assessing students content knowledge achievements to define, measure and evaluate the multifacet creative and synergistic abilities.

Taking creativity as an example, since the goal of education is to develop students' creativity, then the overall goal of assessment can be creativity. Only the question will be transformed into how to define creativity, in other words, how to break down creativity into a number of measurable and evaluable sub-definitions, or how to scout for valuable and assessable performance tasks in real life and authentic teaching processes because according to the definition of assessment, as long as the educational goal is definable and measurable, it can be assessed. Under different contexts, creativity has different meanings. Generally speaking, it is the power of fluent, flexible and original thinking in music teaching and learning (Kaya & Bilen, 2016). For example, in secondary school music curriculum, it is expected as improvising and composing, and also thinking and creating ability through musical perception and knowledge (Kaya & Bilen, 2016). For another example, in tertiary level music major curriculum, it is expected as an ability to compose and improvising at a professional level (Sarath, Myers, & Campbell, 2016, p. 75). Both require students can transfer knowledge from one domain to another, with a wide-range repertoire and most importantly, possess creative thinking capabilities. This puts the measurement focus on "how to measure improvising and composing". The measurement results are also intended to help develop a creativity-based learning environment, thereby promoting the development of students' creativity.

For the synergistic ability, let me take a regression analysis assessment (statistics) as an example. No matter the teacher assigned us individual or group tasks, they were always related to the reality, such as selecting and buying a house in an assigned area by using regression data in the chart, finding a way to predict whether moms' IQ influences their young kids to school academic performance and so on. Assessors tried to reconcile the expectations with reality because the assessment is expected to evoke holistic self-reflection

of the students (Blom & Poole, 2004; Leong, 2014). In this case, few definitions were in math, but more depth, considerable time and repetition were in math practice. Even if there are mistakes in the assessment, as long as the logic of the topics can be interpreted to the teacher after the class (e.g. topics of home buying or parents' IQ on children's academic performance), the grading won't be hurt by the previous mistakes. Instead, the assessment allows the students to clearly understand how to use statistical knowledge to solve real-world problems, and more importantly, to find and make up for the gap between students' current levels and the teaching goals without fear.

Conclusion

The definition of “assessment” is “measurement plus evaluation”. The purpose of assessments is to motivating learning and promoting teaching. Then, the distance between the definition and purpose is the space for assessment as a reasonable functional tool. In the past 30 years, assessment has carried a lot of non-essential functions (e.g. counting attendance), which involve both rewards and punishments. These should not actually be the function of assessment.

On the contrary, how to use assessment to motivate learning and how to improve instructions are what teachers should think about. If memorizing knowledge points is not the holistic purpose of learning, the assessment tasks should not be just content knowledge in music. Instead, educators are expected to select proper performance tasks for measuring students' ability and select appropriate assessment strategy or strategies based on the objectives, the context and the characteristics of the teaching process with clear assessment questions and criteria. The focus of future research is on how to promote assessment reform based on teaching reforms. How to design reasonable assessments to evaluate students creativity when music is as a pan-human experience? How to define and measure teaching objectives and teaching quality? How to develop assessment criteria? After all, the purpose of assessments will not be just exams, but the students' ability to solve real-world problems after they enter the society.

(Abstract 66)

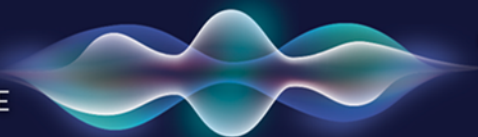
The beautiful sound, a visible voice

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Abstract. The beautiful sound. How can we define beautiful something that cannot be seen? For centuries everyone has defined the sound of Stradivari as beautiful, but no one can see it. The problem is that there are now only 500 instruments of him left in the world, not all of them are in good condition and they will not be eternal; moreover, they are few and very expensive. So, we need new violins of that same acoustic standard at reasonable prices, but first of all we need to train and educate a generation of high-level luthiers, capable of not only equaling but also exceeding the production standards of Antonio Stradivari. Today this is possible, and we teach to do it; This is our educational purpose.

Keywords. Lutherie, Sound, Violin, Voice



Introduction

The beautiful sound. How can we define beautiful something that cannot be seen? For centuries everyone has defined the sound of Stradivari as beautiful, but no one can see it. To understand if a person in front of us is a friend, we rely on sight and hearing. If we recognize her voice or recognize her face, we can distinguish her from anyone else and greet her warmly. A violinist looking for a good instrument will appreciate that it is aesthetically beautiful but above all he will evaluate its sound and compare it with what he considers the ideal sound; for a musician that instrument will be a true friend, an adventure companion for the concerts of the future. Lutherie is the very art of creating beautiful musical instruments with a good sound, and everyone knows that the highest level was reached by some 18th century Italian luthiers such as Antonio Stradivari. The problem is that there are now only 650 instruments of him left in the world, not all of them are in good condition and they will not be eternal; moreover, they are few and very expensive. Hence, we need new violins of that same standard at reasonable prices, but first of all we need to train and educate a generation of high-level luthiers, capable of not only equaling but also exceeding the production standards of Antonio Stradivari. After all, it shouldn't be difficult to surpass in precision and efficiency the products of a XVIII century's craftsman who only worked well until sunset because he had no electric light in the house, and could only dream of a pillar drill or band saw, but there is a solution: the Conservatory of Santa Cecilia in Rome not only teaches how to play musical instruments but is also training a new generation of luthiers, considering with them not only classical but also experimental lutherie in order to reach and improve the acoustic performances of the new violins. A new education for future's luthiers.

Violin sound and Human voice: a specific goal

An interesting article, *Master Violins Designed to Mimic Human Voice (1)* by Tia Ghose, indicated how this was the aim of classical Italian lutherie from its beginnings: "The great violin makers, such as Stradivari and Guarneri, may have designed violins to mimic the human voice, new research suggests".

Effects of Visual and Auditory Feedback in Violin and Singing Voice Pitch Matching Tasks (2) is a research of an even more specific scientific level that explored these correspondences and indicated how listeners by the sound of the violin and the human voice receive very clear visual and auditory impressions.

For these reasons some composers have even written specific exercise books. For example, *The Integration of Violin and Voice for the Solo Performer: A Set of Exercises, Studies and Short Pieces (3)* by Cassandra Elizabeth Norton. In fact, she says "The violin has often been compared to the voice for its ability to connect with human emotions. Both violinists and vocalists have the ability to shape sound through pitch, timbre, dynamics and articulation, on a level as small as an individual note".

One study noted the renewed interest in the last century in works that combine the sound of the violin and the human voice; this confirms our thesis that the two are closely connected. I refer to the *Violin and Voice as partners in three early Twentieth-Century - English Works for Voice and Violin* by John Paul Rutland (4).

The today's reality regarding Stradivarius violins

The violin reached its definitive dimension in the 16th century having been initially conceived for small ensembles. Also in the Baroque era, even in the case of solo concerts, the violinist could easily emerge on other string instruments, that is, with limited acoustic performance. In the Mozart era the first winds (oboes and horns) began to be inserted in the orchestra and therefore, in the case of solo concerts, the violinist found it more difficult to emerge on all the other instruments present. From Beethoven, alongside the strings, the presence of wind instruments will expand (flute, 2 oboes, 2 clarinets, 2 bassoons, 2 horns, 2 trumpets and drums) until to include - in the Sibelius or Khachaturian violin concertos - the entire brass band (piccolo, 2 flutes, 2 oboes, English horn, 2 clarinets, 2 bassoons, 4 horns, 3 trumpets, 3 trombones, tuba, timpani, percussion (bass drum, snare drum, suspended cymbals, tambourine) and harp. In the same time an evolution happened among the wind instruments (originally many wind instruments were made of wood). This evolution of the orchestra's sound power required an equal evolution of the acoustic capabilities of each violin to be able to maintain a balance between the various sections of the instruments.

Another reason that led to a demand for more sound was the evolution of concert venues. At the beginning, Corelli's sonatas for violin were rightly called "chamber music" because it was performed in a room or, at most, in the hall of a building. The birth of theaters and concert halls required more and more sounds to offer more and more spectators the possibility of attending a show. Today, concert halls with a circular plan of up to 2000 seats are built.

For all these reasons the 18th century violins have been modified (neck, bass-bar, fingerboard, bridge height, etc.) and currently use modern strings in synthetic material designed to produce a more powerful sound, they use carbon fiber bows and recently synthetic horsehair is also available. The few Stradivarius violins still capable of being played retain little of their original appearance and use strings and bows that did not exist at the time of their birth. The evolution of the violin over time has been recognized by many researchers. Among the many I would like to mention:

- *Power efficiency in the violin – A New study identifies key design features that boost violins' acoustic power* by Jennifer Chu (5)
- *The evolution of air resonance power efficiency in the violin and its ancestors* by Hadi T. Nia, Ankita D. Jain, Yuming Liu, Mohammad-Reza Alam, Roman Barnas and Nicholas C. Makris (6)
- *The violin music acoustics from Baroque to Romantic* by John McLennan (7)
- *Violins evolved by Stradivarian design* by Colin Barras (8)
- *The Evolution of the Violin's Sound* by Julia Rothchild (9)
- *Imitation, Genetic Lineages, and Time Influenced the Morphological Evolution of the Violin* by Daniel H. Chitwood (10) where we can read: 'Numerous innovations on violin design have improved the acoustical properties and playability of violins'.

Looking for a better classical violin

It is surprising that today's luthiers already consider it a great achievement to be able to reproduce one of Stradivari's instruments. He only worked well during the day because he had no electric light in the house, therefore he could only dream of a band saw and a pillar drill. We now have the technology to go to the moon and send satellites to Mars, but are we unable to match a craftsman of 300 years ago? It is not true and it is not so. In fact, we already know everything about Stradivari and for several decades. An excellent book that explains many aspects of Antonio Stradivari's technique is The "Secrets" of Stradivari by

Simone Fernando Sacconi (11), a great expert. Eric Blot called it 'one of the important contemporary violin makers. His book explains the construction techniques used by Stradivari with clarity and precision. It is considered an indispensable reference for both the professional and novice violin maker.' Honestly, some of Sacconi's statements seem to be only his beliefs still in the state of hypothesis, but the amount of information is impressive and astounding.

If then almost all of the aspects are now known, why does eternal research on Stradivari's secrets continue to be conducted and financed? And why do journalists still tell the gothic tale of the mystery that surrounds the figure of Antonio Stradivari? The researches that continue today are self-referential and only serve to justify their existence and related costs; moreover, too many superficial journalists find it convenient to shout out Stradivari's secret just because their article will get more glances from curious but uninformed readers. The actual truth is different. Numerous experiments have already shown that contemporary violins of good lutherie are able to play even better than Stradivari.

Modern violin can be better than ancient one

The most serious research is certainly the Double-blind violin experiment conducted over the years 2010-2013 in Indianapolis, Paris and New York by a team of experts. I believe that the following articles are useful to understand the seriousness of the research:

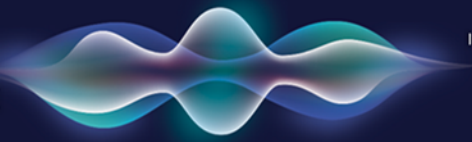
- *Sound projection: Are Stradivarius violins really better? (12)* by Léa Peillon-Comby, Claudia Fritz
- *Blind playoff of Stradivarius violins and new ones leaves old Italians a little flat (13)* by Associated Press Report
- *Double-Blind Violin Test: Can You Pick The Strad? by Christopher Joyce (14)*
- *Million-dollar Strads fall to modern violins in blind 'sound check' by Adrian Cho (15)*
- *Science can tell us only so much about Stradivarius violins (16)* by Philip Ball

I am convinced that the personal experience of an esteemed violinist deserves to be noticed, as published in *The Strad* (17): "Christian Tetzlaff switched from playing older instruments to a modern one built by the German luthier Stefan-Peter Greiner. ... He suggests that "Stradivari and Guarneri 'del Gesù' were fantastic violin makers but their instruments are not good because they are old and Italian, but because they are well built - and this is something that somebody nowadays can also do."

It is evident that the Stradivari are not unsurpassed and modern luthiers can make modern violins with excellent sound. The problem is to overcome a cultural "must". It takes courage. A violinist knows that if he plays a Stradivarius at a concert he will have more publicity, more audience and more attention from critics and concert agencies. If the same violinist played another violin instead, he would have less publicity, less public and less attention, but perhaps the sound would be even better!

I humbly believe it is appropriate to point out a couple of articles made by us that further clarify our point of view:

- *Knowledge and Innovation on Classic Italian Lutherie: A Competitive ducation in Market Economy* by Massimo de Bonfils (18)



- *Beyond Stradivari: The New Santa Cecilia Violin - An Essay on Research of the Classic Italian Lutherie* by Massimo de Bonfils and Mauro Fabretti (19).

A better education for future luthiers

Stradivari violins are not untouchable and unreachable totems. Modern lutherie is able to make instruments with even better sound, but it is necessary to spread this culture and not take advantage directly or indirectly of low-cost low-quality factory production. I say this because a shameful scam has recently been discovered in Cremona:

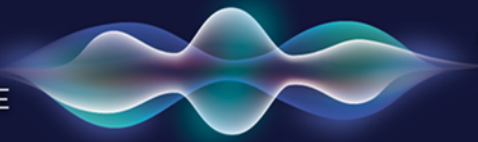
- *Liuteria della Vergogna (Lutherie of shame)* by Fabrizio Loffi (20)
- *The scandal - Hundreds of Romanian and Bulgarian violins in white in the shops. They come from Kazanlak and Reghin, cost between 250 and 600 euros, are repainted and then put on the market. We need a real quality brand that is not just a designation of origin.*

A 250 euro factory violin sold for 8,000 with a coat of paint and a misleading label. A big gain. All violinists in the world would like a Stradivarius but the prices are exorbitant, so they come to Italy to buy a violin that is at least Italian, and they don't deserve to be scammed.

For *all the reasons we have listed so far*, the Santa Cecilia Conservatory in Rome has decided to find a Course for the luthier of the future, capable of offering a more modern and competent training, rich in tradition and interested in innovation. So, in our Conservatory we teach not only to play an instrument but also Lutherie, String Instruments' History and Technology. Our Lutherie Course, founded in 2011, is the only university-level course in Italy that has a laboratory and today has an average of 50 students from a dozen different countries. The professors are me (History and Technology Evolution of the String Instruments), M^o Mauro Fabretti (Laboratory Teacher, the real father of the Santa Cecilia violin) and M^o Massimo De Notti (the Laboratory's Assistant). Over the years we have also worked for a Course in Engineering in Musical Instruments in collaboration first with the La Sapienza University of Rome then with the Polytechnic Università delle Marche of Ancona. In 2016 we also organized the first edition of Santa Cecilia Violin Making International Competition where we received more than 100 instruments participants of 24 different nations. Two juries worked together, one of luthiers and the other of musicians, and the competition attracted the interest of various Italian and foreign press. In October 2019 we open our stand at the World Music China Expo, in Shanghai. Moreover, we also promoted several Seminars on Lutherie in several Italian Conservatories and Universities and abroad. Moreover, we promote the instruments built in our Laboratory by playing them in concert. For example, in 2017 we played in concert a classical violin built by our course at the Castello Sforzesco in Milan, at the Italian Embassy in Paris, France, during the European Music Fest, and finally at the Mirabell Schloss in Salzburg, Austria.

Our lessons cover both classical and experimental lutherie and in 2018/2019 a new ergonomic model of violin was designed and built, the new Santa Cecilia violin. Maestro Fabretti designed (see Fig. 1) the new model project and our staff began to build it following the teacher's precious instructions. This new violin (see Fig. 2) is easier to play, powerful and with a better sound quality.

- easier to play: the ergonomic body helps the playing on higher positions pushing down his left shoulder.



(Abstract 77)

A Philosophical Examination and Application of Lessons from the Pixar Film, *Soul*

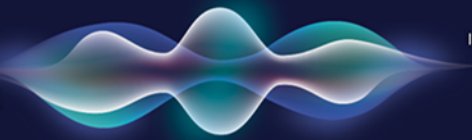
Raychl Smith

East Carolina University

The purpose of this philosophical inquiry is to examine what the Pixar movie, *Soul*, (Murray & Docter, 2020) might teach music educators about the preciousness of everyday life both in and out of the music classroom. Directed by Pete Docter, the animated film was released direct-to-streaming in 2020 as music educators across the country were amid an existential crisis, striving to connect with students in online environments, and longing to make meaning amid teaching music during a global pandemic. The movie's protagonist, Joe Gardner, is a middle school band director and jazz pianist who lives out the identity crisis of teacher vs. musician that is documented throughout the literature base of music teacher education (Pellegrino, 2009). While this conflict of identity seemed to be the focus of conversation on music teacher social media groups (Music Teachers Facebook Group, 2021) after it premiered on Disney+, the deeper meaning of Joe Gardner's growth into a teacher who comes to share the joy of everyday experiences with a fearful student may be a more pertinent lesson for music educators who are seeking to find meaning in the daily life of music teaching and learning.

Films may offer an entry point for music teachers seeking to ponder questions such as: "How do I perceive my role in the classroom? How do I understand and make meaning of my relationship with students?" or even "Why do I choose to continue teaching?" (Richerme, 2015). While philosophical texts may provide a deeper understanding of these questions (Hodges, 2017), films are often approachable and situated in the social and cultural landscape of practicing teachers and students. Because discussing films seems so natural to our social experience, pondering how the characters of Joe Gardner and 22 evolve and come to understand their purpose may help music teachers develop a deeper understanding of their own identity and interconnected relationships. While there has been criticism about the voice and identity of the black male protagonist, Joe Gardner, being switched with the voice of 22, a naive, white, female-voiced young soul (Acuna, 2020), the evolution of both Joe and 22's characters are tied up in a relational interworking where it is unclear at times who is the mentor and who is the student. This relationship, where learning and growth are multilayered and multidimensional, can serve as a model for how teachers may wish to cultivate relationships with and among the students who are a part of their classroom communities.

Soul is the first Pixar film to feature an African American protagonist, and throughout the film, wisdom is situated in the hands of strong, black, female characters, Libba Gardner and Dorthea Williams, as well as characters from the black, male, working class, Dez. Joe's mother, Libba, is excited that her son is finally offered a full-time teaching job because she sees it as a step toward financial stability. Libba's practical wisdom is balanced by the passionate and creative energy of Dorthea Williams, a renowned saxophonist and leader of the jazz quartet that Joe has the once-in-a-lifetime opportunity to perform with. Joe is



star-struck by his encounter with Dorthea and cannot get out of his head to improvise and play in the moment when he is given the opportunity. Any musician who has had an initial experience with improvisation can empathize with Joe's feeling of being trapped in his mind, unable to free himself from the paralyzing fear of not being good enough. Later in the film you see 22 stuck in a similar thought pattern, an obsessive state of negative energy that spirals into a loop of fear and self-loathing. The way this mental state is characterized in the film sends chills down the spine of the viewer, hitting at an experience that many musicians have felt deeply at some point in their career. When Joe sees that 22 is stuck in a dark place, he empathetically finds a way to reach out to the young soul by feeling gratitude for the simple moments, objects, tastes, and smells of everyday life. Joe collects a series of objects and sits in front of the keyboard to improvise a piece based on their shared experience. The objects appear to swirl around in Joe's consciousness, sending him into a state of flow (Csikszentmihalyi, 1990) created by a score of gratitude, sensation, and relational experience with the world around him. Through this shared musical experience, 22 feels Joe's presence reaching into the darkness and manages to return to the present moment. This scene can serve as a metaphor for how teachers can facilitate meaningful musical experiences that allow students to leave behind their fears and anxieties and be present in the moment.

As I watched this scene unfold, I was reminded of the 24-hour Examen Prayer of St. Ignatius Loyola (Xavier University, n.d.), and how my most powerful moments of gratitude over a 24-hour-period were found in observing my nine-month-old son (another new soul) experience sensations for the first time. The taste of an orange, the caress of sunshine and a warm breeze on your face during a morning walk, the thrill of joyfully splashing in a warm bubble bath: these were the moments of gratitude that fueled my spirit for teaching and kept me reaching out to my students through postpartum depression and the dark void of online music learning amid a global pandemic. When we remember the sensations that bring us back to life, they form a lifeline that tethers us to the present moment, and the people around us may feel a shift in the energy of our shared space, even when that space is created in a virtual environment.

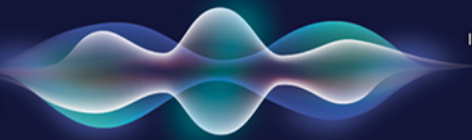
It is important to remember that teachers are not the only instigators of awakening to the present moment. Just as my lifeline often came from the smile of my infant son, our students may be the ones who are more closely attuned to the preciousness of a moment. I would encourage teachers to be particularly attentive to moments in rehearsal that spark unexpected energy that spreads throughout the room. A lighthearted discussion that may seem to be off-task, a moment of shared vulnerability that inspires courage in others, or a student who powerfully models learning from their mistakes. The power in these moments is that we cannot go searching for them because they are indeed all around us. Instead, we must be open to the possibility that these gifts are always abundant if we simply allow a space for them to be.

In the film, Dorthea tells the story of a fish who was constantly searching for the ocean. When the fish was informed that he was already swimming in the ocean, he cried, "man this is just WATER, I'm looking for the ocean!" The wisdom in this parable lies in the power of being awakened to the present moment. When the present is shared in a relationship that is connected by communal learning, time can be so vast and all-encompassing that it is impossible to know the power that moment may have in shaping and creating life. Recognizing the power that improvised music holds in bringing us into a shared experience of the present moment may be simultaneously freeing and terrifying for teachers and students alike.

Jorgensen (2011) describes how the present moment may be particularly meaningful in connecting music education to religion and spirituality, quoting Alfred North Whitehead's (1959) essay, *The Aims of Education*, in which Whitehead states, the present moment holds "the seeds of eternity forwards and backwards" (p. 14). Jorgensen considers the implications of labeling music education as "religious," stating: "far from pandering to student or teacher present interests, such education begins with curiosity, imagination, and impulse to stretch the horizons of understandings beyond the familiar and taken-for-granted, thereby unsettling, surprising, even disconcerting those involved" (p. 159). What would it mean to design a curriculum for middle school general music from a place that begins with "curiosity, imagination, and the impulse to stretch horizons of understandings beyond the familiar and taken-for-granted" (p. 159)?

Consider facilitating an improvisation experience like the one that Joe designed in the film where students are given the opportunity to reflect on powerful images that may have been a part of a shared experience of the group. Joe sits down to improvise with physical objects that he has collected throughout the day. He takes his inspiration from the sounds of leaves rustling in the breeze, the first taste of New York pizza, the feeling of gratitude expressed by leaving all he has in a subway buskers open case, and the brilliant royal blue thread that his mother used to alter his father's favorite suit. Similarly, middle school general music students could create an improvisation to accompany images of current events which make up a shared cultural experience, such as video of recent Black Lives Matter protests or other social justice issues that may be weighing heavily in their hearts. By giving students an assignment to create a video accompanied by improvised music, teachers may open spaces for students to engage with content that is meaningful to them on a spiritual level (Author, 2013). Students should always be given the opportunity to decide what content might serve as inspiration, though they may need to develop their ideas based on thoughtful questions from the teacher. Teachers might ask the following questions to spark inspiration for improvisation based on an image or an event: "When did you feel most alive today?" "What current events or issues set your heart on fire?" "If you could live one day of your life over again, what day would it be?" "Tell me about the most beautiful object you have ever seen." These questions elicit a flood of sensory information that trigger the body, mind, and spirit to be engaged in the creative process, and may have the power to awaken students from the obsessive thought-loops of the mind that often accompany encounters with improvisation. Thoughts such as, "I'm not good enough," or "improvisation is only for experienced musicians," tend to quickly fade when students remember powerful multisensory images or memories. When these experiences are shared the music that is created can become profound.

Music educators may struggle with finding models for incorporating improvisation outside of the jazz tradition, but organizations such as Music for People, whose philosophy of music education is outlined in their Musical Bill of Rights (Darling, n.d.), provide resources and training for educators looking to create community through improvisation (Oshinsky, 2008). Studies in Creative Motion (Allen & Niles, 2010) or Dalcroze (Dalcroze Society of America, 2021) may provide insight into creating playful, purposeful, and dynamic improvised movement experiences. Educators may attend workshops facilitated by intergenerational expressive arts organizations outside of music, such as InterPlay, to get ideas for how they might facilitate experiences that integrate the mind, body, and spirit (Porter & Winton-Henry, 1995). These inclusive music communities (Table 1) provide rich models for how spirituality might be approached in the music classroom by validating the playful spirit that resides inside each person.

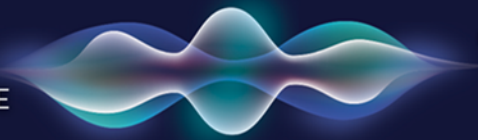


June Boyce-Tillman (2012) describes how musicians can connect to “a sense of communion with others, the natural world, and the wider cosmos” by preparing a transformative liminal space where “time and space operate differently from everyday life” (p. 29). In the film, we see Joe travel into this space on board a psychedelic ship chartered by a shamanistic hippie, who Joe encountered as he was dancing on a busy city block. The dancing hippie that transports Joe into a state of musical ecstasy portrays how the arts, and music specifically, have been used for thousands of years to induce trance-like states of spiritual connection. Csikszentmihalyi (1975) labeled this state flow, “the holistic sensation present when we act with total involvement” (p. 121). Many music education philosophers have discussed the state of flow and its connection to music, spirituality, and transcendence (Bogdan, 2010; Carr, 2008; Palmer, 2006).

How might music educators create space for these transcendent experiences to occur in the classroom? June Boyce-Tillman (2013) argues that music teachers must look past prepackaged curricula, as well as state and national standards that are often slow to evolve and represent a “well-trodden but limited view of human beings, the cosmos, and education” (p. 32). Boyce-Tillman (2004) describes an ecological model employed in her composition, *The Healing of the Earth*, that places the emphasis on process rather than product, with opportunities for personal and community transformation. In several of her pieces, the lines between performer, composer, audience, amateur, and expert become blurred, and a holistic and democratic process of musicking begins to emerge. Many of her works are place and space based, with the audience moving through a performance venue of diverse musical groups to create their own sonic landscape. While the audience has freedom to choose the sounds they hear based on where they roam, the performers can also make musical decisions such as where to begin in each melodic cycle or when they make shifts in texture. Boyce-Tillman describes her compositional role as the builder of a frame that will house a new work of community art each time it is performed. In the film, when 22 points out to Joe that she is really good at walking, and perhaps walking could be her purpose, Joe laughs this off and says, “Walking isn’t really a purpose, 22” (Murray & Docter, 2020). Perhaps it takes the wisdom of a young, naive soul to point out that simply walking can be a meaningful contribution to participatory, community art. In fact, the value may not be in the doing itself, but the relationship that is established between participants who are welcomed into the communal act of creation.

While not the norm, teachers may be able to find models of participatory community arts experiences in their area. I am reminded of a performance I attended at Appalachian State University called *Dragons in the Mountains*, written by Alistair Burke (2012). The score, with improvised music, was provided by university faculty and students, and members of the community including professional and amateur actors, artists, puppeteers, costume designers, school children, and community members told the story of environmental devastation that was happening with mountaintop removal in the Appalachian Mountains through a multisensory performance. As a member of the audience, I often felt a part of the story that was unfolding around me, as characters moved freely among the audience seated in the large ballroom. Performances such as this one are surely what Jorgensen (2008) is calling for when she asks teachers to “think and act artfully, imaginatively, hopefully, and courageously toward creating a better world.”

The character of Joe’s barber, Dez, is powerful in that it addresses the way identity may be shaped and molded by life experiences and circumstances. As a young man, Dez dreams of



becoming a veterinarian, but to take care of his growing family, he forgoes college and pursues a career as a barber, which brings him the joy of connecting with people, hearing their stories, and forming deep meaningful relationships. While Dez did not believe his soul's purpose was to become a barber, he knows his existence is deeply tied to an empathetic and relational understanding of the world that is fed each day through his interactions with people like Joe who come and sit for a few minutes in his chair. What might music educators learn from Dez and his interactions with clients? Dez shares in the joy or sorrow of whatever his clients bring into his shop. Joe believes that Dez is truly interested in jazz because he listens to him with deep and focused attention. Teachers might consider how they can be empathetic listeners to the musical experiences and stories of their students. By practicing deep and focused listening, maintaining eye contact, and treating individual students as if their stories of musical identity are the most important and pressing matter at hand, teachers may find that students feel motivated to be their best possible selves (Author, 2019). This might be as simple as changing how you interact with students during playing assessments, making time to get to know students' musical interests, or making a point to spend a few moments in conversation with a different student before class each day.

As a first-year teacher I was often criticized for spending much of the school day focusing on topics that seemed tangential to performance. My colleagues in the music education and therapy department today still joke that I deal with “feelings” in a way that makes them uncomfortable. So why go there? Arguing that music is a language of spirituality, Yob (2010) writes: “If we have soul as well as mind and body, then spirit is in the classroom whether we acknowledge it or not, or whether the laws of the land prohibit it or not... A possibility and challenge for music educators is in discerning how to employ music as a spiritual language” (p. 150). Yob advocates for a constructivist approach where the teacher facilitates experiences for learners to discover and construct spiritual meaning themselves through music performance, listening, and composition. I would agree with Yob's suggestions, and argue that improvisation, by way of spontaneous creation in the moment, may provide rich opportunities to connect with spirit in a profound way.

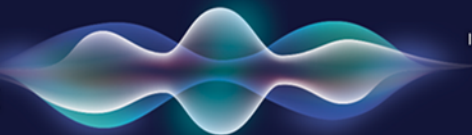
The Pixar film, *Soul*, offers music educators a glimpse into the life of a music educator who learns that the rewards of teaching and performing music may lie in the preciousness of the present moment and the relationships that form when we awaken to our interconnected consciousness. While researchers, philosophers, and scholars have explored the spiritual aspects of music education for years, films such as *Soul*, may provide a more approachable entry point for the typical music educator hoping to implement practical ideas into the classroom. The character of Joe Gardner, and his evolution through relationships with others, may provide teachers with a model for awakening to the beauty of the present moment, and a desire to cultivate community through transcendent experiences with music.

(Abstract 110)

Reform practice of Music Curriculum Based on Mapping-Inversion of Multiple Fusion Perception

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Abstract

This research comes from a special topic of curriculum reform of music education specialty, and discovers a conceptual system of "visible sound" from teaching and learning practice. According to the characteristics of the relationship between perception and cognition in music education, a music learning mode from perception to cognition, mapping and inversion principle, is established by using the method of system integration and classification interpretation. It is possible to go from "invisible sound" to "visible sound" and from "visible sound" to "visible music" through this mapping-inversion process. We would apply multivariate - perception mapping inversion principle to music education curriculum design and teaching practice, the results showed that people's perception of music types are different, learning mode is also different, must according to the different cognitive style and learning patterns to choose corresponding education teaching mode, to conform to the music education of the realistic meaning, can realize music education's real goal.

Keywords: Music education; multiple perception; mapping inversion; realizability

Introduction

From the simple form of music, music is an invisible emotional sound system. However, this "invisible sound" will become "visible sound" when music perception and cognition reach a certain level, which is the real meaning of music. The possibilities are endless from "visible sound" to "visible music". In fact, the purpose of music education is to realize the perception and cognitive activities from "invisible sound" to "visible music"(Yumeng He, 2016). Specifically, the meaning and value of music can only be truly reflected when music is visible, cognizable, self-conscious and exploitable. In recent years, many music education researchers discuss how to improve students' perception of music from different perspectives and try to mapping the sound of music to the visible reality, so as to improve the cognition of "visible sound".

Many researchers believe that the purpose of music education is not only to learn musical skills (playing and singing), but to improve comprehensive literacy through music learning ((Jessica Pitt,2020, Melissa Gerber Knecht,2010, Juliet Hess,2021)). In other words, the real goal of music education is to enable the educatees to realize the transformation from "invisible sound" to "visible sound", and then from "visible sound" to "visible music". Whether this goal can be achieved depends on the idea of music education, the design of courses and the choice of teaching methods. In fact, the meaning of "visible sound" covers all aspects of music education. The research content of this paper comes from the undergraduate teaching reform project of Liaoning Normal University in 2019, namely "Extension Design of Music Curriculum Based on Multiple Information Perception". This teaching reform aims to explore a new curriculum model in accordance with the nature of music education, aiming at the problems of pure knowledge, professional skills and credit formalization in music education curriculum.

Methodology

At present, many literatures discuss the problem of multiple perception of music from different perspectives, but there is no unified conceptual system. In order to establish a unified concept system, expert investigation and demonstration is an effective method. The expert investigation method (Delphi)

adopted in this paper is to take experts' opinions as the object of analysis, and experts use their own knowledge and experience to find out rules through analysis. The characteristic of Delphi method is to give feedback to the experts after synthesizing, sorting and summarizing the opinions for continuous reference, and gradually make the opinions tend to be the same repeatedly. Then establish a universal conceptual system of music multiple perception. In the study of music education, case investigation and statistical analysis are generally adopted by researchers. It is worth noting that the uncertainty of survey objects, the one-sidedness of experimental data and the credibility of data acquisition have a great impact on the authenticity of research results. Therefore, this paper does not simply use survey and statistical analysis, but on the basis of systematic evaluation research based on information analysis, appropriate survey and statistical analysis are used as a supplement to the demonstration, so as to ensure the credibility of research results.

Mapping and Inversion of music multiple perception

In view of what kind of course content should be selected to meet the needs of music perception ability, we conducted an expert interview, we got the basic information to solve the problem through the expert interview.

Expert interviews and information analysis

Interview subjects. The consulting group of "College Music Education Curriculum Reform and Construction" was established: the consulting research group consisted of 9 experts, including 3 music education experts, 2 music criticism experts, 2 children education experts, and 1 performer and 1 singer respectively. Before the interview, the purpose and main content of the interview are explained to the interviewee until the interviewee agrees to conduct the interview. Finally, the content of the interview is reorganized to ensure the homogeneity of the interview.

Interview content. Music performance and singing is a kind of musical skill, and the real musical ability is the ability of music perception and cognition, and this perception and cognition will involve various aspects. So what is the relationship between music and perception? What are the musical perceptions? How to cultivate these musical perceptions in music education?

The mapping - inversion principle of musical multiple perception

Music perception is a fusion perception composed of sound and non-sound entities. Consulting experts were summoned for panel interviews to preliminarily draw up three basic dimensions of music perception: Sound-vision fusion perception, sound-kinesthetic fusion perception, sound-semantic fusion perception. According to relevant research literature and the theory of Music Education Extenics, a conceptual structure of music perception is obtained.

We have obtained a conceptual space of multiple perceptions of music that determines music literacy through expert interview and consultation. When a person has a certain amount of multiple perceptions ability of music, certain cognitive ability of music will be formed. In other words, music education is to improve the cognitive ability of music through the training of multiple perceptions ability. In fact, multiple perception and cognition of music is the mapping and inversion of music space and perception space, and the curriculum content of music education is designed according to this mapping and inversion principle.

As shown in Figure 1:

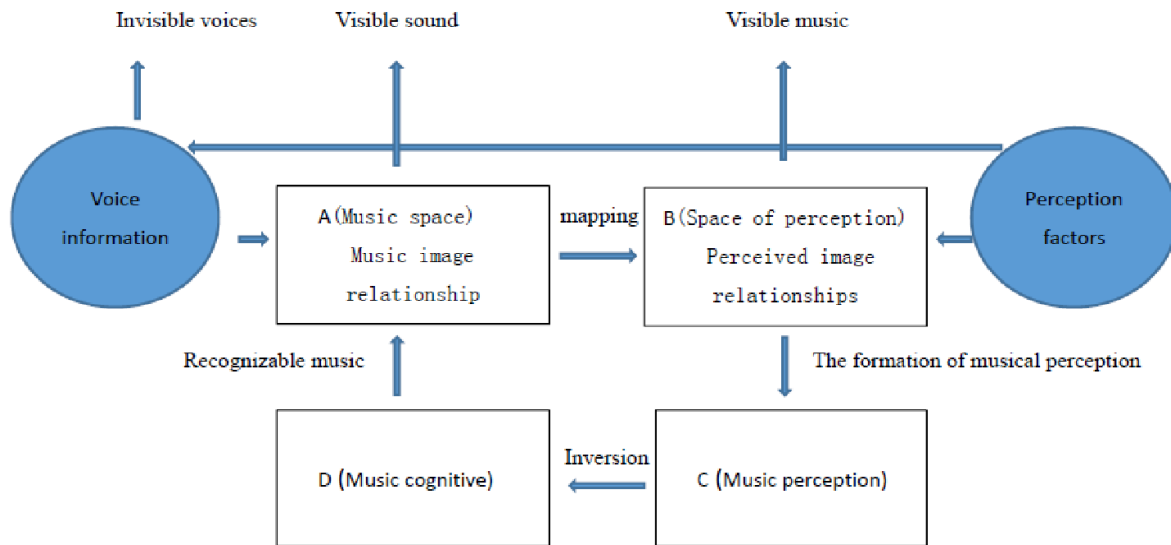


Figure 1. Mapping inversion principle of music perception

In Figure 1, A is a space with various musical relations from the sound system (musical space), and B is the image relationship of musical space in reality perception space. From this perspective, A is the preimage relationship of perception space. Under the influence of perceptual factors, B constitutes a relationship of music multiple perception, and each musical perceptual relationship will form a unique musical perception C. When music perception is understood and applied to a certain extent, music cognition D is formed. It can be considered that music education is the process of realizing music perception and cognition.

Design of curriculum content of multiple perception

We introduce the educational idea of mapping-inversion of music perception into the music education curriculum and transform the music teacher education curriculum from a simple knowledge and skill model to a multiple perception and cognitive model integrated with reality. The main idea of multiple perception curriculum design is to transform and expand the existing content of music teacher education. This course model includes two aspects, namely course content and teaching method. In terms of course content, we adopt two ways: one is to change some course content and introduce the learning mode of music multiple perception and cognition into corresponding courses. In music theory, harmony foundation, music appreciation and other knowledge and skill-based courses, we can learn these courses by using the mapping and inversion principle of music multiple perception, so as to truly understand the educational significance of these courses. The second is to add a course of music education and teaching theory on the basis of public pedagogy, psychology and educational technology. The theme of this course is how to enable students to enter the space of multi-perception and cognition of music, and how to play the function and role of music through education. It is embodied in three aspects:

Auditory-visual fusion perception of music

Auditory ability is the essential ability of music, and auditory training is also the most basic teaching ability of music teachers (Niklas Pramling & Cecilia Wallerstedt, 2009). Music listened to is nothing to a sound system without the ability to hear. Therefore, the first basic skill of a music teacher is auditory perception. However, the single auditory perception is only the basis of music cognition, is a basic music perception. For example, rhythm perception and modal perception reflect the sound attribute of music. True auditory perception should be the perception of the meaning of music (visible music). Auditory -

visual fusion enables you to see the meaning of music. Therefore, The fusion of auditory and visual perception can get the cognition of the meaning of music. For example, when listening to the music of "Two Tigers," the musical meaning of this audience-visual fusion can be expressed by adding pictures of two tigers.

Auditory - kinesthetic fusion perception of music

The fusion of auditory and kinesthetic perception comes from Dalcroze's (1892) body rhythm teaching method. (Luc Nijs,2018) . Dalcroze's kinesthetic perception is the early stage of the fusion auditory and kinesthetic of music. In today's music teaching, the fusion of auditory and kinesthetic perception has more extensive significance. In reality, the content of music meaning obtained through motion perception can be added into the course teaching. We further found the role of the fusion perception of auditory and kinesthetic in music teaching through a series of training experiments combining music and body reaction. Because of the participation of body movement, music elements become visible physical activities.

Auditory - semantic fusion perception of music

As we know, a song is a music form composed of tune (music) and word (literature). By perceiving music through the semantic form of lyrics, music has practical meaning. Otherwise, the music in the song cannot explain its clear meaning, which is the perception of the fusion of sound and semantics. In fact, this kind of fusion form of word and sound is a relatively simple problem, but it is easy to be ignored in the process of music learning. In other words, when listening to music, the necessary semantic description is introduced, and the meaning expressed by music can be presented in the heart with the mutual fusion perception of auditory and semantic.

Experimental analysis

In order to verify the effect of curriculum reform in music education major teaching, we carried out an experiment in the electronic organ elective course of music education major. The electronic organ has the teaching conditions to simulate all kinds of sounds and can simulate training for all kinds of sound perception. The purpose of teaching experiment is to understand and master the teaching and learning methods of music perception and cognition. Twenty students (15 girls and 5 boys) from music education major participated in the experimental class, and these students have certain piano playing ability and singing ability. The experimental analysis of the course consists of three parts: students' music perception diagnosis, experimental teaching and students' teaching practice.

Music perception diagnosis

Self-diagnosis of music perception types. In previous music learning, whether you paid attention to music perception ability; Whether your musical ability comes from perception; What kind of fusion perception do your music perception mainly belong to?

1. auditory - visual fusion perception,
2. auditory - kinesthetic fusion perception,
3. auditory - semantic fusion perception.

Diagnosis results: The diagnosis results of 20 students showed that 11 students (10 girls, 1 boy) had the perception type of auditory - visual fusion, accounting for 55%. There were 5 (3 girls and 2 boys) of the perception type of auditory - kinesthetic fusion, accounting for 25%. There were 2 girls (10%) in the perception type of auditory - semantic fusion. 2 students (boys) had multiple fusion perception type, accounting for 10%.

The diagnostic data showed that the fusion perception of auditory - visual was a common perception type (55%) and was more common in female students (67%). The proportion of the fusion perception of auditory - kinesthetic (25%) was not large, but the proportion of male and female was significantly different (20% for girls and 40% for boys). The proportion of students' perception of auditory - semantic fusion is small (10%), but all of them are girls, indicating that girls are stronger than boys in semantic fusion perception. In other words, girls have more characteristics than boys in terms of music perception of things described by semantic. However, in the aspect of multiple fusion perception, although the proportion is not large (10%), and all of them are boys, which indicates that boy's perception ability in memory and association is relatively stronger than girl's.

Learning mode diagnosis of different perception types. The mapping - inversion of music perception is determined by students' fusion perception types, and the music curriculum model is determined by the mapping - inversion model of music perception. After the operation of different mapping-inversion modes, students will form their own thinking inertia of music perception, which determines the mode of music learning.

Diagnosis Results: Mapping-inversion models are different due to the difference of music perception types. In the 20 students' self-diagnosis, 15 students think that their music perception and cognition are formed in music performance (performance training), that is, from sound to sound perception (learning music in invisible music), and only after reaching a certain music performance ability can they understand the true meaning of music performance. Five students believed that they learned music by inverting the cognitive process according to the characteristics of their perceptual mapping of sound.

Course teaching experiment

We choose the electronic organ performance appreciation course of music education major as the experimental content. The main purpose of this course is ability training of music perception and cognitive. Twenty students were divided into three experimental groups: auditory - visual fusion perception, auditory - kinesthetic fusion perception, auditory - semantic fusion perception. The Chinese orchestral work "Red Detachment of Women Suite" is selected as the content of music appreciation class.

1. auditory - visual perception appreciation: listen to music and synchronously the pictures to reflecting the meaning of each music.
2. auditory - kinesthetic perception appreciation: Listen to the music and synchronise the dance to reflecting the meaning of each music.
3. auditory - semantic perception appreciation: listening to music and giving simultaneous text introduction reflecting the meaning of each music.

As shown in Figure 2:

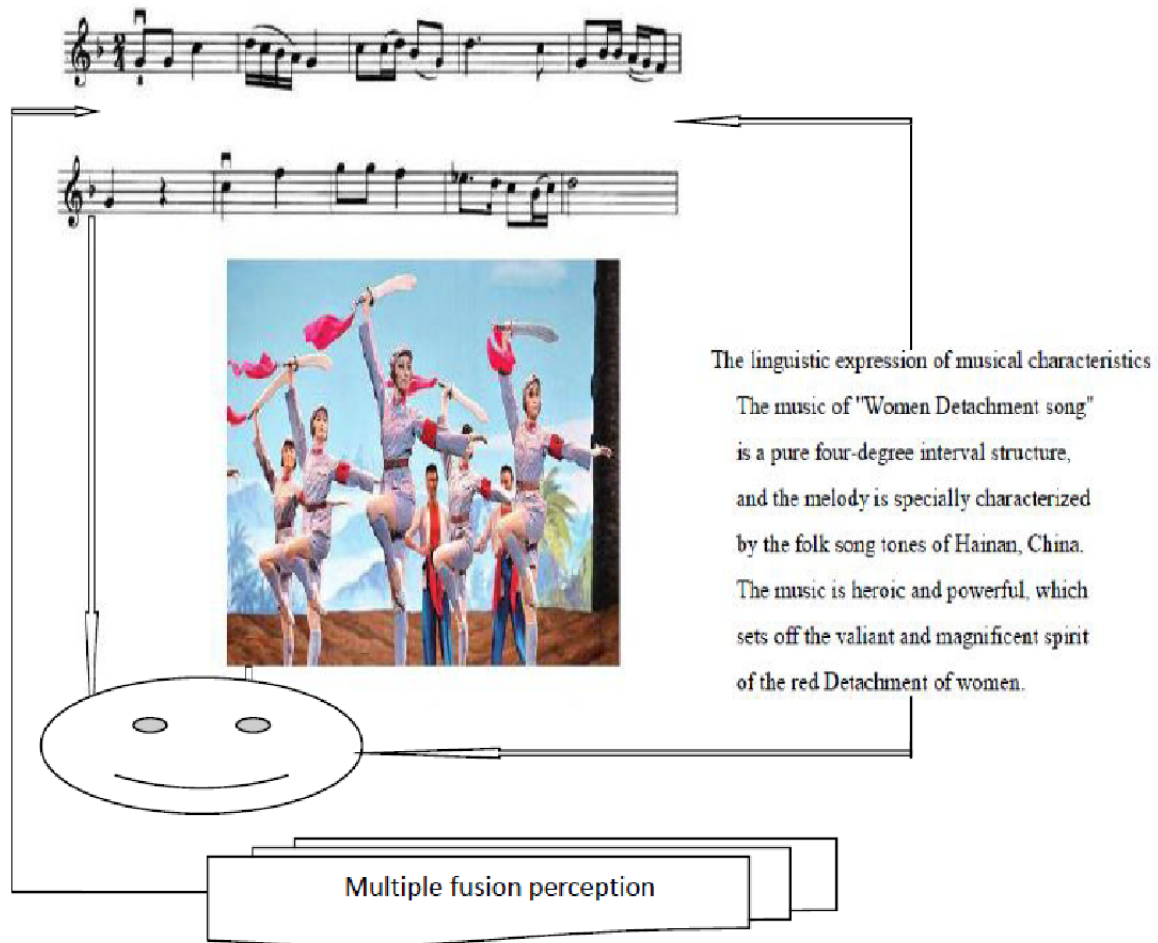


Figure 2. The multiple fusion perception of music appreciation

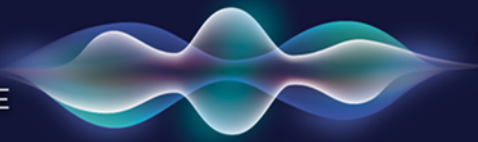
The students were excited by music appreciation classes in different groups. they say, "We get a special feeling of music, we see music." In addition, this appreciation class can also be carried out in different ways, so that students can perceive music in different forms, and then teachers and students can communicate with each other through the music perception of this work, so as to achieve the purpose of learning.

Teaching practice of students

Music education is a kind of practice education, without music teaching practice process, the goal of music education cannot be realized. After the multiple perception teaching experiment of music course, let students further understand and master the infinite possibility of "visible music" by developing teaching experiment content. The following is an example of student participation in a teaching practice.

Two students contacted a kindergarten to give music lessons to children. The content design and steps of the course are as follows:

Introduce the theme of the music activity. 1) Teacher: "Boys and girls, sounds are heard with the ears, so can the sounds be seen?" At this time, children guess whether the sound can be seen and explain their own views. 2) Teacher show guess table, children observation guess table. 3) Children complete the guess table. Teacher: Please draw on the guess table with pencil.



Children operate and complete the record sheet. 1) Teachers introduce materials to inspire children, and children touch and operate materials. Teacher: Here is a stereo. You can make a sound by twisting this button. It's a clear plastic box filled with foam balls, paper scraps, straws cut into small circles. 2) Group children to explore independently. Children experience the power of sound through hands-on operation, and can observe, compare and analyze the bouncing of materials (foam balls, paper scraps, straws). (With and without sound causes material to dance). Teacher: Please turn on the stereo and see if you can see the sound. 3) Children complete the record form. Teacher: If the children find the voice, please fill in the record form with pen. 4) Share observations and notes.

Verify that the sound is visible. 1) Teachers and children should complete visual sound experiments together. The teacher now plays music to make the operation materials in the transparent plastic box dance. 2) Draw a conclusion by comparing the conjecture with the experimental results. Teacher: Through children's continuous exploration and perceptual learning, we find that sound can be heard by small ears and seen by small eyes. (Transitional Language) Teacher: There are many visible sounds in life. Let's take a look.

Activity extension. "Visible sound" ---- Specific presentation of life play Shouting fountain, sound sand painting and other small videos. Teacher: there are many sounds that can not only be heard but also be seen in nature, so please go to the nature to find good and visible sounds.

The above is a sound perception training course designed by students themselves. This kind of music teaching practice can also be extended to other music teaching.

Discussion

As a traditional educational field, music education is facing the challenge of diversification, scientization and socialization. From the trend of music education research in recent years, "visible sound" has become the theme of The Times, no matter which nationality and region of music education began to pay attention to the research of music perception and cognition. Of course, traditional music education is the education of training musicians and performers, while the development of cognitive theory of modern music education emphasizes the influence of music education on other education. However, in the existing literature, music technical training, music emotional education model, music culture and ethics still occupy a leading position. In fact, all kinds of music education attributes are inseparable from multiple fusion perception, especially, how to form the perception and cognition in the heart of music learners through multiple fusion perception, this is the ideal goal of music education.

Conclusions

This paper constructs a mapping - inversion principle of music multiple perception from the perspective of music curriculum and teaching. Music comes from all things and expresses all things with various characteristics of consciousness, which is the significance and value of multiple perception. This paper aims to improve music teaching by establishing multiple fusion perceptions, which aims to transform music teaching from a single sound category into a real music category. The research shows that the fusion perception of auditory and visual is the "visibility" of sound to fixed entity, the fusion perception of auditory and kinesthetic is the "visibility" of sound to dynamic entity, and the fusion perception of auditory and semantic is the "visibility" of sound to text entity. Only the fusion of all kinds of perceptual consciousness can produce the psychological model of music, which will produce the natural music consciousness, which is also the expected result of this research.

Acknowledgements

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(Abstract 138)

Voicing A Multicultural Experience Of Othering

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Abstract

The contentious language prevalent in postcolonial literature substantiates the need to share a personal experience of Othering. In this article, Othering is understood as an expression of prejudice towards ethnic groups by Westerners. The application of two generalist terms, "Us" as Occidentals and "Them" as Orientals (Said, 1994) are used to construct an argument that these two terms should not be applied indiscriminately. Static ethnic categories that informed late 19th century Orientalism, cannot be maintained in the reality of overlapping cultural experiences. An enlarged meaning of Orientalism transforms White Occidentalism and Coloured Orientalism into a more subtle and nuanced account of the East-West dilemma (Said, 2003). A reflective viewpoint in this article rethinks this concept from a constructive angle of growth via intercultural contact. The voice of a multicultural Sri Lankan child of the sixties emerges through an autoethnographic snapshot. A sketch from childhood memories provides the means to retrieve meaning from a legacy of cultural imperialism and a way to challenge the repetitive portrayal of domination in music education as a de facto system of subordination. The function of this narrative is to confront resentment-based ideology founded on the portrayal of minority groups as colonised "Other" people, united through a single marginalised identity of "Them". This story is about choice and the intellectual freedom to distance myself from historical divisions between "Them" and "Us".

Keywords

Multicultural, Othering, Other, Postcolonial, Assimilation

Introduction

This account about Othering is by an author who finds it difficult to identify as Eastern or Western. To begin with, the reader can expect a short account of Othering as perceived by postcolonial scholars. In particular, the work of Edward Said (1994, 2003) provides a useful point of reference for notions of subjugation and alienation. The second section provides a snapshot in time to provide anecdotal justification for the use of childhood experiences to temper negative assumptions about Otherness. The use of a subjective autoethnographic approach allows me to organise the self within the context of the world (Muncey, 2010, p. 43). The recall of memories as an adult scholar serves to position a *mélange* of lived cultural experiences as an intricate and respectful relationship between East and West. The term "multicultural" is used to describe the intersection of other cultures (Nguyen & Benet-Martínez, 2010). The third section is about assimilation which is viewed as a

by-product of Othering. Assimilation is couched in terms of an enhanced understanding of the world. The fourth and final section concludes that assimilation should not be misunderstood as subjugation. It is hoped that an alternative story about Othering will soften the divide between "Them" and "Us".

Section One: Othering

In offering a snapshot of my early life, I pause to reflect on the notion of Othering in a life enriched by diverse cultural experiences. Othering is a useful concept to describe how culture is often associated aggressively as a source of identity by differentiating the dominant European "Us" with the subjugated and colonised Eastern "Them" (Said, 1994, p. xiii). The separation and division of two distinct knowledges, "Theirs" and "Ours", attracts an ideology affiliated with domination. Readers should note that Said uses the term "Othering" in relation to imperialism and the conquests of the West over the Orient. This term was initiated in postcolonial studies and explained by Said as an unequal act of drawing attention to perceived weaknesses of marginalised groups and perceived strengths of dominant groups that ruled over their empires (Said, 2003, p. 42). The philosophical notion of Othering is therefore understood as an expression of prejudice towards ethnic groups by Westerners establishing a hierarchy of knowledge.

The imaginative divide between "Them" and "Us" (Said, 1994, p. xxii) infuses positions of superiority and inferiority between outsiders and insiders. The Oriental is often perceived as "a perpetual and unassimilable outsider" (Li & Nicholson, 2021). The image is that of an exotic Other. The feeling of alienation attributed to the Other is deeply embedded in postcolonial theory with the reinforced grand narrative about the dominance of Western culture and the continuation of cultural colonialism (Chibber, 2014; Wang, 2018). The author contends the position that Asians are destined to remain under the influence of the pervasive tradition called Orientalism (Said, 2003). The postcolonial tendency to see the world in monochrome, as black or white, as "Theirs" or "Ours", emphasises differences between people defined by their ancestry, nationality and religion. A polychromatic lens views the representation between culture and reality as nuanced. World views are increasingly pluralistic with the shifting of personal cultural identities that blur geographic boundaries. A combination of "familiarity and distance" (Said, 1994, p. xxiii) widens the circle of pluralism and creates a space for narratives that contest the relevance of distinctions based on race. Although I speak as an Asian and in the voice of the Other, my message is not shadowed by the spectre of domination. Mine is a consciousness that arises out of an existence "between domains, between forms, between homes, and between languages" (Said, 1994, p. 332). The central premise of this article is to moderate the forceful binary of "Them" and "Us" by sharing a rich and geographically varied personal experience of arts education. I am particularly resistant to the idea of "Them versus Us" where the process of "Othering" emphasises discord between groups of people (Çelik, Bilali & Iqbal, 2016). The next section invites the reader to see beyond the mirage of binary difference with a claim that there is more to a person's identity than an assignation of an inherited culture.

Section Two: A snapshot of a lived cultural experience

My bi-cultural adventure begins at birth, when I experienced life in seven different countries, (India, Sri Lanka, Germany, Russia, Japan, Italy and England), before the age of 12. Being a member of a diplomatic family was multifaceted with the juxtaposition of East and West being a daily occurrence. I was fluent in Sinhalese and English with a rudimentary grasp of German, Japanese, Russian and Italian. The widened international circle of human contact makes it implausible to identify myself as purely Sri Lankan. I was born in India, the place of

my parents first overseas posting. Even from the very beginning, my life was characterised by choice—of being either Indian or Sri Lankan. By default, I have a Sri Lankan passport. In each country, our lives peacefully intersected with multicultural influences that broke down barriers of exclusion between "Them" and "Us". I enjoyed wearing sarees, kimonos, shalwars kameez, jeans and dresses. We lived in colonial-style houses by the sea, a redbrick German town house, a stark Soviet high rise, a traditional wooden Japanese Minka house with tatami mats and sliding doors, an Italian city penthouse apartment and a suburban English cottage. In the evenings I devoutly chanted my Buddhist prayers in Sanskrit and during weekday mornings I enthusiastically played Christian hymns on the piano for daily school assemblies. Experiences of food and culture were equally mixed, developing a lifelong appreciation for curries, sushi, sausages, cheeses, pastas and roasts. The exposure and internalisation of different cultures left me to experience different ways of learning, viewing and reacting to the world. Through the simultaneous study of Eastern dancing and Western piano my "cultural identity is complex and layered" (Nguyen & Benet-Martínez, 2010, p. 25).

The monolithic view of culture is reinforced by scholars who fail to provide a critical account of their own biographies (Ngo, 2008). To address this shortcoming, I situate my narrative within a brief historical overview of the conquest of my country by foreign realms. My island nation, located at the south-eastern coast of India, was colonised by the Portuguese (1578), Dutch (1656) and British (1815). Despite the intermittent pockets of Sinhalese rule in the central highland Kingdom of Kandy, the entire island of Ceylon became a British Colony between 1815 with independence granted in 1948. Between 1948 and 1972, Ceylon became an independent country of the Commonwealth and in 1972, the country became a republic within the Commonwealth and the name changed to Sri Lanka.

My pathway to learning Western Music was non-chauvinistic. I encountered classical music without thinking in terms of cultural, national or ethnic hierarchies. There was no resentment of being culturally subjugated. I attribute this positive disposition to my grandmother and my parents. The former was part-Dutch and part native Sinhalese, and a piano teacher of good standing in my island nation of Sri Lanka. She and my parents believed in the value of a bi-cultural upbringing which transpired in having piano lessons and rigorous training in the ancient Sri Lankan art form of Kandyan dancing. Twin interests avoided an irrational culture war founded on notions of superiority and unfair dominance.

The purpose of providing two snapshots of a place and a person is to argue against the suppositions and associations of belonging that rest on the opaque nature of inclusion and exclusion. There is much more to belonging than an emotional or rational sense of being at home or being tethered to one culture. The intricacies experienced by a visitor-resident of the type of interactions I have described require the kindling of a relationship from the inside to the outside. It is a yearning to move beyond the limits of nationality. As a national flag bearer, I played my part by upholding the traditions and customs of Sri Lanka. At the same time, I also participated in the customs of our hosts. Identity and education became enmeshed in a symbiotic relationship between the preservation of my culture and the embrace of an assortment of cultures. The preservation of Sri Lankan culture and tradition relied on the influences of individual characters such as my parents. Everything else belonged in the multicultural space that I was free to explore with my non-Sri Lankan friends and acquaintances. There was a duality to my life that allowed me to express and live the ideology of diversity.

Fulfilling twin demands of representing Sri Lanka in international dance pageants as well as

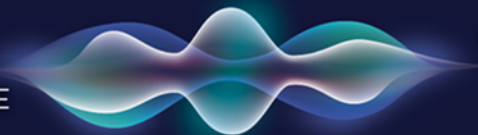
performing in piano competitions characterised a propensity for non-linearity of thought. Contrasts in discipline, notation, mindset, costume, interpretation and style were a phenomenon of dual reality with integrated information laying the foundation for complex sense-making. As a keen student of piano music, I became familiar with Western notation and absorbing the styles of classical music. At the same time, my proficiency in Kandyan dancing grew with an ease of movement that accurately corresponded to the complex cross-rhythms of "tala" that were augmented by the traditional drummers. Arriving in England by the age of 12, I chose to accept a place as a scholarship student at the Junior College of the Royal College of Music. For six years, entire Saturdays were devoted to the study and performance of Western classical music. In time, the opportunities for showcasing Eastern dance disappeared as I willingly spent my time honing my skills at the piano. Looking back on this decision, I realise that living together with two approaches to music knowledge has made me acutely aware of the richness of a hybridised, bi-cultural identity that accounts for my eclectic appreciation of music and dance.

Section Three: Assimilation

The notion of free will is central to an argument that neutralises the disapproval of perspectives that identify socialisation and assimilation as a form of domination (Zane & Mak, 2005). A willingness to assimilate should not be viewed as "camouflaged Orientalism" (Chou, 2008) or the enforced socialisation of immigrants (Said, 2003). A privileged diplomatic upbringing has fostered a plural identity co-joined in multiple experiences strengthening a sense of self and agency (Schechter, 2020). I was never an immigrant but was in an equitable space of being a long-term visitor-resident, moving from one country to another, every two years. As a Sri-Lankan Western trained classical pianist who has transitioned through diverse cultural phases, I never regarded Eastern culture as inferior to Western culture. My draw to the latter was not prompted by a desire for upward mobility to ensure advantages of superiority associated with White privilege and well-being (Li & Nicholson, 2021). That said, I don't deny that mine is an identity rooted in the making of empires, shaped by territorial disputes, conflict and influenced by the collision of cultures. The voicing of my story is intended to challenge the dimensions of Othering that spring from the marginalisation of ethnic groups.

Varied multiple cultural experiences extend the capacity for assimilation, demonstrating that the descriptions of the Oriental historically describe a harsher reality of subjugation of the "Other" during the 18th and 19th centuries. The divide between the Eastern "Them" and the Western "Us" is extensively explained in the cultural theory of imperialism. The grand narrative of imperial subjection is elevated to one of emancipation and enlightenment (Said, 2003). Said endorses an alternative discourse that permits looking at different experiences "contrapuntally" in recognition of intertwined and overlapping histories. This vision allows me to promote a more secular interpretation without denouncing the past (2003, p. 18). Key to distancing myself from the "rhetoric of blame" (2003, p. 19) is the process of assimilation. The difference between assimilation and subjugation can be articulated as a willingness to integrate. Absorption of cultural practices projects a more positive connotation than subjugation where exposure to different traditions does not result in an annihilation of native culture (Case, 2019).

The phenomenon of assimilation, a consequence of prolonged contact, is variously assigned the terms "a process", "an art" and "a result" by sociologists and historians (Simons, 1901, p. 791). The instability of terminology denotes the nature of flux and complexity in the expatriate process of fitting in. All three expressions are employed to explain my



understanding of assimilation as a by-product of Othering. The "process" involved being transplanted in different social and cultural settings. The "art" of dialogical, open interaction was characterised by my multiple relationships encircled by a variety of social norms. The "result" is a kaleidoscope of unique life experiences that laid the foundation for an existential situation corresponding to consciousness as "an ever-present quality of all experience" (Russell, 2014, par 8).

Section Four: Conclusion

Introspection of my life's journey allows for a heightened understanding of how people view themselves and others. My childhood experiences, interpreted as a manifestation of assimilation through acculturation, have allowed me to eradicate the dogma of subjugation. As a child, I did not consciously undertake an endeavour to gain an authentic understanding of cultural differences. Yet, the complexities of assimilating different world views have without doubt influenced the musical development and learning across my life course. Most of all, I have learnt that people do not treat me as a Westernised Other. I hope that my narrative frames a story of inclusion by rejecting the divisive nature of Othering. Oppressive relations split people into two groups: "Them" and "Us". Postcolonial literature positions the partition as the dominant culture, devaluing and curtailing the activities of subordinate groups by systematically deeming them as inferior. A multifaceted upbringing leads me to reject the notion of polarised relations between West and East. A nomadic existence resulted in the opportunity to experience interactive contact with multiple cultures. Furthermore, the dynamic relationship between Sri Lankan dancing and Western piano music created a sympathetic understanding of the boundaries between them that proved the viability of their peaceful co-existence. This has led me to a pluralistic perspective of ethnicity, race and culture where prolonged contact presents the possibility of union rather than struggles between different people. In my case, the association with dancing was as loose as the case with piano music. The authority of neither was well established and "the bond of kinship was scarcely felt" (Simons, 1901, p. 792). Travelling the world and absorbing different influences armed me at a young age to develop critical thinking skills through cross-cultural experiences. Assimilation of different values and habits has encouraged me to look at the world through a colourful prism of multiple perspectives. The scholarly language of Othering has provided the means to share a nuanced interpretation of multicultural experiences. I hope to have persuaded the reader to reconsider presumed representations of East and West.

(Abstract 201)

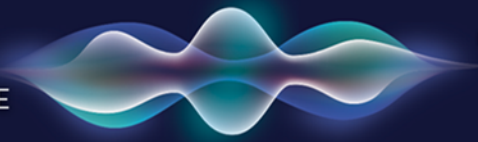
Making Music: Examining the parameters of music created with young musicians

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Abstract

Making Music: Composing with young musicians explores the creative solutions that composers implement in generating new music with the collaboration of students and teachers. The research is based on the assertion that the development of high calibre music appropriate for young people is contingent on effective practice; that is, on successful engagement among composers, students and teachers in the creative process within classrooms, studios and rehearsal halls. By examining the relationship of music composition



to music learning through the co-creation of new music by composers, teachers and their students, this research contributes to the Canadian repertoire for young people and improves the quality of educational music. The students gained knowledge of the creative compositional process and consequently developed communicative, listening, sight reading and performance skills. Composer and teacher feedback facilitated a healthy exchange of musical ideas. Teachers learned new pedagogical strategies while valuing the creative compositional process. Through a non-sequential compositional process of brainstorming, writing, revising and editing, the students also contributed ideas pertaining to the overall structure of the piece, as well as the thematic, melodic, rhythmic, and instrumental aspects of the compositions.

Keywords: music composition; educational music; music pedagogy; musical creativity

Purpose of the Research

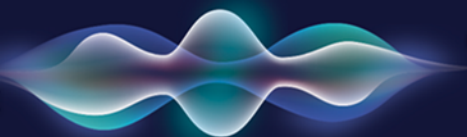
Currently, there is limited Canadian music available for students enrolled in school music programs due to a lack of familiarity by composers of educational music, the perception by them that music for young musicians is of lesser quality than music written for professionals, very few composition commissions for school music programs, and the dominance of American and European music in schools. The purpose of this study, entitled *Making Music: Composing with Young Musicians*, was to obtain an in-depth understanding of how composers can collaborate with young musicians and their teachers to create educational music. The principal question was "How can co-creation of new music by professional composers in collaboration with teachers and their students promote musical development? The partners in the research project were the Canadian Music Centre (CMC) and the Ottawa-Carleton District School Board (OCDSB).

Theoretical Framework

Creativity research focuses on the four dimensions: examination of environmental factors that promote creativity; investigations of the creative process; evaluations of creative products; and assessments of creative persons (Woodman & Schoenfeldt, 1989; Amabile & Tighe, 1993). More specifically for music composition, these dimensions have been identified as the pre-requisites for composing (training, emotions, context), compositional process (strategies, techniques, sequencing), musical piece (features, style, impact), and person (characteristics, pre-dispositions, motivation) (Andrews, 2004).

Research Process

This study employed a multi-dimensional approach entitled Integrated Inquiry (Andrews, 2008). This involved nesting the secondary questions within the four dimensions of musical composition and by adopting different research protocols to answer these questions: pre-requisites: How can musical ideas be conceptualized and developed in collaboration with students? (composer record); ii) process: What musical knowledge and skills are developed when students co-create music with composers in schools? (learning report); iii) piece: What aspects of the new compositions reflect the teachers' pedagogical input? (composition commentary); and person: What do students and teachers learn from collaboration with professional composers? (teacher questionnaire). This article focuses on the findings from these four research protocols of the Making Music Project completed by the participants in the study.



Analysis/Interpretation

This study is based on pragmatism; that is, knowledge claims arise out of actions, situations and consequences rather than antecedent conditions (as in post positivism). Concern is with applications, what works, and solutions to problems (Patton, 1990). It is the problem that is most important in contrast to the method. Researchers use multiple data sources to understand the problem (Rossman & Wilson, 1985; Creswell, 2011). Pragmatism as a basis for knowledge claims is derived from the writings of Pierce, James, Mead and Dewey (Cherryhomes, 1992).

In this study, the constant comparison method was employed to analyze the data, identify patterns and integrate findings (after Stake, 1998). This approach is consistent with the pragmatic focus of the study; that is, to obtain an in-depth understanding of the relationship of music composition to music learning through the collaborative efforts of composers, teachers, and their students. Trustworthiness was achieved by employing multiple data sources (triangulation) contiguous with the four dimensions of creativity (internal validity). Further, participants and partners were involved in reviewing the interpretation of data (member checks).

Participants

The participants consisted of 18 composers and 18 associate teachers with their students in the Ottawa area, Canada's capital city. Protocols for the teachers and composers focused on the relationship of compositional strategies to the development of musical knowledge and skills. A learning report and questionnaire undertaken by teachers with their students identified the musical knowledge and skills developed through co-creation of new works, and also the impact on student and teacher learning, respectively. The composers completed a composition report which focused on the conceptualization and development of musical ideas in collaboration with the teachers and their students. They also completed a composition commentary which identified the teachers' input into pedagogical aspects of the new compositions.

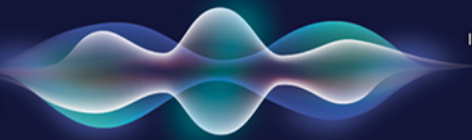
Findings

Composition Reports

Contemporary Canadian pieces are performed and studied infrequently in school music programs due to their complex nature. The Ottawa-Carleton District School Board and the Canadian Music Centre commissioned 18 composers to compose a piece of educational music during a multi-year, multi-site research project entitled *Making Music: Composing with young musicians*. The musical pieces were written in collaboration with teachers and their students. The following research question was addressed: How can musical ideas be conceptualized and developed with students and teachers? In their composition reports, the composers emphasized the importance of listening to students. Listening helped the composers understand the types of music students were familiar with, and to discern students' instrumental abilities. Musical ideas were developed when students worked individually and in groups. Furthermore, composer feedback, as well as teacher facilitation, promoted a healthy exchange of musical ideas. These findings may be of interest to music teachers, post-secondary music educators, composers, and Canadian music publishers (Wendzich & Andrews, 2019)

Teacher Learning Reports

Music of modern professional composers is often inaccessible to students. Composers, teachers and students collaborated in a study addressing the research question: What musical



knowledge and skills are developed when students and teachers co-create music with composers in schools? Data was collected through learning reports which were then interpreted using a pragmatic framework. The students gained knowledge of the creative compositional process and consequently developed communicative, listening, sight reading and performance skills. Moreover, their understanding of musical terminology, concepts and elements improved. The teachers and composers also expanded their understanding of the creative compositional process and realized the benefits associated with listening to students play. The findings will be of potential interest to music teachers, composers, post-secondary music educators, and the few remaining Canadian music publishers (Wendzich & Andrews, 2017).

Composition Commentaries

Due to the complexities associated with contemporary musical works, students seldom study and perform modern Canadian compositions. As a result, the Social Sciences and Humanities Research Council of Canada commissioned composers to compose a new work in collaboration with students and teachers of a large urban school board in a multi-year, multi-site research project entitled *Making Music: Composing with young musicians*. The following research question was addressed: What aspects of the compositions reflect the teachers' and students' input? The eighteen participants, all professional composers, commented that all teachers provided input that directly or indirectly helped shape the composition. Not only did the teachers contribute their creative ideas and knowledge about instrumental ranges, they encouraged students musically. The young musicians also contributed their musical creativity. Through a non-sequential compositional process of brainstorming, writing, revising and editing, the students contributed ideas pertaining to the overall structure of the piece, as well as the thematic, melodic, rhythmic, and instrumental aspects of the composition (Wendzich & Andrews, 2022).

Teacher Questionnaires

Making Music: Composing with young musicians is a multi-year, multi-site research project partnered with the Ottawa-Carleton District School Board and the Canadian Music Centre to commission composers to collaborate with teachers and students (age 11 to 18) to write a piece of music. This article outlines findings on the analysis and interpretation of teacher questionnaires through a pragmatic lens to answer the following question: What do teachers and their students learn musically and pedagogically from collaboration with professional composers? This new pedagogical approach of composer/teacher/student collaboration represents a possible paradigm shift—from a traditional teacher-directed approach to one that is creative and interpersonal. The approach is quite beneficial as it highlights the extent to which learning the musical compositional process can be engaging and enjoyable. It also encourages teachers to learn new pedagogical strategies while valuing the creative compositional process. The findings will be of potential interest to music teachers, post-secondary music educators, composers, and music publishers, as the data will help them write/teach/disseminate educational music (Wendzich & Andrews, 2021).

Integration

By examining the relationship of music composition to music learning through the co-creation of new music by composers, teachers and their students, this research contributes to the Canadian repertoire for young people and improves the quality of educational music. Overall, the students gained knowledge of the creative compositional process and consequently developed communicative, listening, sight reading and performance skills.

Composer and teacher feedback facilitated a healthy exchange of musical ideas. Teachers to learned new pedagogical strategies while valuing the creative compositional process. Through a non-sequential compositional process of brainstorming, writing, revising, and editing, the students also contributed ideas pertaining to the overall structure of the piece, as well as the thematic, melodic, rhythmic, and instrumental aspects of the compositions (refer to Figure 1).

There are both research outcomes and social benefits for students, teachers and composers acquired through their involvement in the research partnership. Research outcomes include: increased participation by teachers in the implementation of the creative process; development of an in-depth understanding of the relationship between music composition and music learning by composers; and a raised awareness of the dimensions of music creativity by young students. Social benefits include: the addition of 18 new works to the repertoire for young musicians for use by students and teachers; and the development of procedural knowledge to improve music composition instruction by teachers in schools, studios and post-secondary institutions.

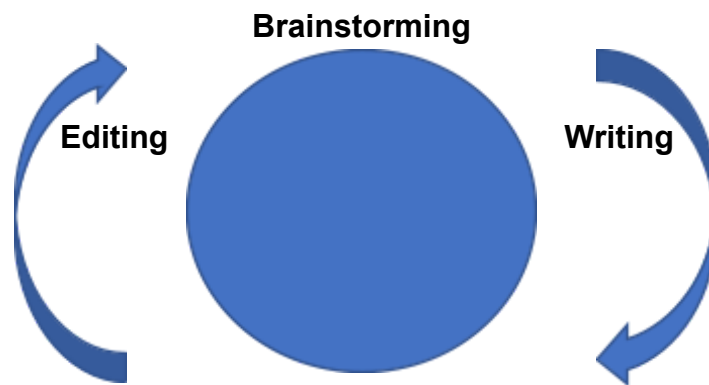
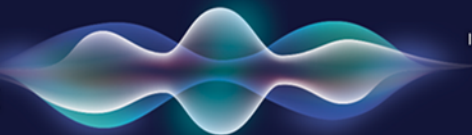


Figure 1: Collaborative composition process

Acknowledgements

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(Abstract 240)

Learning Analytics and Higher Music Education: Perspectives and Challenges

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Abstract

Continually monitoring student learning, improving tutoring, predicting academic risks such as performance drops or dropouts, assessing more objectively or understanding the behavior of student groups are some of the tasks that have been beyond the reach of music teachers. The current technology of massive data processing (Big Data) and its analysis (Learning Analytics-LA) allows to achieve these goals with relative ease. The possibility of extracting individual behavior patterns facilitates attention to diversity, reduces school dropout and failure, and opens the possibility of implementing new educational strategies. The phenomenon of data-based education has led to different types of studies. This paper reflects on three trends or fundamental perspectives in the use of the collection of massive information applied to learning and teaching. We offer an overview of research and applications of Learning Analytics specifically in the field of music education, as well as a reflection on its possible practical uses in higher music education in conservatories. For this purpose, we discuss some practical examples of how this technological methodology could be incorporated into music and music education research, and its influence on possible new educational paradigms that lead to innovation on teaching-learning process through new technological resources.

Keywords: Learning Analytics; Big Data; Educational Data Mining; Higher Music Education; Music Education Research; Self-Regulated Learning

Introduction

The increasing use of digital mediation systems in educational spaces, whether face-to-face or not, and at all educational levels, has accelerated the advance of the so-called Learning Analytics and led to an exponential increase in research that takes the information collected as a reference of the activity of the students in said educational digital spaces. Domínguez, Reich and Ruipérez (2020) postulate that the interaction between students, teachers and learning resources through digital educational tools “continuously generate a remarkable volume of data that can be analyzed by applying a variety of methodologies” (p. 33).

The phenomenon of data-based education has originated three types of studies. On the one hand, there is a large amount of research based on the mining of educational data, which seeks to analyze the behavior patterns of students and establish relationships between the variables involved in the learning process. A second trend refers to studies with a marked pedagogical approach, which use the aggregate information resulting from the analysis of the data in order to improve instructional design, enrich teaching methods and better understand the role of educational agents. Finally, there is also a significant number of research that focuses on the institutional derivatives of the use of data and aims to develop frameworks to improve strategic decision making, organizational design and curricular policies (Domínguez, Reich and Ruipérez, 2020: 34).

In line with the increase in research around educational data and data-based algorithms, concern has arisen about how to handle all this information because educational algorithms are very intrusive: they directly influence the practices of educational agents and determine the student learning (Hartong and Förschler 2019). In addition, in the development of data-driven education it is essential to consider aspects such as cognitive biases, cultural variables and questions related to the skills of users. Shibani, Knight, and Buckingham Shum (2020) warn of the importance of exploring not only what can be done with data, but also if it should be done, how it should be done, and how it fits into existing learning ecosystems.

Other emerging aspects in relation to Learning Analytics (LA hereinafter) are the political and ethical questions that can be raised in data-driven educational practices. Domínguez, Reich and Ruipérez (2020) warn of the existence of a growing concern about ethics and the misuse of data. Faced with these fears, which were also experienced during the beginnings of the use of artificial intelligence and which now focus on digitally mediated education, Barocas and Boyd (2017) suggest the need to rely on comprehensive analytical approaches, considering all the planes that are part of an educational process.

It is interesting to observe how there has been a departure from the main topics on which the learning analytics initially focused (enrollment rates, drop-out rates, evaluation follow-up, etc.), and which were closely related to the aggregation of large volumes of data from learning situations (Domínguez, Reich and Ruipérez, 2020). Currently, learning analytics are advancing towards other educational topics that did not have a prominent role in the field of data-based education and that are now fundamental pieces, as will be shown in the following sections.

Some previous definitions

Current technology resources seek to improve and optimize students' learning experiences by adapting or intelligently using the information gathered about students, their environment, and their interactions. The use of mass information collection applied to learning and teaching has been approached from three different perspectives (Atkinson, 2015):

Academic Analytics (AA) aimed primarily at the use of information to improve organizational efficiency; Aspects such as the way in which teachers use the teaching space, the popularity or impact of a certain program, the individualization in the offer of instructional modules, etc...contribute to improving the training offer of the institutions. For example, Louisiana State University (LSU, 2019) uses AA for departmental and programmatic evaluation and expansion, departmental peer comparisons and benchmarking or the evaluation of new program proposals. Academic analytics refers to “analytics used to help run the business of the higher education institution” (Oblinger, 2012:10). It is used to describe the intersection of technology, information, management culture, and the application of information to manage the academic enterprise (Goldstein & Katz, 2005).

Educational Data Mining (EDM) uses the knowledge of machine learning and the way in which they predict events or behaviors to predict student behaviors in different circumstances, which in turn will influence the way in which teachers organize o design teaching and evaluation.

Castro, Vellido, Nebot & Mugica (2007) propose that EDM is applicable to the evaluation of student learning, evaluation of online course materials, management of feedback from

students and teachers of online courses and models for the detection of student learning behaviors. The most frequently used analysis methods are (Algarni, 2016): prediction, clustering, relationship mining, distillation of data for human judgment, discovery with models and Social Network Analysis (SNA).

Learning Analytics (LA) shares with EDM the quest to improve student learning experiences and individualized adaptations, but LA focuses more on knowing how students learn -which are the most successful behavior patterns-, how those patterns relate to social variables and predicting future behaviors in relation to learning. Atkinson (2015) and Siemens, (2012) define Learning Analytics: is the process of collecting, measuring, analyzing and reporting data on the context of the learner and the learner's engagement with learning with a view to optimizing both.

LA has been used in various educational settings: identifying students at risk of dropping out or underperforming (Foster & Siddle, 2019), assisting students to improve their vocational choices (Gedrimiene, Silvola, Pursiainen, Rusanen & Muukkonen, 2019), prediction of student performance (Huang, Lu, Huang, Yin & Yang, 2019), patterns in collective problem solving (Hwang & Chen, 2019), change in teachers' beliefs in training (Sun, Hu, Wan, Fu, & Wu, 2019), the analysis of Personal Learning Environments (Casquero, Ovelar, Romo, Benito & Alberdi, 2016) or the dropout of students in distance education (García-Tinizaray, Ordoñez-Briceno & Torres-Díaz, 2014). Kumar & Kumar (2018) review different uses of LA in the academic field.

The challenges of Big Data applied to education and educational research

In the last decade the analysis of educational data has grown remarkably, but the transfer of such research to the practices of educators in the classroom or its impact on institutional policies has been quite limited (Domínguez, Reich & Ruipérez, 2020). In this sense, during the past decade, rather than finding solutions, challenges have been identified, organized fundamentally into three areas: research, educational practices and institutions.

Fisher et al. (2020) outline current challenges of accessing, analyzing, and using Big Data. Such challenges include balancing data privacy and protection with data sharing and research, training researchers in educational data science methodologies, and navigating the tensions between explanation and prediction. The challenges in the field of educational practice focus specifically on solving the problem of the lack of sufficiently validated results and the strong theoretical base of the studies that has led to a low transfer of research to practice (Domínguez, Reich & Ruipérez, 2020). It is not yet common to find educators applying learning analytics in their classrooms. As Mandinach and Gummer (2016) emphasize, the main challenge that arises is the training of teachers in management skills and interpretation of digital data.

Accessing Big Data

Educational data exist in a wide array of formats across an even wider variety of platforms. In almost all cases, these platforms were developed for other purposes, such as instruction or educational administration, rather than for research. Many commercial platform providers, such as educational software companies, have no interest in making their data available publicly. Other companies make their data available in a limited way but have not invested resources to facilitate access to data for research. Only a small number of platforms, such as Cognitive Tutor and ASSISTments, have made high-quality data broadly available. Parents, educators, and others are rightly concerned about companies' ability to mine large amounts of

sensitive student data and fears have been raised that student data that are inappropriately shared or sold could be used to stereotype or profile children, contribute to tailored marketing campaigns, or lead to identity theft (Strauss, 2019).

Analyzing Big Data

As with accessing Big Data, analyzing Big Data also poses challenges regarding researchers' skills. Few education researchers know key programming languages used for data science, such as Python. Education research graduate programs seldom offer instruction in the data-clustering, -modeling, and prediction techniques used to analyze Big Data (Fisher et al., 2020) but, in general, there is a lack of training in Big Data analysis for educational research in general and in music education in particular.

On the other hand, numerous investigations develop systems without considering the target user as part of the design, and end up implementing prototypes that do not meet the requirements or interests of the people who are going to use them (Domínguez, Reich & Ruipérez, 2020). To solve this, Dollinger and Lodge (2018) propose the implementation of systems and applications of learning analytics whose design is focused on the user, as well as the involvement of that user -teachers, for example- in co-design sessions.

Using LA

Finally, even if we successfully access and analyze Big Data, additional issues arise related to how such data are used. One of them is that the applications of learning analytics can be systematically integrated within the infrastructure of educational institutions (Tsai & Gavesic, 2017). These infrastructures must incorporate options to ensure privacy so that data can be shared by students and teachers in a transparent way. Leitner et al. (2019) point to the need to create work units or teams focused on learning analytics, within the departments or institutional units dedicated to educational innovation. In this way, the different points of view of the multiple actors that participate in the learning analytics process (researchers, teachers, students, educational technologists and administrators, among others) could be channeled, facilitating synergies between all of them.

Curricula in graduate schools of education overwhelmingly favor research methods that fall within one of two major paradigms: quantitative measurement and hypothesis testing or interpretive qualitative research. Analyzing Big Data draws on an alternate research paradigm to those used in computational social sciences. Only a handful of doctoral programs in education offer the kinds of research training necessary to develop the educational data sciences of the future, and even fewer offer instruction related to the ethical, moral, and privacy dimensions of working with Big Data. There is too little interdisciplinary training across these fields and education.

Traditional models of education research privilege the sole author. In contrast, research projects that involve data mining typically privilege team science, with junior and senior scholars, and open science, so that large data sets can be combined and reused for new analyses and replication.

Examples of use of LA in teaching-learning music

1. Using LA to investigate Self-Regulated Learning (SRL) in Music Teacher Education

Montgomery, Mousavi, Carbonaro, Hayward & Dunn (2019) report research on how four-year undergraduates use SRL in a Blended Learning (BL) environment. Self-regulation is especially important when learning in virtual and face-to-face (BL) environments. Determining when to connect, for how long, how to explore the materials, etc., are personal decisions of the student that must be self-regulated to achieve their learning objectives. In the aforementioned experience, the authors tried to investigate SRL patterns in a music teacher training course and also whether these patterns had any relationship to the performance of participating students. The analyzed group consisted of 157 participants in the 4th course of a Bachelor of Education in the BL modality with a distribution of Face to face (F2F) activities (50%) and online (50%).

2. The Objective Ear: assessing the progress of a music task

Burrows and Kumar (2018) have developed a tool called Objective Ear; Starting with a couple of performances of a piece of music returns an accurate and reliable assessment of progress between performances. The system consists of two components: an evaluator and a classifier. The performances of the piece are entered into the evaluator in MIDI format through a keyboard. The evaluation component tackles an analysis of the piece and each analysis provides a measurement that can be compared with other measurements of that piece executed at a different time. The analysis of each piece was based on the following parameters: Tempo, pitch, rhythm errors, flex-rhythm, ornaments, and error Groups. The result of the comparison (subtraction between measures) is the input of the classifier that provides a result in terms of worse, equal or better. The precision (reliability) of the system when compared with other sources of assessment was in the range 0.81-0.86, which indicates the feasibility of the proposal.

3. Musix

Guillot, Guillot, & Kumar (2015) present a learning analytics tool for music: MUSIX. Basically MUSIX is a music self-learning tool that allows students to learn at their own pace and monitor their progress; this makes it easier for students to detect their learning difficulties and solve them in an individualized way. As students monitor their progress and grow in autonomy, their self-confidence and motivation to learn increases. Based on the information collected, MUSIX forms study patterns, identifies what skills are present in the student's activity, predicts the growth / development of the skills and competencies involved in learning, and measures the students' self-regulation efforts regarding their learnings.

Reflections on possible applications of Learning Analytics in Higher Music Education

An initial approach to the potential in Music Education of Learning Analytics leads us to imagine its possible practical applications in different fields and levels. It is not difficult to think about the usefulness of the Big Data collection in harmony, composition, conducting, analysis, instrument, virtual classes, teacher training and its influence on possible new educational paradigms that make a greater impact on self-regulated and reflective learning, Long Life Learning, improve tutoring, improve student monitoring, self-assessment, imitation of models, enhance creativity, etc.

Some concrete proposals for the application of LA in the learning process of music students, and aimed at strengthening autonomy in study and self-assessment, could be, for example:

1. Chamber music rehearsals to test the degree of progress when they rehearse in groups without a teacher, as well as the relational structure within the group and planning within the rehearsal (when, where, frequency, duration, etc.)
2. Individual study of the instrument

3. To carry out exercises of stylistic harmony or historical composition where the tool allows to identify harmonic and musical gestures inside or outside a certain style. Also for self-assessment of traditional harmony exercises and scholastic counterpoint.
4. The imitation of sound models (quality, projection, acoustic characteristics, etc.) with comparative analyzes between the real sound and the previously stored sound to be imitated (introduced by the teacher, or by a specific recording)
5. Individual and collective work with exercises designed to practice tuning, interval intonation, rhythmic pulse accuracy, transposition, sight reading, and a long list of learning and improving training in multiple musical parameters.

The collection of data from all these experiences would allow teachers and music institutions to investigate the learning methodologies, the ways in which students learn and the frequency of work, among many other things. The results of the application of the analysis of this data would allow to improve tutoring and follow-up of music students. In this context, LA can also be a valuable tool for self-assessment and peer-assessment.

In relation to music research, LA has great potential as a tool in artistic research where the subject and its learning is the object of study. LA could endorse the perceived improvements - or not - in the results of artistic research, thus avoiding the subjectivity inherent in this research paradigm, increasingly on the rise in music and other arts. The use of Big Data and its analysis in the field of higher music education could help shed light on issues related to the music profession. Understanding the demands of the music market; identifying the possible job niches, not too explored until now; being aware of some of the keys to the success or failure of graduated students, or having the knowledge of the real difficulties they face in their work as musicians of the XXI century, for example, could have a great impact on the design of conservatory training programs and the adaptation of them to authentic needs of future professionals.

In the field of music teacher training, research based on Big Data and LA is also seen as an innovative technological incorporation that can promote an updating of the training curriculum, especially at a methodological level.

Conclusions

The availability of Big Data offers exciting new threads of research and the opportunity to add additional perspective to existing threads in education, in general, and particularly, in music education. All types of Big Data in education offer affordances and challenges. On the one hand, the ubiquity of Big Data and LA suggests an increased emphasis on preparing students in educational graduate music programs to utilize data science methods, as well as a committed push toward open science and research structures that favor collaborative teams, to improve our field's capacity for mining Big Data for education research. On the other hand, to achieve the above, it is necessary that conservatories implement the mechanisms to be able to access this data, and instruct the educational community how to use them, as well as promote the design of tools that allow them to personalize data searches and applications.

There is no doubt that, given the potential benefits of mining Big Data in music education, it is worth our effort to begin addressing these challenges. There is still a long way to go before LA can be used in higher music education research as a common research paradigm, but the first steps have already been taken and we should rethink the use of new technologies, and

more specifically Big Data mining, in its application to educational improvement, specifically in the arts.

In summary, the use of LA in the educational process concerns all the actors involved, and to ensure the synergy of all of them is essential, on the one hand, the training of teachers in data analysis and the design of tools designed for users and, on the other hand, the creation of specific work units or departments to jointly address the use of digitally obtained data.

(Abstract 242)

The Musical Playground as a Vehicle for Community Development

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Abstract:

This paper outlines a case study of a musical playground in New Orleans, the Music Box Village, examining its social impact on multiple aspects of the community. The purpose of this paper is to share the scholarly literature as it relates to the three key constructs inherent in my research: creative expression, alternative educational space, and community development. I begin by tracing the history of creative music and sound art over the last century, and how it links specifically with the Music Box Village, New Orleans. From there, I discuss the social change that came as a byproduct of this shift in music-making. Later, I discuss play, free play, music education and how they fit into an alternative educational space; the musical playground. Next, I outline the history of playgrounds, playground learning and musical architecture. Finally, I end this paper with my research findings and areas for future research in the field.

The Music Box Village in New Orleans is a one-of-a-kind musical playground where you play the repurposed houses as musical instruments. The unique space attracts international and local performing artists for on-site concerts; they offer educational programs, and more. Their educational model also resonates with children on the autism spectrum and has become a pillar for community development in the Bywater neighbourhood of New Orleans.

In May 2019, I conducted my PhD research on this site in New Orleans, using a case study model, examining the benefits and/or deficits to installing an interactive sound structure in a community; how one might construct a musical playground to optimize the community impact and learning; how children interact with a musical playground in both guided and unstructured experiences; who might benefit from a musical playground, including cities, schools, children, youth, special needs communities, and others; what curriculum would support a musical playground thriving in a community.

The Music Box Village grew from this ethos of repurposing damaged homes from disaster, a spin on the early junk playgrounds of Denmark.

As communities can become more seemingly disjointed, and less connected, a musical playground can help bring students of all ages together in a memorable way – through the simple act of playing together. To observe and frame the importance of free play in the

context of a musical playground, it will help justify its importance not only for rethinking music education, but also community development.

A musical playground has the potential to develop and maximize multimodal learning in children. Kids playing together on a large-scale musical playground installation will create longstanding memories, forge new relationships, ways of thinking, musical understandings all from an organic starting point of free play. Unique music-making worlds such as this are less steeped in traditional form, and replication and more focused on community learning, self-expression and social development.

The purpose of this study was to examine exactly how the Music Box Village in New Orleans functions as an educational space, and to use those learnings as an exemplar to share with other communities. Here is some of the background that has led me to this point.

I will provide an overview of the major insights of the research and offer recommendations based on them. I will also suggest areas for future research that emerged as a result of this study.

This study was focused on discovering answers to the following research question: how does the Music Box Village (MBV) musical playground function within its community? Through gaining multiple perspectives on the MBV, from documents, interviews, observing over 50 local New Orleanian grade four students playing in the space for three consecutive days, conducting surveys, and experiencing multiple events in the space in May 2019, I began to understand how the space affected its surrounding community. Run by an organization of well-informed transplants who now call New Orleans home, the New Orleans Airlift takes a holistic approach when it comes to connection and building community through the arts. As outlined in the next section, MBV is often personified, as the composer in the context of creative expression, as the teacher in the context of education, as the conduit in the context of community development, and as the canvas for radical collaboration, where the larger community all pitch their ideas in to the village.

Learning how the MBV came to fruition, seeing the way it operates, behind the scenes as an organization, and as a front-facing tourist attraction to the public, it begs the question, what are the general makings of such a space that could be replicated elsewhere? General themes that emerged from my research are reviewed below, as they relate to each of my sub-questions. However, in general, I saw a willingness at every level, from each docent in the space, through to New Orleans City Hall, in wanting MBV to succeed. I saw numerous hours spent in the hot, swampy Louisiana heat, to get the job done, so that children of all ages could enjoy the space, and relish in the odd sounds it produces. I saw a willingness to make new friends through music, something all the folks at New Orleans Airlift embrace as a fundamental tenet of the organization (Martin interview, 2019), and also an ability to function within the parameters of New Orleans municipal bylaws, for the most part.

During my stay, I witnessed hundreds of smiles and evident imagination expansions, saw the odd finger get cut, but for the most part, no tears, just joy emanating from the space. The odd guitar string would break, periodic Louisiana rainstorms would flood the space, but as resilient as the city itself, the strings would get replaced each day before MBV reopened.

At a time when most arts and cultural institutions find themselves at a crossroads, challenging their own possible systems of oppression and systemic racism, music education is not void of

such scrutiny. At the root of Western classical music is a hegemony of white male supremacy (Maysaud, 2009). Bartel (2004) outlines the power structures still prevalent in music education, where the conductor leads, and the design of our teaching institutions perpetuate oppression. There is a reckoning in music education, where repertoire and educational models need to be closely examined.

In line with Lundquist (1982), Howard (2020) asserts “despite this growth of interest in diversifying the content of and even decolonizing pedagogical practices in music education” (p.3) very little research has been done in schools and community. From a general music curriculum obsessed with structured, polished, performance-based Western classical music, and teaching structures that support it, music education needs a rethink. For example, the typical disciplinary tactics used to discipline a student with behavioural challenges could perpetuate the power imbalances, and race inequities of our overall society (Ladson-Billings, 2020). Therefore, we must look to other models, and spaces to consider new directions for the field.

The Sub-Questions

Q1. How does The Music Box Village function as a safe space for creative expression?

Sub-question one explores the context of creative expression and how the MBV fosters unique artistic voices. “Creative expression” in the context of the multiple examples I witnessed, where the MBV provided opportunity for decision-making, and functioned as a creative hub in New Orleans, a venue for experimental musical performance.

As part of the creative process, Kratus (1990), claims that pupils engage in the following types of creative activity: exploration, improvisation, composition and creative performance. The MBV engages these different types of creative activities through their modular design, where the playground by day can also function as a music venue or lecture hall. On multiple occasions, I witnessed the space function as co-composer, where the design and layout of the unique musical instruments influenced the musical output.

The MBV encourages a space for creative expression and new ideas, through presenting progressive social concepts using sound art as the medium. Through diverse cultural events, their own unique brand of rebellion in music, and community-building, the MBV inspires creative works, inspiring audiences of all ages to participate in the adventures they help foster.

From the research, particular themes were evident which pointed to the MBV as a space that fosters creative expression. These themes include their post-modern approach to repurposing old Creole cottages into new musical houses; the battle in the village between experimentalism, traditionalism and the microcosm the MBV is for experimental music within a city that is steeped in traditional jazz history; celebration and commemoration within the space; honouring New Orleans and finally, the organization itself, as a collective that propagates creative expression.

Q2. How does The Music Box Village function as an educational space? With

sub-question two, the MBV functions as an alternative educational space, from its multiple purposes as a music venue, presentation space, playground, it presents a unique opportunity to develop new curriculum to help maximize its potential for affecting social change, within the City of New Orleans and beyond as a tourist attraction. Created by experts in the field of

sound art and experimental music, delivered by the collective New Orleans Airlift, the space itself, in this instance, becomes the teacher, through its well-thought design.

The MBV functions as a space that naturally teaches sound art to students of all ages, and through this exploration, reflects many of the different forms of intelligence, as per Howard Gardner (1999). This musical adventure playground inspires invention, it sparks the imagination, much like a children's museum model might, and it teaches sustainability, and other important STEM-related pillars, such as collaboration, physics, and math.

Some of the themes that were derived from my research in this area include how informed the entire team were in delivering this unique form of sound art to children of all ages; the recurring theme of structured versus unstructured forms and how this plays out in music education; free play and the importance of risk in play (Almon, 2013), where the space itself acts as the third teacher; and finally the impact left of the participating children, who were inspired to invent their own musical instruments in the end.

Q3. How does the Music Box Village function as a vehicle for community development?

The third construct I analyzed is community development. The MBV helps build community through every project it launches or supports. MBV is a space that helps foster new relationships and ideas, similar to an actual village (Martin Interview, 2019). They have a strong ability to encourage unforeseen collaborations, crossing disciplines, creating new artforms and communities in the process. Themes derived from the research include community music; assets as they relate to the MBV within the City of New Orleans including the space as connector, community-mindedness, intergenerational and intercultural, commemoration, and disruption; finally, the theme of knowledge-sharing and how the MBV becomes an exemplar for other cities to adopt.

What I observed during the case study, from lectures on the history of Black spirituality, to how the entire space was born from the disaster of Hurricane Katrina, I learned how important the arts are as a community healer. This musical playground connects unobvious communities, fostering social harmony (Spiro, 1965) through using odd sounds and experimental music.

Acts of protest, commemoration, and placemaking are also highlighted throughout the playground.

Recommendations for future stakeholders to try and replicate such a model as MBV are as follows. In my participant interview list, I spoke with founding members, related sound artists, a City of New Orleans official, a board member, academics, parents, park visitors consisting mostly of student participants, makers and musicians who perform in the space. In each interview, I found a willingness and belief in the project and its merits that help the project shine. Everybody I interviewed treated MBV just as that, a genuine care for the village aspect of it. Everybody adds their special voice and ways of supporting the project, whether it be fundraising through a board member, or approving a permit from the city's Historic Landmark Commission. None of this would thrive without the leadership and vision of its founders, Delaney Martin, Jay Pennington, Taylor Lee Shepherd and Swoon. MBV simply would not exist were it not for their persistence, their diverse paths to knowledge, and their refined sense of collaboration.

Lennard and Lennard (1992) call for a community model that is embraced by MBV in New Orleans, where parents, unknown adults and children of all ages mix and learn together in an inspiring public play space. Their approach also links to Vygotsky (1933), who ties play to child learning, as it includes language in play as an important tool for social development. Meta-Theme: Radical Collaboration

The MBV brings unique thinkers together in a safe collaborative space that helps breed new relationships, projects, and unforeseen paths of inspiration. Without this space acting as the conduit, and its supporting organization the New Orleans Airlift, helping mobilize these relationships, they might not otherwise occur. The organization has a touch of care, helping build trust in the collaborators, a necessary ingredient in the model, according to Louis (2013).

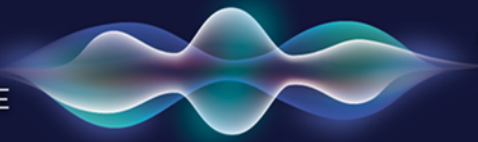
Pennington (2019) outlines how the initial performance between avant-garde musician Peaches and local New Orleans artist Tif Lamson led to further collaborations between the two artists, with tours and musical direction and more. A deeper relationship forged from this initial spark in the village. Another example, among many, where new collaborations grow from the original spark project started by MBV and the New Orleans Airlift. When I interviewed Andrew Schrock in Detroit (2019), he mentioned that he and Klaas Hubner are still in touch about new collaborations in Europe, continuing on their initial project, which all began at MBV with Chateau Poulet.

What makes their collaborations radical is the level of innovation, one of the only places in the world to be producing these unique musical houses, the MBV forges collaborative paths that would not otherwise occur. Crossing renowned Mardi Gras Indians like Big Chief Darryl Montana of the Yellow Pocahontas with New York kinetic sound artist Gamelatron (aka Aaron Taylor Kuffner), Jeff Poree Plastering and Studio Inferno Glass is just another example of community-building through their radical collaboration model. This inside out concept of trying to ensure somebody local gets paired with somebody from outside the city, helps import and export creative concepts and fosters new paths and future artistic collaborations. When I reflect on the impact made on the Louisiana Deaf community, through the project Elevator Pitch, it is evident that their work begins with the notion of community and providing access. MBV and New Orleans Airlift use space to act as the seeming conduit of community connection, as it is the backdrop to unlocking new directions between the new creative teams they orchestrate.

Where most organizations or funding bodies would not support such experimentalism, this is an area where the MBV thrives in creating new artistic communities, built on risk and trust. The entire MBV team embrace the sharing of the village, checking their egos upon entry. Their anything-goes mantra helps it expand as an actual healthy village would. As Martin (2020) asserts “collaboration, when really done right, when prefaced on the idea of leaving ego at the door and being open to adaptation, can be a tool for artistic expression, but also community building” (Martin email, 2020).

Implications for Future Research and Curriculum Development

As this study was conducted at one site in New Orleans, Louisiana, findings cannot be generalized beyond the one institution in the New Orleans Airlift. However, future research on similar spaces, even linked to the same organization or other sound art installations could be pursued. Other business models that differ from the New Orleans Airlift are of interest, for



example, the for-profit model of Meow Wolf in Santa Fe was cited numerous times by the Airlift staff in interviews. What could be learned from these alternate business models? In chapter 5, I touch on the fact that I had intended to observe children with behavioral challenges and disabilities, as they might benefit significantly from accessing a musical playground. There is a need for more in-depth study in this area.

In my interview of Daniel Sharp at Tulane University, I quickly learned of the book he was writing on Music Box Village, and the musicological study he was doing on the site, from a popular music perspective. This quickly made me realize the vast number of studies that could be done on a musical playground, specifically the MBV, looking at it from multiple perspectives. Perhaps looking at their outpost sites, the organization in greater details, their collaborative artistic model, how the trauma of the COVID-19 pandemic might inform their organization, as they were born out of post-Katrina New Orleans, so their new take on public space, public health, and community music would be of interest.

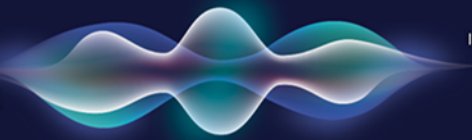
New research could continue to focus on the participating children's experience, and their future musical inventions. It could observe the collaboration in touring musicians, coming from a more conventional background, as they prepare to perform concerts in the space, and how they approach the unique challenges the space presents.

It could also trace scaffolding techniques and design different play assignments for students in the playground. Additionally, future research could relate to the socio-economic structure of affected communities as it relates to access and engagement of such a space.

There is a need for future study of the impact of alternative music education spaces, such as the City Museum in St. Louis, the hydraulophone (Mann, 2007) at the Ontario Science Centre, and other international musical installation sites outlined in Chapter 2.

Finally, I discussed a need for complimentary curriculum development for alternative music learning sites such as these, to help educators guide and foster creative ideas from the unique play and projects that can spawn from such a place.

Imagine a world where musical playgrounds became as ubiquitous as actual playgrounds. This study charts a path for municipalities to consider taking such a step, to help them continue developing in unique and creative ways. The MBV in New Orleans provides such an example, acting as a healing agent for the city. As an organization, it takes on a leadership role in the community, in hosting important dialogues around race, religion, culture and more. The space pushes the boundaries of music and celebrates the rich musical traditions of its city. It is the perfect reflection of what New Orleans can be, as it honours its past, while helping the city look forward, to what it can become. Imagine an Airlift, or MBV in every city, where the uniqueness of each city could help shape the playground and programming within. This study has aimed to highlight this great potential. The next step gives distilled suggestions for parents (elements to consider when setting a play date), musicians (new methods and ways to make music together, from the communal playground, to musical installations and other forms of creative expression, referencing Elevator Pitch and the deeper purpose of why we create), educators (showing children a new way to make music, in a completely different space, multidisciplinary model), and city councils (showing them there is a better way to create together and grow closer neighbourhoods because of spaces like this one), to strive for more inclusive, collaborative modern cities.



One Final (Ugly) Note

The Italian proverb, “tutto il mondo è paese” or “all the world is a village” comes to mind, as throughout this research experience, an experimentalist such as me got to feel a lot closer to my community by bonding with the fine folk at New Orleans Airlift. I hope that the rich model presented by the Music Box Village can be drawn from and help improve cities and neighbourhoods around the world, one ugly note at a time.

(Abstract 245)

Making Music Visible in the Curriculum

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Long Abstract

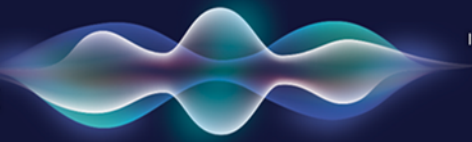
Throughout the United States and North America, in particular, music educators have struggled to make music visible in school curricula and affirmed as a basic or core subject in which all students should develop knowledge and skills, or they will not be prepared for a successful life (Bonamici & Schock, 2014). Reading and math as curricular subject areas have not had such a struggle. The academic subjects that are deemed most important to a child’s education have been given various labels: basic subjects, core subjects, STEM (Science, Technology, Engineering, and Math) subjects, and most recently well-rounded subjects in the United States (Leonard, 1999; Summary of Goals 2000 Educate America Act, n.d.; Public Law 89-10 – H.R.2362, 1965; & Public Law 114-95, 2015). Regardless of the label, gaining visibility as a subject that is important to a child’s education is not an easy process. It is the purpose of this paper to identify both group and individual advocacy actions that can make the work and voices of music educators around the world more visible, more effective, better understood, and more influential. In this paper, a case study approach will be used to examine the context of the struggle for music’s visibility in PreK-12 school curricula in the United States. After an historical review of how music became visible in the curriculum, the paper concludes with a discussion of specific advocacy actions that suggest how music educators from around the world can become a “visible voice” through advocacy in their communities, state, and nation for music as part of a basic/core/well-rounded curriculum. These implications include: (1) recognizing that the fight for visibility does not occur in a vacuum, (2) outlining a firm foundation for music’s inclusion based on the needs of students and society, (3) presenting solutions as well as questions, and (4) aligning with allies that have shared goals.

Short Abstract

For music to become a viable and visible part of the curriculum, it takes many determined voices advocating individually and together. The purpose of this paper to identify both group and individual advocacy actions that can make the work and voices of music educators around the world more visible, more effective, better understood, and more influential. These advocacy actions are grounded in a case study of the framework of music’s struggle for core subject status in the United States that may suggest how music educators from around the world might become a more “visible voice” to promote the idea of “music for all.”

Keywords

Advocacy, National Music Standards, Core Curriculum, & Well-Rounded Curriculum



The struggle for music to become visible in the curriculum, to become a subject recognized as important enough to be affirmed as one in which all students should develop knowledge and skills, or they will not be prepared for a successful life, is a struggle that has echoed throughout the United States and North America for many years. Reading and math as curricular subject areas have not had such a struggle. For these subjects, visibility has not been an issue. Governali (1983) reported that the emphasis on student needs and interests; humanness; and the “whole child,” so prevalent in the 1960s and 70s, were replaced in the 1980s (and three decades that followed) by “. . . a return to a time when schools were primarily interested in the so-called academic areas and their goals revolved around the 3 R’s” (p. 564). (The three Rs, as in the letter R, Reading, wRiting, and aRithmetic, is a term that refers to the three basic skills taught in schools: reading, writing and arithmetic. What is taught in these three subjects—the content—has been considered the cornerstone of what is considered a good education in the United States, dating back to at least the 19th century.) The academic subjects that have been deemed most important to a child’s education have been given various labels: basic subjects, core subjects, STEM (Science, Technology, Engineering, and Math) subjects, and most recently well-rounded subjects.

Regardless of the label, gaining visibility as a subject that is important to a child’s education is not an easy process. It is the purpose of this paper to identify both group and individual advocacy actions that can make the work and voices of music educators around the world more visible, more effective, better understood, and more influential. A case study approach will be used to examine the context of the struggle for music’s visibility in PreK-12 school curricula in the United States. After an historical review of how music educators became a “visible voice” in having music recognized as part of what every young American should know and be able to do and thus became a part of a well-rounded curriculum for students in the United States, specific advocacy actions that suggest how music educators from around the world can become a “visible voice” through advocacy for music as part of a basic/core/well-rounded curriculum will be explored.

The History of Music’s Struggle for Curricular Visibility

As previously mentioned, the academic subject areas considered to be most important to a child’s education have been given various labels over the last decades—basic subjects, core subjects, well-rounded subjects, etc.—in the United States. Regardless of the label applied at the time, some scholars trace the origins of music’s struggles to become just as necessary for inclusion in the curriculum as reading and math back to the Elementary and Secondary Education Act of 1965 (Nichols & Berliner, 2007). However, practically speaking, music as a visible part of a basic/core/well-rounded curriculum in American schools could be said to have begun in the 1980s with the publication of *A Nation at Risk* (1983). This report was very critical of American schools, criticizing them for spending too much time in the process of socialization of students and lacking high standards. The business community, led by the Business Roundtable (n.d., About Us), an association of chief executive officers of America’s leading companies working to promote a thriving U.S. economy, led the charge for change by advocating a return to a curriculum that emphasized the 3 R’s, insisting on high standards, and demanding accountability.

Music as a Basic Subject

Thus began the music education profession’s effort to have music become one of the subjects recognized as important enough to be emphasized in the curriculum at the same level as reading, writing, and mathematics. In 1989, one of the most important events that led to the

designation of basic subjects (later referenced as core subjects) was the Charlottesville Education Summit, a meeting of the nation's governors and President George H. W. Bush. Leonard (1999) summarizes the importance of this meeting:

Based upon the deliberations there [Charlottesville], six national education goals were developed. They were first announced by President Bush in his State of the Union speech on January 31, 1990; six months later, the National Education Goals Panel (NEGP) was established to monitor progress towards the goals. The six national education goals became one of the centerpieces of educational reform in the 1990s and were incorporated in the Goals 2000 legislation in 1994 (which also added two more goals) (p. 1).

In these six goals, reading, science, math, literature, history, and foreign language study were listed in content goals that were to be the focus of the basic K–12 curriculums. Neither music nor the other arts were among the basic subjects listed.

In the years between the Charlottesville Summit and the passage of Public Law 103-227, the 2000 Educate America Act (Summary of Goals 2000, n.d.) in 1994, the arts community, led by the Music Educators National Conference (MENC), worked diligently to write the National Standards for Arts Education (Music Educators National Conference, 1994a). The acceptance of these voluntary standards by then Secretary of Education Richard Riley was a key factor in having the arts designated as a basic subject in the Goals 2000 legislation, meaning that students' mastery of skills and concepts in these basic curricular areas was crucial to their success in leading meaningful and productive lives in the future. Language arts, math, and science were included in this list of basic subjects from the Charlottesville Summit, but education in the arts (including music) was an addition to this legislation.

Music as a Well-Rounded Subject

In the beginning of the second decade of the twenty-first century, some two decades after music struggle to become visible in the curriculum as a basic subject, the battle raged again. The labels and the setting were different, but the issue was the same: Are music and the arts important enough to be considered along side reading, math, and science as curricular subjects in which all young Americans should have knowledge and skills?

In 2012, Barack Obama was President of the United States, and there was a great deal of uncertainty about what should be the focus of education in this country. Does core learning occur only in Science, Technology, Engineering and Math, the STEM subjects; or is there room in the "core" of learning for content in the Arts & Humanities? In fact, the National Association for Music Education (NAfME) was so concerned about the STEM focus that it worked with other arts advocacy groups to shift attention away from STEM toward STEAM, i.e., including the Arts along with Science, Technology, Engineering, and Math, as a part of "Core Learning" or the subjects that should belong in the "Core" of the curriculum. NAfME and its advocacy allies, working "behind the scenes," even went so far as to organize a Congressional STEAM Caucus, initially headed by Congresswoman Suzanne Bonamici (Democrat) and Congressman Aaron Schock (Republican), the purpose of which was to change the acronym vocabulary of education from STEM to STEAM to recognize the benefits of both the arts and sciences to our country's future generations (Bonamici & Schock, 2014, article 6). The STEAM Caucus; the acceptance of the National Core Arts Standards (National Coalition for Core Arts Standards, 2014); and the efforts of countless individual parents and arts advocates created a strong policy framework that eventually led to

the passage of Public Law 114-95 (2015) labeled the Every Student Succeeds Act (ESSA). It is important to note that once again the acceptance of National Standards for what is important to know and be able to do with respect to music played a key role in the passage of this legislation.

ESSA, signed into law in 2015 as a reauthorization of the Elementary and Secondary Education Act (Public Law 89-10 – H.R.2362, 1965) passed some fifty years earlier, recognized music alone, for the first time in law, as a subject important to a well-rounded education ((Public Law 114-95 [S.1177], 2015, December, Sec 8002, p. 2980). (Note that the label core learning was replaced with well-rounded education in the legislation. Space does not allow for a detailed explanation of this descriptor change; but in brief, the term core learning was replaced because of its connections with a national curriculum and high stakes testing.) The designation of music as a well-rounded subject was important for music's visibility, not only because it gave music educators a “legitimate seat around the curriculum planning table” in schools districts across the country, but also because it solidified the acceptability of the practice of music educators making applications for professional development grants authorized by the reauthorized Elementary and Secondary Education Act—ESSA—that could improve children's well-rounded development.

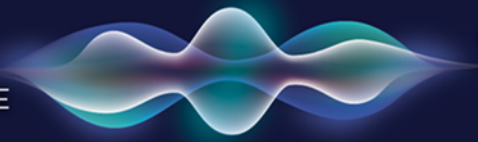
Lessons Learned from the Visibility Struggle in the U.S.

What can be learned from music's curricular visibility struggle in the United States that might be applicable to music educators across the world? Are there both individual and group advocacy actions that can make the work and voices of music educators around the world more visible, more effective, better understood and more influential? Yes, there are implications to be shared from U.S. music educators' struggles that could be applied in other parts of the world. First, it must be recognized that the fight for visibility does not occur in a vacuum. Secondly, music educators need a firm foundation for their argument for visibility based on the needs of students and the needs of that segment of society most closely aligned with schools—the community. Another consideration is that those who advocate for change should not only pose questions and define issues, but they must also present solutions. Finally, it must be understood that the chances for success in the visibility struggle are greatly improved if the cause can be aligned with the goals of other allies.

The Struggle for Visibility does not Occur in a Vacuum

The process of educating students occurs as a living, vibrant part of life that is happening all around us. Identify those issues and forces that are shaping the political discourse surrounding education at the particular point in time and determine how music and music education might contribute to the resolution of the issues identified. In the last decades of the twentieth century, American schools were under fire. They were being criticized for spending too much time in the process of socialization of students and lacking high standards. Music education leaders in the U.S. recognized this discontent and took steps to become involved in crafting a set of National Music Standards (Music Educators National Conference, 1994b) that helped to define the high standards for which music educators were striving. This led to the designation of music and the arts as a basic subject in the Goals 2000 legislation and a voice for music educators in the schools.

Some twenty years later, music education leaders again recognized that the education rhetoric was all about the STEM subjects. Again, a revision of the National Music Standards (NAfME, 2014) and the passage of ESSA led to recognition that student skills other than academic achievement and ability in the STEM subjects, predict a broad range of academic



and life outcomes. STEM discussions became STEAM discussions, and music became a viable and visible part of a well-rounded education. Understanding the environment in which lack of visibility issues arise can increase the chances to enhance visibility.

A Foundation for Visibility Based on Needs

Many writers that discuss curricula development (Tyler, 1950; Taba, 1962; Danielson, 2007; & Marzano & Toth, 2013) suggest that the curriculum development process should begin with identifying—making visible—the needs that the curriculum will address. This is one of the lessons learned by U.S. music education leaders a few years ago in 2015 when they wanted music to be labeled as a well-rounded subject that all children in the U.S. should encounter and understand. The leaders pointed out that music was needed by students because it is item so prevalent in society that it cannot be ignored; it is often used as a form of communication; and it can be a vehicle for understanding one's inner most self. They codified these needs in the areas of performing, composing, and responding to music in the revised National Music Standards. Further, the fact that music can be a vehicle for understanding cultural differences makes it an effective tool for promoting diversity, equity, and inclusion—a prevalent need in American society today.

Building a firm foundation for music in schools based on the needs of students, the needs of community, and the needs of society in general is an influential way to make the importance of music in the curriculum more visible. This would seem to be a tactic that would know no geographical boundaries in terms of its effectiveness.

Pose Questions and Present Solutions

In addition to building a firm foundation based on needs, another implication of the U.S. struggle to increase the visibility of music in the curriculum is to realize that it is not only important to pose questions about educational issues, but it is also important to present solution is to those issues as well. When the U.S. struggle to make music a basic/core subject began in the late 1980s and early 1990s, many questions were asked by then President of the Music Educators National Conference (now NAFME), Paul R. Lehman. Finally, he was told that if music educators were to produce a set of National Standards, such as those that existed in science and math, music would become a basic subject. Never had the profession moved so quickly to come to consensus about what is important to be taught in music and why. Decision makers wanted to know the rationale for including music in the curriculum. These solutions were codified in the National Music Standards (NAFME, 1994), which were part of the National Core Arts Standards (National Coalition for Core Arts Standards, 1994). The implications for effective advocacy are clear—don't simply ask questions but suggest ways to be a part of the solution.

Align with Allies

Finally, it is important not only to provide potential solutions to educational issues that have been identified, but also to recognize that other allies, perhaps stronger politically than you or your music organization, might be engaged to help your cause. The inclusion of music as a well-rounded subject in ESSA would not have been possible without the assistance of other powerful organizations, such as the NAFME, Americans for the Arts, the National Association for Colored People (NAACP), and the STEAM Caucus, as well as individual music educators and arts advocates.

Search for those individuals and organizations whose voice might make your rationales more visible. Many curricular challenges faced by music educators are also faced by our arts

colleagues in dance, media arts, theater, and the visual arts. Further, there are a plethora of organizations that are interested, for example, in making the curriculum more diverse, equitable, and inclusive in the content that is available to students. Seek to align your interests and concerns with their stand on the issues. This strategy was most effective in the passage of ESSA and would again seem to be transferable to other regions and nations of the world.

Epilogue

This case study of the context of the struggle for music's visibility in U.S. PreK-12 school curricula is like a "biography" of a prevalent issue in music education, it seems safe to say, that resonates in many nations of the world. One can learn much from biographies. Applications can be made from learning how others faced challenges in their lives to help solve problems facing individuals today. So too, then, can applications from the U.S. struggle to make music a basic/core subject in the curriculum bring suggestions to other music educators across the world to help them find their "visible voice" to make music a subject that all students should encounter. May those who read these words find ideas to increase the visibility of their voices and find the courage to share those ideas with others!

(Abstract 246)

Characteristic differences in eye movements when singing several songs in early childhood

Mina Sano

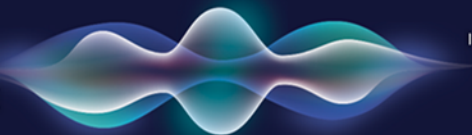
Tokoha University

Abstract

Eye movement would affect the body movement created by the children when singing a song. This study aims to quantitatively analyze using an eye tracking technology to extract the characteristics of eye movement when early childhood children singing several nursery rhymes in Japan. The author tried to find out more additionally feature quantities extracted from the results of quantitative analysis depended on the acquired data of eye movement during musical expression by eye tracking, based on the result of machine learning in my previous studies. 3-year-old, 4-year-old, and 5-year-old children in nursery schools and kindergartens (n=118) participated in eye tracking in 2020 and 2021 during singing nursery rhymes using glasses-type of a wearable eye-tracker (Tobii Glass 3). Eye movement of each participant child was measured during singing a song. The author conducted a saccade-specific quantitative analysis from fixation to next fixation by a two-way ANOVA (non-repeated song factor (10 levels) and non-repeated age factor (3 levels)).

As a result, some characteristic differences by songs were extracted from the data regarding the number of occurrences, the moving average velocity and the size of the saccade. It was verified that effective feature quantities of eye movement for machine learning could be derived in the same way as feature quantities of movement based on the results of quantitative analysis during musical expression in early childhood.

Key words: eye movement when singing a song, eye-tracking technology, quantitative analysis, a two-way ANOVA, early childhood



Introduction

The author has extracted the developmental characteristics of musical expressions in early childhood using 3D motion capture and developed a method for classifying and predicting the developmental process of musical expression in early childhood applying machine learning technique (Fernandez-Delgado et al., 2014). Regarding 3D motion capture in the field of education, some research reports showed the results of specific analysis of movement in traditional Japanese dance and sawing, mainly for adults, and the development of learning support methods (Ando et al. 2012; Sato et al. 2010). Some researches in the music field discussed experiments and video analysis on the relationship between the movement and expression of the performer (Dahl & Friberg, 2007; Thompson & Luck, 2012). The purpose of those researches was not to capture the musical expressions in the process of musical practice for children in early childhood. Machine learning method is also applied in educational fields such as behavior recognition and individual recognition methods in daily life (Kodama et al. 2015; Takada et al. 2012), and learning support of movement such as upturning of elementary school students (Matsumoto et al. 2014). But, no research report was observed in musical expression for early childhood using machine learning method. The author has obtained a certain level of classification accuracy by several classifiers applying machine learning method to the feature quantities of movement in musical expression and derived a discriminant model for the musical expression in early childhood (Sano, 2019; 2020).

Based on those results of my studies, the author thought to focus on the eye movements of early childhood children during musical expression because it is necessary to add new feature quantities of movement. The participant children in the activity of musical expression often watched other children each other or a teacher's accompaniment. In the previous researches on eye movements, some discussions were presented regarding quantitative analysis of eye movements and eye movements related to character recognition, and how eye movements and eye movements affect judgment by cognitive function (Higuchi, 2019; Watanabe et al. 2019; Kusunoki et al. 2017; Mpofu, 2016; Seong-un Kim, 2016; Moreno-Estevaa et al., 2018). In the field of music, researches using eye trackers showed the results of inspection about eye movements during rhythm hearing and reading (Plöchl et al., 2017; Lörch et al., 2017; Fusase 2017), eye-hand synchronization during instrumental performance (Marandola, 2017), differences in reading and listening to melody between music experts and non-music experts (Drai-Zerbib and Baccino 2018). The attention in those previous researches was mainly paid to the participant's line of sight looking at the display. There is also a study (Burger et al., 2017) that attempted to analyze the response to music by combining eye tracking and motion capture, but the subject of the research was adults (Fink et al., 2019).

The author tried to capture changes in eye movements during musical expression in early childhood children by using a glasses-type as a wearable system of eye tracker.

Purpose of this study

This study aims to quantitatively analyze using an eye tracking technology to extract the characteristics by songs of eye movement when singing several nursery rhymes.

Method of this study

1. **Eye tracking of early childhood children when singing a song using an eye tracker technique**

The eye movements captured by the eye tracker are mainly divided into saccade (rapid eye movement) and fixation. The movement of the eyeball can be quantified by the moving velocity (angular velocity) and the moving distance (magnitude of the angle). The author thought to focus on saccades during musical expression to find out effective feature quantities of eye movement.

The author tried to quantify the eye movements of children in early childhood during singing by using an eye tracker (Tobii Glass 3). Tobii Glass 3 is a glasses-type eye tracker. Each child wears it in the same way as glasses, is calibrated while being fixed with a strap, starts from singing with a signal to the end of the singing. It is a 1/50 second time frame at 50Hz, and audio and video are recorded at the same time. The measurement time for each child takes it for 20 seconds by one song.

2. Participant children and songs

In 2020, it was difficult to adjust multiple survey schedules due to COVID-19. In Osaka Prefecture, at U nursery school from 9:30 to 11:00 on August 18 and 14:30 to 16:00 on August 19 at M nursery school, Only one measurement was taken. Since the situation was similar in 2021, the author decided to conduct only a short-term inspection schedule, and eye tracking when singing 5 songs each at 2 kindergartens in Shizuoka prefecture. Data at Y kindergarten was acquired in May 31, June 7, and June 21 from 9:30-11:00, and data at N kindergarten was acquired in June 8, June 29, and July 6 from 9:30-11:00.

In 2020, 3-year-old children, 4-year-old children, and 5-year-old children participated in the eye-tracking when singing two songs at U nursery school and M nursery school (n=58). In 2021, 3-year-old children, 4-year-old children, and 5-year-old children participated in the eye-tracking when singing two songs at Y kindergarten and N kindergarten (n=60). These investigations have been approved by the research ethics committee to which the author belongs, as well as permission by the person in charge of the kindergarten that cooperates in the research, the parents of the participant children, and the submission of consent forms.

Each child sang one Japanese nursery rhyme in major and one minor for each measurement. The participant children had experiences to sing these songs before the inspection in this study.

The songs are as follows.

In 2020, at U nursery school, the song as "Umi" (lyrics: Hayashi Yanaginami, composition: Takeshi Inoue) was sung in major key, and the song as "Ureshiihinamatsuri" (lyrics: Sato Hachiro, composition: Mitsuyo Kawamura) was sung minor key. The participant children sung at M nursery school, the song as "Kaerunouta" (lyrics: Toshiaki Okamoto, composition: German folk song) in major key, and the song as "Teruterubozu" (lyrics: Kagamimura Asahara, composition: Shinpei Nakayama) in minor key.

In 2021, in Y kindergarten, the songs as "Musundehiraitte" (lyrics: unknown, composition: Rousseau), "Tewotatakimashou" (lyrics: Junichi Kobayashi, composition: Spanish folk song), and "Kaerunouta" (lyrics: Toshiaki Okamoto, composition: German folk song) were sung in major key. "Darumasan" (nursery rhyme=warabeuta) and "Genkotsuyamanotanuki" (lyrics: Miko Kayama, composition: Akihiro Komori) were sung minor key. In N kindergarten, the songs as "Shiawasenaratewotatakou" (lyrics: translation: Kimura Rihito, composition:

American folk song), "Tewotatakimashou" (lyrics: Junichi Kobayashi, composition: Spanish folk song), and "Kaerunouta" were sung in major key, and "Hotaruko!" (warabeuta) and "Teruterubozu" were sung in minor key.

3. A quantitative analysis of the acquired data

The author conducted a saccade-specific quantitative analysis from fixation to next fixation to capture eye movement. Therefore, the author quantitatively analyzed the number of occurrences of saccade, the moving average velocity (angular velocity), the average value of the size of movement (total angle), the average of moving distance (total angle), the angular velocity of the moving average of the first saccade (rapid eye movement), and the magnitude (angle) of the first saccade. A two-way ANOVA was carried out to inspect whether a statistically significant difference in the average data regarding saccade (non-repeated song factor as 10 levels and non-repeated age factor as 3 levels).

Results

In this paper, an example of individual calculation data of eye movement analyzed by analysis software (Tobii Pro Lab) and a part of the result of quantitative analysis are presented.

1. Visualization of eye movement when the participant children singing a song

Firstly, examples of individual data for eye movement visualized by Tobii Pro analyzer are shown for two songs in major key and minor key.

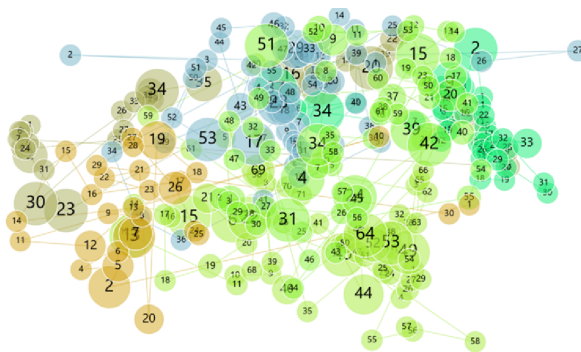
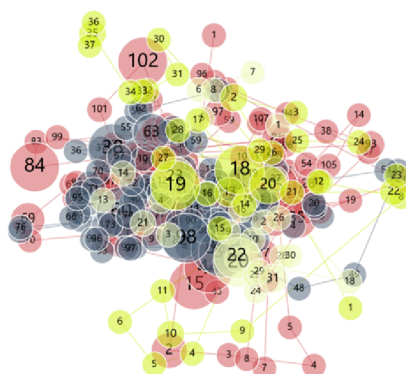


Figure 1-1. Gaze map when a 3-year-old child sings "Kaerunouta"



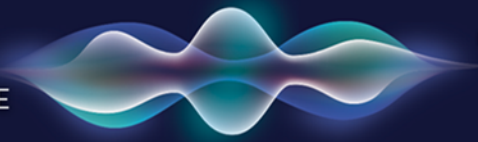


Figure 1-2. Gaze plot when a 3-year-old child sings "Darumasan"

The above figures regarding an individual case is a visualization of the movement of the line of sight. The gaze plot shows the order of movement of the line of sight, and the size of circle indicates the relative length of time that the line of sight stayed there, and the participant child was gazing at that part. The participant children performed their own singing and accompanying movements while paying close attention to the teachers and other children each other. The 3-year-old saccade of songs in major key such as "Kaerunouta" tended to alternate between the teacher on the right side and the other children on the left side, and finally the other children each other. 4-year-olds and 5-year-olds tended to look at the center of the place where the participant child could see the teacher and other children at the same time. Regarding songs in minor key such as "Darumasan", participant children tended to sing with facing forward without moving their eyes too much.

2. Occurrence of the saccade during singing different songs

A two-way ANOVA was carried out in order to inspect whether a statistically significant difference was observed in the calculated data regarding saccade for all 10 specific songs (non-repeated song factor as 10 levels and non-repeated age factor as 3 levels).

(1) *The number of occurrences of saccade by songs*

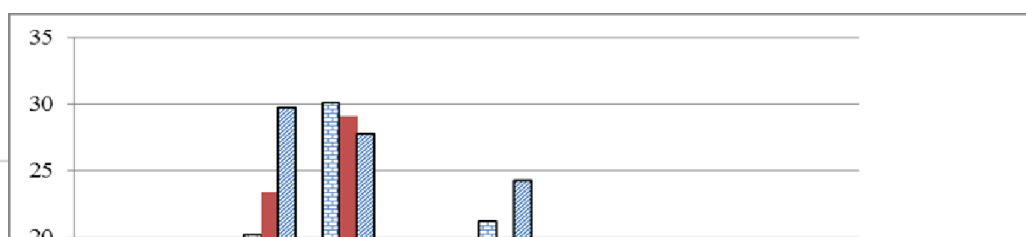
Table 1 shows the average data regarding number of occurrences of saccade by song.

Table 1. Number of occurrences of saccade by song

Song	Age	Average	SD	
Kaerunouta	3-year-old	15.4138	8.65001	29
	4-year-old	15.8667	9.75469	30
	5-year-old	17.1875	10.56604	32
Umi	3-year-old	17.7778	10.70955	9
	4-year-old	18	10.50926	10
	5-year-old	14.9	8.33267	10
Musundehiraite	3-year-old	20.1	15.05877	10
	4-year-old	23.4	21.22472	10
	5-year-old	29.7	17.21143	10
	3-year-old	30.05	19.50027	20

Tewotatakimashou	4-year-old	29.1	21.06356	20
	5-year-old	27.7	19.75668	20
Shiawasenara	3-year-old	14.4	9.41866	10
	4-year-old	16.2	12.85647	10
	5-year-old	12.6	10.65833	10
tewotatakou	3-year-old	21.125	5.66789	8
	4-year-old	18.1	9.46866	10
	5-year-old	24.2	12.14542	10
Darumasan	3-year-old	8	4.57044	10
	4-year-old	10.4	5.89161	10
	5-year-old	11.5	4.74342	10
Hotarukoi	3-year-old	13.1	11.36711	10
	4-year-old	16	10.79094	10
	5-year-old	10.3	6.11101	10
Teruterubouzu	3-year-old	12.1053	11.8598	19
	4-year-old	17.3158	14.86253	19
	5-year-old	12.0909	10.00433	22
Genkostuyamano	3-year-old	12.7	6.03784	10
	4-year-old	11.6	4.83506	10
	5-year-old	19.2	5.71159	10
tanuki				

As a result of the test of the effect between subjects, the main effect was statistically significant with the music factor ($F(9, 388) = 9.948, p < .005$). As a result of multiple comparison, the 3-year-old child's "Tewotatakimashou" was significantly larger than "Kaerunouta", "Darumasan", "Horaru koi", "Teruterubouzu", and "Genkotsuyamanotanuki".



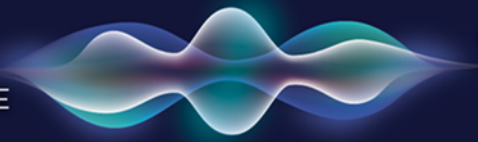


Figure 2-1. Age-specific changes in the number of saccades that occur depending on the song

As shown in Figure 2-1, even among the songs in major key, the number of occurrences in "Tewo tatakimashou" and "Musundehiraite" were remarkable.

(2) *The moving average velocity of saccade (degree/ second)*

A two-way ANOVA was conducted by the song factor (10 levels) and the age factor (3 levels) to inspect whether a statistically significant difference was observed in the calculated data of the moving average velocity of saccade.

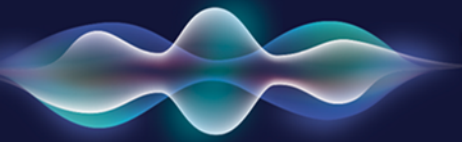
As a result of the test of the effect between subjects, the main effect / interaction was statistically significant (song factor: $F(9, 388)=3.305, p<.005$, song factor * age factor: $F(18, 388)=2.928, p<.005$). Therefore, a simple main effect test and a multiple comparison test by Bonferroni's method were conducted. Concerning the song factor/ song factor * age factor, a simple main effect was statistically significant in 5-year-old — $F(9, 388)=8.883, p<.005$ — . As a result of multiple comparison, 5-year-old children showed significantly larger data in "Musunde hiraite" than in other nine songs. Concerning the age factor/ song factor * age factor, age factor, a simple main effect was statistically significant in "Musundehiraite" ($F(2, 388)=28.89, p<.005$). As a result of multiple comparison, 5-year-old children showed significantly larger data in "Musunde hiraite" than 3-year-old and 4-year-old children.

(3) *Average size data of saccade (degree)*

A two-way ANOVA was conducted by the song factor (10 levels) and the age factor (3 levels) to inspect whether a statistically significant difference was observed in the calculated data of the size of saccade.

As a result of the test of the effect between subjects, the main effect was statistically significant in the song factor ($F(9, 388)=230.36, p<.005$). According to multiple comparisons, 5-year-old children showed significantly larger data in "Musundehiraite" than 3-year-olds children.

(4) *The total moving distance of saccade (degree)*



A two-way ANOVA was conducted by the song factor (10 levels) and the age factor (3 levels) to inspect whether a statistically significant difference was observed in the calculated data of the total moving distance of saccade.

As a result of the test of the effect between subjects, the main effect was statistically significant in the song factor ($F(9, 388) = 12.999, p < .005$). As a result of multiple comparison, in 3-year-old children's data regarding the average of total moving distance of saccade, "Kaeru no uta" and "Umi" were larger than "Musundehiraite". "Tewotatakimashou" in 3-year-old children was larger than "Musundehiraite", "Darumasan" and "Teruterubouzu". 3-year-old children's data of "Ureshiihinamatsuri" was larger than "Musundehiraite". Regarding the average of total moving distance of saccade in 4-year-old children's data, "Kaerunouta" was larger than "Musundehiraite". "Umi" was larger than "Musundehiraite." "Tewotatakimashou" was larger than "Musundehiraite" and "Darumasan." "Ureshiihinamatsuri" was larger than "Musundehiraite". Regarding 5-year-old children's data, "Kaeru no uta" and "Tewotatakimashou" were larger than "Musundehiraite". "Ureshiihinamatsuri" was larger than "Musundehiraite", "Hotaru koi", "Teru terubouzu". "Kenkotsuyamanotanuki" was larger than "Musundehiraite".

(5) *The size of first saccade (degree)*

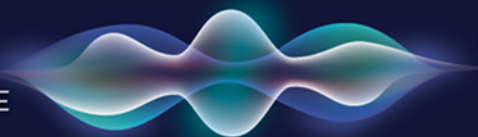
A two-way ANOVA with the song factor (10 levels) and the age factor (3 levels) was conducted to inspect whether a statistically significant difference was observed in the calculation data of the size of the saccade that occurred the first time.

As a result of the test of the effect between subjects, the main effect was statistically significant in the song factor ($F(9, 388) = 128.383, p < .005$). As a result of multiple comparison, "Musundehiraite" was significantly larger than the other 9 songs in 3-year-olds, 4-year-olds, and 5-year-olds.

Discussion

In this paper, a two-way ANOVA was carried out in order to inspect whether a statistically significant difference was observed in the calculated data regarding saccade for all 10 specific songs (non-repeated song factor (10 levels), non-repeated age factor (3 levels)). As a result, regarding the number of occurrences of saccade, the number of occurrences of "Tewotatakimashou" and "Musundehiraite" were remarkable as songs in major key. Musical expression usually accompanies with particular feelings or emotions. It is intuitively consistent that songs in major key induces more active expression because major/minor key to link to positive/negative emotions. Moreover, generally highpitch, staccato or implying hand clap behavior are associated with positive emotion and induced active response. As for the average moving velocity of saccade, "Musundehiraite" was remarkable for 5-year-old children, and "Musundehiraite" was also large for the size of saccade. Regarding the total moving distance of saccade, the data of "Kaerunouta" and "Umi" for 3-year-old children, the data of "Kaerunouta" for 4-year-old children and the data of "Kaerunouta" and "Tewotatakimashou" for 5-year-old children were large. It was found that the size of saccade occurred in "Musundehiraite" for the first time was large in all ages of 3-year-old children, 4-year-old children, and 5-year-old children.

As a result of quantitative analysis by song, the number of occurrences of saccade was large in "Tewotatakimashou" for 3-year-old children. The moving average velocity and size of saccade in "Musundehiraite" for 5-year-old children were remarkable. Regarding the size of



the saccade occurred for the first time, "Musundehiraite" was large for all ages of 3-year-old children, 4-year-old children, and 5-year-old children. Those results showed that participant children involved in a spontaneous body movement accompanied to singing a nursery rhyme from the beginning of singing "Musundehiraite" during every-day life in early childhood facility. In the singing, the participant children, looking at the teacher, other children nearby, and their own hands, put out their fist hands forward and shake them up and down in time with the beat.

Conclusion

From the eye gaze tracked data focusing on saccade, which was the rapid and ballistic eye movement during musical expression of early childhood children, statistical analysis verified that effective feature quantities of eye movement for machine learning could be derived.

When machine learning is conducted by adding the feature quantities of eye gaze behavior, the classification accuracy could be improved. It will be possible to develop music education optimization methods suitable for each child and this study will lead to the development of music education in early childhood. Experiment results from 10 specific songs showed eye gaze pattern of children was affected by songs. Songs showing statistically significant difference will be employed for feature quantities.

Acknowledgement

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(Abstract 313)

A Place to Express Themselves: Adapting for Cognitive and Physical Changes Among Older Music Makers

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Abstract

In recent years, music educators have created opportunities for adults to make music throughout the adult lifespan. Researchers continue to explore motivations for and environments conducive to older learners' participation in group music making (Fung & Lehmborg, 2016), health and wellness benefits of engaging in musical activity during the third age (Creech et al., 2014) and traits of effective adult facilitators (Author, in press a). This collective case study of six third-age piano classes explores how instructors adapted and accommodated for cognitive and physical changes, typically experienced during the third age, allowing the participants to experience meaningful music making activities and express themselves in ways not possible in other areas of life.

Data were gathered from in-person observations, video-recorded classes, focus groups with the students and interviews with the teachers. The transcripts were coded by the researcher and common themes emerged using the constant-comparison method (Creswell, 1998). Teachers tailored musical activities to compensate for changes in cognition, gross and fine motor skills, vision, hearing and age-related fatigue. Effective adaptations employed by the

teachers in the third-age music classes to accommodate for physical changes included: ensuring the physical space was free of obstacles and well-lit, providing ample time between classes and time for rest during rehearsal, engaging students in suitable warm-ups, creating exercises to strengthen fingers and increase control, adjusting tempi, holding classes during daytime hours, encouraging use of computer/piano glasses, providing larger scores, marking scores in pen, reducing background noise when speaking, giving instructions slowly and clearly, choosing repertoire that didn't aggravate tinnitus or hyperacusis and not using keyboard headphones for students with hearing aids. Adaptations for changes in cognitive processing included allowing time for students to process musical demonstrations and spoken instructions, giving students time to try out new skills and concepts individually at their keyboards and repeating new skills from week to week to give time for automaticity to develop.

Third-age music participants in this study were grateful for the opportunity to participate in ongoing piano classes, they were affirmed by their teachers' respect for their abilities and accommodations made by their instructors, and they valued the feelings they were able to experience or express through their music making activities, both in class and during at-home practice. Although findings of case studies are not generalizable, there is reason to believe that accommodations explored in this paper can be adapted for other third-age music classes. Keywords: instructional accommodations, piano class, third-age students

Background of Third-Age Music Making

Educators in the field of andragogy concern themselves with differences between child and adult learners. In highlighting characteristics unique to adult learners, such as recognizing past educational experiences and the roles of various intrinsic motivators in the pursuit of lifelong learning activities (Brookfield, 1986; Knowles, 1984), many adult educators work to create inclusive, challenging and engaging learning environments and experiences that allow adults to develop their love of learning and gain confidence (Wlodkoski, 2008). Merriam, Caffarella and Baumgartner (2007) proposed that unlike 20th-century discussions of andragogy that were focused on the adult learner, primarily, additional variables need to be considered with respect to engaging adults in formal learning including: learners, educators, processes, context, curricular design and facilitation practices. In music education, formal and informal experiences of participants, and the contexts in which the music making takes place (Creech, Hallam, Varvarigou, & McQueen, 2014; Fung & Lehmborg, 2016; Kruse, 2009; Pike, 2011). While some researchers have begun exploring characteristics of effective facilitation of adult music learning (Author, in press a; Hallam, Creech, McQueen, Varvarigou, & Gaunt, 2016; Pike, 2021), more work in this area could help tertiary-level faculty to prepare future music educators to engage adults in meaningful music making contexts throughout the lifespan, particularly during the third age.

Changes impacting learning music in later adulthood

Music educators recognize the ability of adults to develop musical skill throughout adulthood (Myers, 1992) and the importance of creating opportunities for adults to make music throughout the adult lifespan (Creech, Hallam, McQueen, & Varvarigou, 2013; Hays & Minichiello, 2005). Due, in part, to a larger aging population in the developed world and increasing demand for music classes or ensemble access, educators are providing opportunities for third age adults to make music in group settings (Dabback & Smith, 2018). Researchers continue to explore motivations for older learners to participate in music making activities (Fung & Lehmborg, 2016; Pitts, 2012), environments conducive to effective music

learning for older adults, and health and wellness benefits of engaging in musical activity during the third age (Creech et al., 2014).

Adult educators recognize that although third-age adults experience changes associated with primary aging (typically experienced gradually and by most aging adults) and secondary aging (changes associated with underlying disease and not experienced by everyone), these should not be viewed as losses; rather, many adults compensate for such changes and learning can continue (Bjorklund, 2011). Likewise, with appropriate accommodations, music making is reportedly beneficial to psychosocial health and wellness, it can continue throughout and beyond the third age (Creech et al., 2014; Perkins & Williamon, 2014) and participation in music programs can increase resiliency through later adulthood (Majeski & Stover, 2019). Typical losses, that impact music making and learning, associated with the third age include: general mobility and balance issues, slowing of gross motor skills, stiffness and cross body movement challenges, fatigue during practice and rehearsal, less control of finger movements, slowed response time for repetitive motor movements, vision changes (including photosensitivity, difficulty adapting to low light, presbyopia, impaired vision due to cataracts and peripheral loss), hearing loss, tinnitus, presbycusis, hyperacusis and changes in cognitive processing (Author, in press b).

Purpose and need for the study

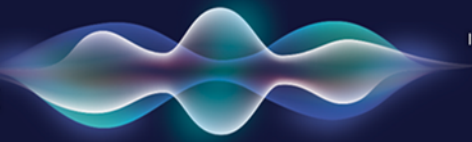
This study explores how teachers of a multi-level third-age piano program recognized and adapted for some of the aforementioned physical and cognitive changes within specific classes and it reports on what the learners value d about the music making experience, especially as this related to accommodations made by teachers who facilitate d the music making activities. Talmage and colleagues (2015) advocated for researchers to conduct interviews and focus groups with third-age learners involved in existing programs. Thus, a case study of a long-running third-age piano program serves as the focus of this research and surveys, interviews, focus groups and class observations form the bulk of data collected.

Methodology

Six established third-age piano classes were identified for inclusion in this case study. The classes were part of a large 16-year-old third-age piano program that offered beginning, intermediate and advanced piano classes during spring, summer and fall semesters. The classes were chosen for convenience, accessibility throughout the research project and due to the ongoing participation by most students involved in each class. The third-age students involved in the study (N= 61) had been participating in their class for 2–16 years and they ranged in age from 62– 91.

The researcher observed classes in person and recorded these for subsequent comparison with field notes. Students completed individual written surveys and participated in focus group discussions (which were recorded and transcribed) about their experience of piano study in the third age. Two teachers of the classes participated in in-depth interviews. Interviews, focus groups, surveys and field notes were triangulated and coded using the constant comparison method (Creswell, 1998). Findings regarding how students valued the musical experience, perceived personal learning challenges and experienced helpful teaching accommodations (with respect to physical and cognitive challenges) are reported in this paper.

Findings



The findings reported here relate to specific benefits described by the third-age participants and beneficial accommodations that the instructors made based on perceived physical and cognitive needs of the students. These findings are a subset of a larger, comprehensive study of the third-age program.

Self-reported benefits

The third-age participants described, in various ways, the importance of using piano as a vehicle for self-expression. They valued the time spent making music together during class, and many reported enjoying time spent in personal practice throughout the week as a fulfilling and enjoyable activity. A common theme from the third-age learners was that they had noticed improvements in specific musical skills such as reading, rhythmic execution, performance (at home or in class), listening ability and, more generally, in their understanding of musical concepts. Because their technical and performance skills had improved throughout the course of their participation in the class, they believed that they were better equipped to convey emotions and musical aspects of repertoire (even if these musical aspects were not always evident to the teachers or the researcher). The third-age

students experienced success, with at least one element of music making during each class which lead to increased self-efficacy, feelings of musical competency and a perceived ability to express themselves at the piano.

Participants reported, also, a sense of common purpose, when working on music with others in the class, they expressed gratitude for the opportunity to participate in meaningful music making during each class and they appreciated the support of their peers and instructors as they pursued challenging musical skills in the long-term. While they acknowledged some physical and cognitive impediments to learning, they described specific improvements in their musical and cognitive skills because of the classes and they expressed a desire to continue making music as long as possible into the future. Music participation added to their sense of well-being.

One final broad benefit noted by participants was the opportunity to meet and learn with a diverse group of people, beyond their typical social circles. While there was ethnical diversity within the group, there was a common educational and social background. Most were upper-middle class citizens, who held bachelors or advanced degrees and who worked in various professional fields prior to retirement. Social and educational barriers to participation by adults from lower socio-economic circles did not surface during the research, but due to a very low registration fee, it may be assumed that cost was not a primary obstacle.

Physical and cognitive concerns

Specific physical and cognitive changes or concerns enumerated by the participants, and confirmed by the instructors, included: slowed cognitive processing, difficulty remembering new skills and concepts from week to week (or sometimes day to day), slowed fine motor skills (grabbing chords, playing passagework and playing quickly were often-cited issues), difficulty reading small scores or cluttered pages of music, hearing loss, trouble adapting to using hearing aids, needing additional time to process verbal instructions and new performance skills at the keyboard and challenges listening to others in the group when making music together. Despite these concerns, everyone reported being able to make individual compensations for the changes they experienced, and they noted the benefit of having instructors who adapted in-class teaching to meet their challenges and specific needs.

Specific adaptations that enabled music making to remain effective for the third-age students follow.

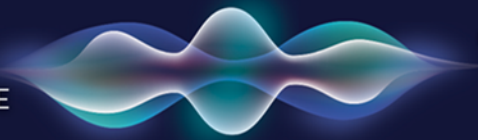
Instructional accommodations made by facilitators

Firstly, the instructors considered physical and vision constraints when setting up the class schedule, choosing the location and making other administrative decisions. For example, the class was offered during daylight hours, during times when participants could drive without experiencing rush-hour traffic. The classroom (a well-equipped piano lab) was located on the ground floor, reasonably close to parking, and was adjacent to large, uncluttered hallways with numerous benches where students could sit and wait comfortably before class and chat with peers following class. There was extra time provided between back-to-back classes for students to move to and from the piano lab, without feeling rushed.

The students noted numerous instructional strategies and effective teacher traits, consistent with previous research, including respect for the learners and their stage of life, expertise in piano teaching and performing, knowledge of how to evoke the best from the group, appropriate use of humor and patience. In adult education, and music facilitation in particular, expertise, enthusiasm, empathy, clarity and expectancy have been noted as important teacher traits (Author, in press a). In this study, the instructors provided ample time at the beginning of class for warm-ups (often creating their own for specific needs within each group) and review of new concepts from previous classes, priming both the fine motor skills and the mind for music making. Indeed, much of each class consisted of review, which the students appreciated, and although measurable progress was slow, improvement was discernable. The teachers offered specific praise when they heard improvements from week to week. The instructors allowed students to play and rehearse repertoire at slower tempi than might be observed with younger adults; the students clearly enjoyed playing the music regardless of the speed and they met with success because they had time for physical and cognitive processing. Playing at slower speeds may have enabled them to listen to what they were playing and thus, improve listening skills.

To compensate for difficulty with auditory perception and processing, the instructors spoke clearly, slowly and enunciated while ensuring that no background noise was present. They gave directions several times and kept the mood light when instructions had to be repeated or exercises reviewed. They chose music that was played in the middle range of the piano (so as not to exacerbate tinnitus or hyperacusis, or pain with certain sounds). The instructors rarely used the digital keyboard headphones during class and didn't use them at all if students in the class wore hearing aids.

The piano lab was well lit, with adequate lighting above the music rack of each individual keyboard. Since many of the students reported difficulty reading small scores and confusion if there was too much information on the page, the instructors chose music and editions of repertoire that were only lightly edited, uncluttered and easy to read due to the print and size of the musical notation. Theoretical, historic or background information, that might be present in critical editions of more advanced music, was shared verbally when students needed to rest the fingers, hands, arms and eyes during class. Students were encouraged to use piano glasses, though many found that their computer glasses combatted presbyopia (difficulty with close-range focusing). Many students reported using pens, markers or highlighters to make reminders on their music, since they found it difficult to see pencil markings on the score.



The instructors encouraged students to write out fingering, chords or anything else needed to aid memory. For example, several members in one class that played lead sheets during each class, wrote out the required chords on staff paper to reduce cognitive load and poor memory for the notes in chords and the inversions, enabling them to participate fully in each class performance of the musical examples. Those students felt that they benefited from applying the theoretical concepts even though they were unable to process them in real-time without the visual aids. Finally, as students discovered strategies to compensate for cognitive and physical changes, they shared these with classmates and their teachers, who then made similar accommodations in other classes, as needed. Everyone participating in the third-age piano program (students and teachers) demonstrated the ability to reflect and adapt throughout the music making and learning process; in short, they were lifelong learners.

Implications for Teacher Education

Third-age music participants in this study were grateful for the opportunity to participate in ongoing piano classes, they were affirmed by their teachers' respect for their abilities and the accommodations made by their instructors that allowed them to succeed in developing skill and making music. They valued being able to experience or express feelings and emotions through their music-making activities, both in class and during at-home practice. Despite increased numbers of third-age adults who participate in formal private, group and ensemble music-making in the industrialized world, there is little written evidence that music education and pedagogy programs are preparing future educators to meet the special needs of the third-age group.

The ability to learn new musical skills and participate in music making with others has been demonstrated to offer important psycho-social, musical and health benefits for those who participate. However, effective facilitation of adult groups is crucial for a meaningful and successful participant experiences. Teacher educators are encouraged to apply insights about third-age learning and musicking from the growing body of research with students in their music education and pedagogy classes. Tertiary music students who can observe effective third-age music facilitation and complete supervised internships, where they work with third-age music students, should be encouraged to do so. Additionally, future researchers might explore barriers to music participation in the third age, with an eye to increasing access to meaningful music making experiences for all older adults.

(Abstract 323)

Music Teacher's Work Motivation in Non-Formal Private Music School in Thailand

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Abstract

This research aimed to examine and compare part-time music teachers' motivation to work in non-formal private music schools in Thailand. Mixed methods research was used to collect data in the study. The research instruments were an online survey and semi-structured interviews. The respondents for an online survey were part-time music teachers in non-formal private music schools in Bangkok and surrounding areas, which were selected by simple

random sampling. Part-time music teachers (n=186) are classified by their main occupation: music college students (n = 48), freelancers (n = 25), full-time workers (n = 35), and professional music teachers (n = 78). Quantitative data from the survey were analyzed using descriptive statistics: percentage, mean, and standard deviation. Twelve music teachers selected by snowball sampling participated in one-on-one interviews to address reasons and broaden opinions.

The results revealed that music teachers' motivation to work were student happiness, growth, and success ($X = 4.80$, $SD = 0.47$), student role model and inspiration ($X = 4.55$, $SD = 0.77$), and passion in music and teaching ($X = 4.51$, $SD = 0.76$). Differences between groups: music college students, freelancers, full-time workers, and professional music teachers were revealed in reasons to become music teachers, perceptions of income, the requirement from the workplace, and expectation of rewarding. Findings also showed that financial rewards, including income, employee benefits, overtime payment have small impacts on the motivation of music teachers. Deficient administration, unsupportive staff, as well as an unpleasant relationship with colleagues discouraged motivation to work. **Keywords:** part-time job, music teacher, motivation

Introduction

Motivation is a factor that supports and encourages human drive and demand, which enables a person to act or do something to achieve the desired goal. (Sanford & Wrightman, 1970, cited in Islam, 1999) Motivation can be positive forces, including rewards and benefits, or negative impulses, including avoiding penalties for non-compliance or unsuccessful actions. (Flippo, 1982) Motivation affects work behavior and leads to satisfactory work performance. Psychologists divide motivation into two types: 1) extrinsic motivation caused by external factors including compensation, reward, praise, reputation, conditions, regulations, rules, deadlines, and 2) intrinsic motivation, the driving force within the person, for example, attitude, satisfaction, preference, interest, appreciation. (Kuvaas, Buch, Weibel, Dysvik, & Nerstad, 2017, Ryan & Deci, 2020)

A teacher is a profession with in-role tasks: teaching, classroom preparation, student assignments, and extra-role tasks: helping students in areas beyond their education, consulting on personal matters, etc. Therefore, being a professional teacher requires personal time, sacrifice, dedication, and patience. Many researchers found teachers with high intrinsic motivation, including willingness to encounter students' accomplishment, job satisfaction, career success-driven works more competently, and are likely to produce better student results (Chonko, Tanner & Weeks, 1992; Khan, Waqas & Muneer, 2017). For school managers, it is necessary to understand the motivation and character of music teachers to design rewards schemes to motivate teachers, which include appropriate financial and non-financial rewards. Excessive use of financial rewards could lead to undesirable behaviors (Firestone, 2014). For example, the pay rises offered according to the student's performance developed inappropriate student assessments. Non-financial treatments should be carefully applied, together with financial incentives.

The working conditions of music teachers in non-formal private music schools in Thailand are specific. Non-formal private music school generally uses part-time agreements to hire music teachers. The part-time teacher is required to attend school during lesson time solely. However, unlike full-time teachers in a formal school, other extra functions are usually not assigned. The school pays the hourly rate by actual working time, with no guaranteed minimum payment. This method is also known as a zero-hour wage contract. (Lopes &

Dewan, 2014). If students do not attend music lessons due to illness or personal leave, music teachers may not be paid, even if they have already spent time preparing and transporting to work. Some part-time music teachers are freelance musicians, and some are music students at university. Some teachers have full-time jobs unrelated to music and teaching, i.e., officers, bankers, engineers, lawyers. Therefore, part-time music teachers at the same school are divided into significant occupations, teaching reasons, working life, expectations, and music teaching attitude. Previous research has shown the problems of music teachers in non-formal private music schools. The turnover rate is high, as part-time teachers work on current unoccupied schedules, and once life plans are changed, there is an increased risk of abandoning lessons. The change in music teachers interrupted the student's learning journey, and the effects of the disappearance of teacher-student relationships were found to discourage students from continuing music lessons (Kingngoen, 2017; Yookeaw, 2018; Aung-Insombut & Intarak, 2018). In addition, part-time teachers are only paid for the actual teaching hours. Teachers' additional roles: planning lessons, reviewing student's work, and evaluating student's performance do not affect performance evaluation, nor increase in the hourly rate. These additional roles are suspected of missing or rarely performed in non-formal private music schools.

Purpose statement and research questions

This paper classified music teachers as music college students, freelancers, full-time workers, and professional music teachers. The study aimed to identify the motivation of part-time music teachers to work in non-formal private music schools and the differences between each group. Maslow's hierarchy theory of needs was used to explain and compare motivation to work. The results support non-formal music schools and music educators in Thailand in understanding part-time music teachers. The focus on non-formal private music schools fulfilled music education in Thailand, as it has always been overlooked in the pre-service music teacher training program.

Two research questions were formulated 1) What are part-time music teachers' motivation to work in non-formal private music schools? And 2) What are the differences between each group classified by their main occupation?

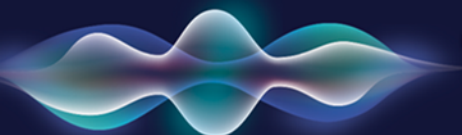
Method

The mixed method research was conducted in this study to investigate music teachers' motivation and opinions. Firstly, the survey gathered information from music teachers in Bangkok through the private community in a social network platform. The survey comprises two parts. The first part is respondents' demographic and characteristics, the second part is motivation, which consists of 18 questions developed from 5 levels of Maslow's hierarchy theory of needs.

Secondly, the semi-structured interviews were conducted with 12 participants selected by purposive sampling to find the group representatives. The main occupation classifies four groups as the following: 1) music college student who studies music in the university 2) freelancer, including both music and non-music career such as music producer, artist,

musician, architecture, photographer, etc. 3) full-time worker who does not work full-time as a music teacher and 4) professional music teacher who only works as a music teacher.

Results



Participants completing the survey (186) identified themselves as working in non-formal private music schools in Thailand. The demographic characteristics of the respondents are reported in Table 1.

Table 1 Demographic characteristics of the respondents

Attribute	Music College Student		Freelancer		Full-time worker		Professional music teacher		Total	
	n	%	n	%	n	%	n	%	n	%
	48	25.81	25	13.44	35	18.82	78	41.94	186	100.00
Gender										
Male	14	29.17	17	68.00	12	34.29	34	43.59	77	41.40
Female	34	70.83	8	32.00	23	65.71	44	56.41	109	58.60
Age										
18 – 24	39	81.25	4	16.00	5	14.29	16	20.51	64	34.41
25 – 30	7	14.58	10	40.00	15	42.86	31	39.74	63	33.87
31 – 40	2	4.17	9	36.00	10	28.57	21	26.92	42	22.58
40 up	0	0.00	2	8.00	5	14.29	10	12.82	17	9.14
Marital status										
Married	2	4.17	2	8.00	4	11.43	9	11.54	17	9.14
Single	46	95.83	23	92.00	31	88.57	67	85.90	167	89.78
Others	0	0.00	0.00	0.00	0.00	0.00	2	2.56	2	1.08
Instruments teaching										
Various	18	37.50	8	32.00	9	25.71	36	46.15	71	38.17
Piano	14	29.17	3	12.00	15	42.86	20	25.64	52	27.96
Vocal	5	10.42	4	16.00	6	17.14	10	12.82	25	13.44
Strings	5	10.42	7	28.00	2	5.71	8	10.26	22	11.83
Drums set	2	4.17	2	8.00	1	2.86	3	3.85	8	4.30
Woodwind or Brass	4	8.33	1	4.00	2	5.71	1	1.28	8	4.30
Workplace										
Teaching at many places	12	25.00	12	48.00	14	40.00	37	47.44	75	40.32
Franchise music school	22	45.83	5	20.00	11	31.43	17	21.79	55	29.57
Non – franchise music school	6	12.50	6	24.00	7	20.00	21	26.92	40	21.51
Private studio/student's home	8	16.67	2	8.00	3	8.57	3	3.85	16	8.60

Participants answer 18 questions about their perception of motivation to work in detail in Table 2. The questions were developed from Maslow's motivation theory.

Table 2 Music teachers' motivation to work in non-formal private music school

Motivation	Music Student		College Freelancer		Full-time worker		Professional music teacher		Total	
	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>
1. Physiological needs:	3.81	H	3.45	M	3.51	H	3.87	H	3.73	H
Adequate and fair income	0.62		0.76		0.74		0.73		0.73	
C1 Main income for living	4.00	H	3.68	H	3.26	M	4.46	H	4.01	H
	0.90		1.07		1.27		0.92		1.10	
C2 Extra-earnings to support life	3.92	H	3.20	M	3.49	M	3.97	H	3.76	H
	0.87		1.08		1.20		1.08		1.08	
C3 Savings for future	3.90	H	3.28	M	3.80	H	3.63	H	3.68	H
	1.13		1.17		1.13		1.37		1.25	
C4 Seeking other jobs for higher revenue	3.42	M	3.64	H	3.49	M	3.42	M	3.46	M
	1.18		1.29		1.34		1.39		1.31	
2. Safety & Security Needs:	3.48	M	3.04	M	3.20	M	3.18	M	3.24	M
Reliable workplace and stable income flow	0.78		0.71		0.86		0.89		0.84	
C5 Steady revenue stream for living	2.90	M	2.60	M	2.49	Low	2.68	M	2.69	M
	1.04		1.04		1.15		1.13		1.10	
C6 The school stability and credibility	3.90	H	3.56	H	3.63	H	3.64	H	3.69	H
	0.90		1.00		1.06		1.12		1.04	
C7 Job security and an adverse possibility to lose the job	3.65	H	2.96	M	3.49	M	3.23	M	3.35	M
	1.14		1.10		1.20		1.25		1.20	
3. Social Needs:	4.24	H	4.13	H	4.39	H	4.26	H	4.26	H
Work environment and relationship with people	0.63		0.69		0.64		0.60		0.63	
C8 Passion in music and teaching	4.44	H	4.40	H	4.54	VH	4.56	VH	4.51	VH
	0.77		0.82		0.66		0.78		0.76	
C9 Efficient administration, supportive staff, and fair treatment	4.06	H	3.92	H	4.09	H	3.95	H	4.00	H
	0.93		0.76		0.95		0.95		0.92	
C10 Good relationship with manager and colleagues	4.21	H	4.00	H	4.46	H	4.24	H	4.24	H
	0.92		0.96		0.82		0.86		0.88	
C11 Good relationship with students	4.25	H	4.20	H	4.46	H	4.28	H	4.30	H
	0.67		0.87		0.70		0.75		0.74	
4. Self-Esteem Needs:	4.33	H	4.16	H	4.35	H	4.37	H	4.33	H
Self - Development and recognition	0.61		0.59		0.84		0.64		0.67	
C12 Music skills development	4.35	H	4.20	H	4.37	H	4.50	VH	4.40	H
	0.84		0.91		0.91		0.80		0.85	
C13 Teaching skills development	4.25	H	4.28	H	4.34	H	4.47	H	4.37	H
	0.84		0.74		1.00		0.78		0.84	
C14 Recognition and acceptance from family, friends, and society	4.38	H	4.00	H	4.34	H	4.14	H	4.22	H
	0.79		0.76		0.94		1.00		0.91	
5. Self-Actualization:	4.42	H	4.21	H	4.43	H	4.56	VH	4.45	H
Meaningful, fulfilling, and satisfying job	0.48		0.79		0.66		0.50		0.58	
C16 Students happiness, growth and success	4.81	VH	4.84	VH	4.71	VH	4.82	VH	4.80	VH
	0.45		0.37		0.57		0.48		0.47	
C17 Being student's role model	4.48	H	4.32	H	4.51	VH	4.69	VH	4.55	VH
	0.68		1.22		0.74		0.63		0.77	
C18 Attitude toward music teacher job	3.98	H	3.48	M	4.06	H	4.15	H	4.00	H
	0.91		1.36		1.11		0.95		1.08	

Meaning : VH = Very High, H = High, M = Moderate

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Most respondents indicated their top 3 motivation to work: student happiness, growth, and success ($X = 4.80$, $SD = 0.47$) student's role model ($X = 4.55$, $SD = 0.77$) and passion in music and teaching ($X = 4.51$, $SD = 0.76$). Results are similar in each group. Most respondents also showed that safety and security ($X = 3.24$, $SD = 0.84$) are factors that have the least impact on their motivation to work as part-time music teachers. Participants also reported a clear perception of part-time music teachers as a meaningful and fulfilling job with small earnings. In other words, while the income situation is unsatisfactory, part-time music teachers recognize other benefits that meet their needs: self-actualization needs ($X = 4.45$, $SD = 0.38$), self-esteem needs ($X = 4.33$, $SD = 0.67$), and social needs ($X = 4.26$, $SD = 0.63$).

Respondents also differed between groups in their motivation to work.

- According to the traditional way in music student life, music college students appeared to be part-time music teachers. Extra revenue and the opportunity to experience work-life motivate these young teachers. One participant perceived part-time work as a paid trainee during university life. Successful teachers who receive positive feedback, compliments, and fair treatment in the workplace will likely continue their music teaching careers.
- Freelancers reported low work motivation in all aspects compared to other groups and showed a higher possibility of abandoning teaching for a better-paid job. Participants indicated that teaching music was the second priority in their time at other positions. While most participants in other groups viewed part-time music teachers as unstable, freelancers believe that teaching music offers predictable income, which contributes to a secure life. However, two self-employed musicians strongly believe the role of the music teacher is crucial to the music industry. They explained that music teacher has more duties than teaching, which are to inspire, express attitude, exhibit aesthetics toward music.
- Full-time workers have higher social needs than others. One participant explained her views on music teacher work as her way out of a stressful routine life. Working at music school on the weekend gives her artistic opportunity to work with musical and friendly colleagues who share the same interests and enthusiasm in music.
- Professional music teachers have higher needs for self-esteem than others: teaching skills development, musical skills development, and higher demands for self-actualization than others: student happiness, growth, and success, student's role model, and attitude to music teacher's job. The revenue depends on the number of students they teach. Professional music teachers tend to be successful teachers. They have an excellent relationship and positive feedback from the students. Consequently, they have more students than others to earn an adequate income from music lessons.

Discussion

The results showed that all types of part-time music teachers have the same motivation to work: to discover students' happiness, growth, and success in learning music. Respondents perceived music teachers as a meaningful, fulfilling, and satisfying job, even if their income was not high. These findings were revealed in previous studies, which indicated that an effective teacher has the high intrinsic motivation, a positive attitude to career, and a spirit to drive the student's results (Blumberg & Pringle, 1982; Davidson, 2007; Firestone, 2014; Shen, Benson & Huang, 2014; Kromraruay, Paiwithayasiritham & Polpanthin, 2017; Biasutti & Concina, 2018; Cansoy, 2020). Diversity among groups is also evident. Music college students were looking for work experience and future career opportunities. Freelancers wanted to secure a source of income with a teaching job. Full-time workers aimed at a high-quality work environment and colleagues who share an interest in music. Professional music teachers wanted success in careers, rewards, recognition.

Based on Maslow's hierarchy of needs, findings from this research are described in picture 1. Maslow (1954) pointed out that there are five levels of human needs, starting from 1) physiological needs: adequate and reasonable income, 2) safety and security needs: workplace credibility and reliability, 3) social needs: work environment, 4) self-esteem needs: recognition and self-development, and 5) self-actualization needs: meaningful, rewarding, and satisfying work. Maslow also explained that people have different needs, depending on personal characteristics, family background, and social environment. People sometimes show higher needs, even though they are not yet satisfied with lower needs. The results of this research show that part-time motivational aspects of music teachers were associated with Maslow's theory as follows:

- The definition of satisfaction differs between the respondents. Professional music teachers were satisfied with the income from teaching, while a full-time worker did not meet and had to do other jobs to meet basic needs.
- Some part-time music teachers accomplished basic needs from other workplaces. Consequently, they become part-time music teachers to fulfill higher needs: social needs, self-esteem needs, and self-actualization needs.
- Having a meaningful, fulfilling and rewarding job remunerated the basic needs of some teachers. Evidence showed that some part-time music teachers chose to continue their career as music teachers until retirement, even though they admitted that income and job security were unmet.
- Successful music teachers who meet the needs of self-actualization tend to devote more time to work. Encourage reactions from colleagues, along with student happiness, growth, and success, strengthen a positive attitude to a music teaching career. This result corresponds to previous research that identified self-actualization needs as growth needs; people are more motivated when this level of needs is provided (McLeod, 2018).

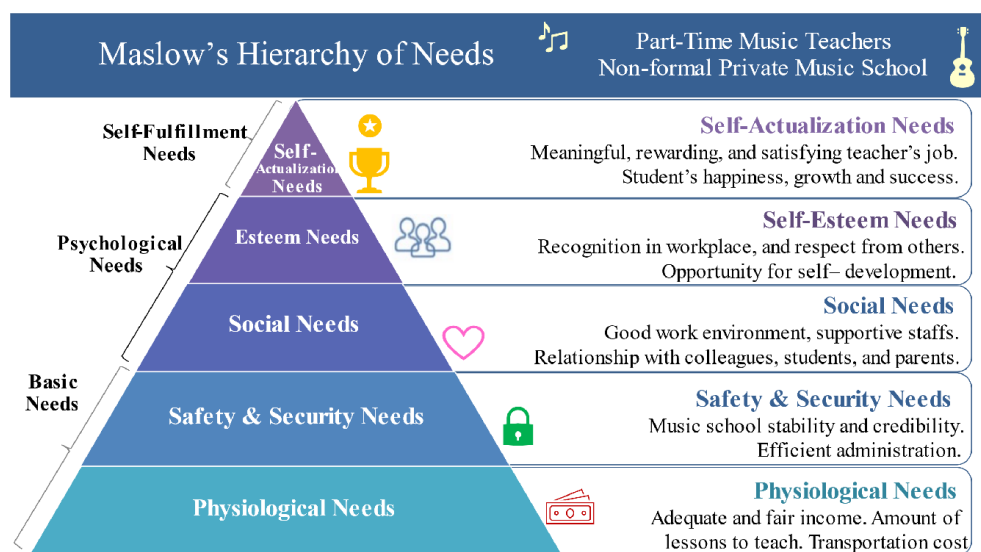


Figure 1 Maslow's Hierarchy of Needs: Part-Time Music Teachers in Non-Formal Private Music School (Kritpet, 2021)

This study examined the perspectives of music teachers in Thailand. The results are therefore specific to certain local areas in Bangkok and surrounding areas. This research used surveys and interviews to obtain information but extended empirical research may be needed to distinguish the real effects of work motivation on educational outcomes. Further research should include behavioral monitoring to identify the relationship between motivation and desired performance. Additional studies can be conducted in formal private schools, government schools, and other types of music academies to develop a comprehensive understanding of the motivation of music teachers.

(Abstract 344)

Falling Through the Gaps: Instrumental Music Education for Children with Disability in Australia

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Abstract

Providing access to instrumental music education for students with disability in Australia is usually left to the responsibility of individual teachers and/or schools, with few broad systemic supports for accessible or adaptive education being available. This paper draws on the author's experience as a disabled musician and music researcher to explore the barriers and enablers facing Australians with disability attempting to access instrumental music education. Australia is famed for its love of sport, and while educational opportunities for disabled musicians may be limited, the nation is a world-leader in recruiting, training and retaining Paralympic athletes from beginner right through to elite level. This paper uses Australia's highly successful Paralympic training program to outline how similar strategies could be employed to support musicians with disability to learn their craft and become leaders in their field, using their diverse brains and bodies to bring new voices to the nation's musical landscape.

Keywords: Music education, disability, music therapy, Australia, instrumentalists

For people with disability in Australia, access to a quality instrumental music education is still, as often as not, a matter of luck rather than a result of broad systemic supports for disabled music students and their teachers. This paper draws on the author's experience as a professional musician with disability, as well as recently completed pilot study into Professional Pathways for Musicians with Disability conducted by {Colleague 1}, {Colleague 2} and the author to examine current opportunities and barriers for participation in instrumental music education for people with disability in Australia. Using the Australian Paralympic program as a model, it also suggests possible ways to improve outcomes for disabled music students through collaboration between music teachers, music therapists and professional musicians with disability.

Most music educators are probably aware of the work of disabled instrumentalists like violinist Itzak Perlman, percussionist Evelyn Glennie and pianist David Helfgott, but they are really just the most famous members of a whole community of instrumentalists with

disabilities. Musicians such as French horn player Felix Kleiser (Germany), violinist Gaelynn Lea (USA), and guitarist James Durbin (USA) are building careers which demonstrate that people with diverse brains and bodies have a lot to offer as instrumentalists, while panflautist Hannah Schlubeck (Germany) and others are bringing non-traditional instruments to the concert platform. Meanwhile the internet is giving a chance for audiences to hear musicians such as guitarist Zaina Arekat (Bahrain) who performs from her bed and whose disabilities limit her access to traditional performance venues. Ensembles such as the British Paraorchestra also combine professional-standard musicians who are Deaf or disabled playing a range of traditional and adaptive instruments.

The existence of professional disabled instrumentalists is by no means a new phenomenon. Music has historically been a place where disabled people could work on an equal footing with able-bodied peers. Many cultures around the world have a history of disabled people finding employment in music. Areas in the Middle East, China, Japan and Ukraine and many others have musical traditions specifically targeted at blind people (see, for example de Ferranti 2003; Kononenko 1997). In times and places where most available employment was manual labour and social security was non-existent, music was one of the few places where disabled people could earn enough money to survive. So, for example, in the segregated American South there was a flowering of disabled musicians including Blind Willie McTell, No Leg Kenny, Blind Lemon Jefferson, Mamie Desdoumes, Peg Leg Howell and De Ford Bailey to name but a few. And of course, although it's viewed as controversial for many, freak shows from the 18th to early 20th centuries provided not just employment but community to a wide range of disabled performers.

Throughout much of history, disabled children have been funneled into musical careers in much the same way as they are now funneled into the Paralympics and sports, and in many ways it was a much better fit. To create a level playing field for disabled athletes a whole parallel sporting competition had to be created, indeed, the 'para' in Paralympic stands for parallel, not paraplegic. Every player has to be individually assessed and categorised based on their physical functionality. Anyone whose body does not fit within their narrowly defined categories has to be excluded from the game. The Author, for example, passes the stringent qualifications to receive a disability support pension in Australia, but would not be eligible to play Para-sport at any level. Music, on the other hand, is not competitive and therefore does not require the extensive assessing and categorisation that sport requires to make it 'fair'. Indeed, the differing lived experiences and world views of disabled people actually give us an edge in any field where creativity and uniqueness are valued.

The Author is also an active member of their local Disability Music Scene, a genre where disabled musicians are encouraged to explore their own ways of making music, and of using that music to tell their own stories. Australia has a vibrant disability music scene. But when one looks at the majority of performing, disabled musicians in Australia, one quickly notices a disturbing lack of instrumentalists. It is not that there are no disabled instrumentalists at all but receiving a quality instrumental music education as a disabled person in this country, often seems to be based more on luck than on any formalized inclusive education system (ref. removed for peer review). Looking at successful musicians in Australia's disability music scene, one can identify a number of factors that increase one's likelihood of accessing appropriate music education. It helps to have a disability that is not seen as impacting on playing, that is why Melbourne-based band the Bi-Polar Bears never have trouble finding people with mental illness to join their ensemble. Alternatively, students who already have a degree of music education prior to developing disability often fair better. That's how the

Author became a musician, and how vocalist Tim McCallum, who was a tertiary voice student when he became a quadriplegic, learnt his craft. Failing that many successful disabled musicians have a parent who is a musician, or at least knowledgeable about music, and of course, they need to find a dedicated music teacher who is willing to do their own research to access individual supports. Although these supports are often eligible for funding through Australia's National Disability Insurance Scheme, there is little available in the way of standardized supports, so parents, teachers and students are often unsure of where to turn to for advice. Finally, there are some disabilities for which being a musician is deemed culturally appropriate, like blindness, autism or Williams syndrome. Support services for people with these specific types of disabilities often provide pathways to accessible music education.

For example, Vision Australia provides literacy and learning support to students who are blind or have low vision across the country. This includes support in music education and in music literacy, either through Braille music or other means as appropriate (Vision Australia 2019). The Australian Braille Authority also holds an annual National Braille Music Camp for school age children (Australian Braille Authority 2021). Equivalent, standardised supports simply don't exist for music students with other kinds of disabilities and as a result, the limitations of music education that exist in the broader disability community do not exist in the blind and low vision ones.

Rory Burnside, the lead singer, songwriter and keyboard player for the band Rudely Interrupted is a prime example of the kind of situation in which disabled people are most like to receive a quality music education in Australia (Rudely Interrupted 2021). His father is a music producer and Rory is both blind and on the autism spectrum. It really is his skills, honed since childhood, that are the driving force that makes Rudely Interrupted the best known, most commercially successful disabled-led band in the country. Unfortunately, the educational experiences of the other three members of the band are far more typical of our community. Guitarist Rohan Brooks is the only able-bodied member of the band, and he taught Josh Hogan, who had previously only played on pots and pans, how to play drumkit. Through equal parts natural talent and hard work, Josh has grown to become a highly skilled drummer, but it is hard to imagine any Australian adult, outside of the disability community, with a love of drumming only having access to pots and pans. Rohan also attempted to teach Sam Beke, who had no prior musical experience, to play bass, using open tunings and a variety of adaptive playing techniques, but Sam found it too stressful and prefers to work as the band's dancer, a job he does superbly (pers. comm. Rohan Brooks). Now Rudely Interrupted are a great band with a large following, but I can only imagine how many opportunities they may have had if Josh and Sam had the same early access to music education that Rory and Rohan had.

Given this situation, it is not surprising that the majority of instrumentalists in Australia's disability music community play instruments that are traditionally self-taught: keyboard, guitar, electric bass, drumkit, contemporary voice and occasionally harmonica. Difficulty in accessing instrumental education was echoed by a number of the participants in the Professional Pathways study, including cabaret singer Clare Barnier who tried numerous vocal coaches

before finding one with an accessible rehearsal room, and singer Jess Kapuscinski-Evans who could not access her school's ensemble or instrumental programs because none of the instruments it offered were accessible to her (anonymized ref).

Looking at the academic record, there are an increasing number of articles providing useful solutions to some of the common problems facing disabled instrumental students (for example, Criswell 2017; McCord 2017; Thornton and Culp 2020), but there is little, if any information on accessible instrumental music in the Australian context, with no information on local resources and supports. There is an extensive, Australia-based literature on music therapy for people with disability, which is important, but is not a direct pathway to the kind of professional practice being discussed in this paper. Disability was not even mentioned in a 1991 report on music education for disadvantaged students produced by the Victorian Ministry of Education and Training (Gatens et al 1991), and although a 2005 National Review of Music Education listed 'improving the equity of access, participation, and engagement in school music for all students' as one of its main priorities, the project was cancelled before even being implemented (Garvi, Barton and Hartwig 2017, 11). So despite the fact that international research shows that integration in instrumental music is not just possible but preferable, and despite the fact that Deaf and disabled people are having successful music careers all around the world, and have always done so, instrumental music for students with disabilities in Australia seems to rely on individual, dedicated teachers and therapists, rather than on any systemic support structures. The Author's own anecdotal observations, made as a disabled musician, educator and researcher who was educated and continues to work in the Australian government education system, along with preliminary results from participants in the Professional Pathways study, demonstrate a number of barriers to participation in instrumental music programs for students with disabilities. In Australia, instrumental music is an elective class with students normally being pulled out of scheduled activities to attend. Many parents of disabled children are very wary of anything which might further limit their child's access to regular classes which they may already be struggling with, or which they may already miss regularly for doctor's visits and hospital stays. Moreover, many parents worry that the "burden" of practicing an instrument will add to the stresses of a child who may already be struggling to keep up with homework, a concern that was also raised by a Professional Pathways research participant who had decided to delay instrumental education until after completing secondary school. In Australia, band and orchestra rehearsals are also often held after school, which can be problematic for children with limited physical energy, or for children whose evenings are already taken up with activities like speech pathology, physiotherapy and the like. When I was teaching I regularly had parents of children with disabilities say that they would give their child a year to settle in to high school, and then consider music lessons at the start of year eight (form two). Of course by that time the child's peers have all moved into the intermediate band and they are often unwilling to learn with a group of younger children.

Musical instruments themselves can also be very intimidating to parents of disabled children. They are expensive and look very, very complex and easily broken. As musicians we know that instruments can be highly adaptable, but with limited communication between music teachers and music therapists, there are few local resources for teachers or students looking for specific advice on making such adaptations. Perhaps the broader problem is, with so few adult disabled instrumentalists in Australia to act as role models for disabled young people, there almost seems to be an assumption that instrumental music education for disabled people is simply not worth the difficulties involved. Young disabled Australians all want to grow up to be like their Paralympic heroes Dylan Alcott or Ellie Cole, they have often not even heard of disabled musicians like Felix Kleiser or Gaelynn Lea.

While there is little existing research on pathways to professional practice for disabled musicians in Australia, there is a larger body of research on disabled theatre professionals,

which, along with visual arts, has been much more prominent on the Australian disability arts scene. Bree Hadley (2017) identifies Australian disability theatre as existing in three distinct types:

- Practices by able-bodied people about disabled people
- Practices by able-bodied people working with (facilitating for) disabled people
- Art (led) by disabled people themselves.

If this model were applied to disability music in Australia, the vast majority fit into the second category. This is not to say that some of the ensembles led by able-bodied facilitators are not producing fantastic work, some are clearly doing their best to push disability music out of what Hadley calls the 'therapy ghetto' (Hadley 2017, p311) or what Randolph Reimann refers to in disability music as the 'sing-a-long paradigm' (Reimann 2012, p82).

Perhaps one of the most successful of these facilitated programs is TraLaLa Blip, an electronic music ensemble from northern New South Wales. Formed in 2008, one of the major causes for the group's success has been facilitator Randolph Reimann's decision to treat the experience not as therapy, but education (Reimann 2012). Participants receive instruction on the history of electronic music, and how that relates to the music they are already familiar with. Reimann also treats the ensemble as an active member of the broader electronic music community, and has established links and collaborations with other ensembles, disabled and non-disabled, around the world. However, while disabled members of Tralala Blip may have creative control over individual tracks, the broader foundation of the ensemble, including the decision that it should focus on electronic music at all, remains firmly in the hands of their able-bodied facilitator.

Tralala Blip, along with most facilitated ensembles in Australia use the same basic format as do disability theatre and visual arts programs. That is, they operate as programs in day centres or as community arts programs targeting participants with disabilities who have little or no prior experience in that artform. This technique has proven very successful in the theatre and visual arts world.

However, music has one big difference to theatre and visual arts, and that is the length of time that it takes to learn a musical instrument. Most instrumentalists begin learning in childhood, so an adult walking into a disability music program with no experience is already a long way behind their peers, without even taking their impairment into account. That is why disability music culture in Australia lags behind theatre and visual arts and that is why it is so important to make music education more accessible.

At the moment instrumental music education for people with disabilities in Australia often seems fall between the cracks of music education and music therapy. Ideally therapists, educators and disability arts professionals could work together to find a solution, or more realistically, a series of solutions. It is vitally important for the ongoing health of Australia's disability music scene because without instrumentalists, disabled musicians do not own their own means of production, they will always be reliant on others.

Although, as has been shown, Paralympic sport is far from perfect, it can serve as a better model for music education than those offered by current disability theatre practices. Sport, like music, requires training from a young age and the Paralympic movement has been

extremely proactive in having trained physiotherapists working with physical education teachers and youth coaches to identify and support young disabled athletes from beginner stages right through to professional practice. A similar service operated by music teachers and music therapists working together in schools could identify disabled students with a passion or a talent for music and then actively work with schools, parents and students to identify appropriate instruments, playing and learning styles to meet their needs. Unlike the Paralympics, there would be no need to create parallel events or designate who is or is not allowed to take part. Musicians around the world, including bands like Murder of Crows, Rudely Interrupted, Wheelchair Sports Camp, Kounterclockwise and even Def Leppard are proving every day that disabled and non-disabled people can work together on an equal basis in the music industry, but in Australia, at least, our education system has not yet caught up. Considering disabled students in our instrumental music programs is important, not just because disabled musicians need extra support, but because disabled musicians like myself and my colleagues see the world from a slightly different angle, and anyone who sees the world from a different angle has something really valuable to bring to the artistic table. If we do not start educating our disabled musicians, we will all miss out on hearing some truly spectacular voices.

(Abstract 355)

Biomechanics, neurorehabilitation, and ergonomics provide an evidence-based approach to piano technique: torso, neck and legs

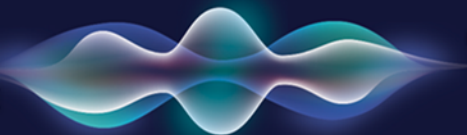
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Abstract

Although it has been more commonly accepted that the whole body is involved in piano playing, there is no available research on the contribution of the stabilising muscles of the torso or the role of the neck and legs. There is however research in other fields such as biomechanics, neurorehabilitation, orthopaedic medicine, sports medicine, and ergonomics, that help fill the void and give us valuable insights into the contribution of stabilising muscles and optimal alignment requirements for pianists. This article briefly explores the biomechanics of the torso, leg, and neck. It integrates this with current research findings in the above fields and then makes applications that are pertinent to the pianist. Each section concludes with recommendations of what is considered the best alignment of segments and which muscles are key contributors specifically in piano playing. Findings highlight the contribution of the feet during balanced sitting at the piano and the crucial use of stabilising muscles in the torso, neck and leg regions that set the body up for optimal performance. These findings can be used to guide teachers, pianists and students in the use and practice of good postures, optimal muscle use, and best skeletal alignments. An evidence-based approach such as this gives a benchmark by which pianists can examine and appraise their own technique as well as established methods and techniques that are commonly used. This approach also paves the way for uncovering the causes, diagnosis, and management of injuries in pianists.

Keywords biomechanics, evidence-based, piano, technique, pedagogy

Introduction



Pianists and pedagogues have been trying to establish for centuries what are considered good movement patterns in piano playing. An evidence-based approach to piano technique allows us to determine what these good movement patterns are. This can be achieved by integrating biomechanical principles with research in neurorehabilitation, orthopaedic medicine, sports medicine, and ergonomics, along with established knowledge about piano technique and teacher's experience. Most research on pianists has focused on the hand, fingers, arm, and shoulder (Furuya et al 2011 & 2018, Goubalt et al 2021, Kaufman-Cohen 2018, Montes et al 1993, Oikawa et al 2011, Tubiana and Chamagne 2005, and Wings et al 2013). Only some research has considered the torso and pelvis (Grieco et al 1989, Honarmand 2018, Verdugo et al 2021). There is no research that has considered the deep stabilising muscles of the torso, neck, and leg. There is also no established normative data regarding postural or skeletal alignment for the pianist except a descriptive model derived from observation (Wristen 2000). This article will include a brief anatomical and biomechanical description of the torso, leg and neck and highlight the important role of the stabilising muscles. It will draw on research from various fields that can guide us into deducing what is considered optimum alignment and movement patterns for playing the piano. From this evidence-based approach, recommendations will be presented that can guide pianists and teachers in establishing and teaching optimal movement patterns.

Skeletal alignment of the spine whilst sitting at the piano

The vertebral column comprises of a series of movable bony segments held together by ligaments and muscles. The bones line up on top of each other like building blocks and each is each separated from adjacent bones by a cushioning disc. There are 24 separate bones and 9 fused bones forming the sacrum and coccyx. Pioneering ergonomic research using radiographic imaging concluded that optimal spinal alignment looks vertical when looking from the front to the back (anteroposterior view) and displays four curves in the side view (lateral view). There is also no forward positioning of the head or hunch in the mid-back (Belytschiko and Privitzer 1978). The curves and discs create a flexible support and give the vertebral column the resilience to handle compressive forces which are absorbed by the giving way and recovery of the various curves (Palastanga 2012). Research that followed added the recommendation of a neutral pelvis and feet supported by the floor (Harrison et al 1999). Because alignment changes in different positions and movements, it is helpful to consider static sitting posture (when the body and its segments are aligned and maintained in certain positions), in contrast to dynamic sitting posture at the piano (when there is changing alignment of the spine in response to movement) (Levangie et al 2019). For the pianist, this is most significant when playing in the higher or lower registers of the piano or when having to make abrupt changes of speed or direction of movement. These instances are when the Centre of Gravity (COG) shifts suddenly or more extremely over the Base of Support (BOS), and the pianist is required to make rapid and continual postural adjustments. The COG is the point where a person's body mass and gravity is mostly concentrated, whereas the BOS is the areas of the body that make contact with the supporting surfaces. The body is balanced and stable when the COM is maintained over the BOS. The BOS in sitting is the thighs (bony protuberances under the buttocks called ischial tuberosities) and the feet (Carr & Shepherd 2010). This research is helpful in guiding pianists when movement adjustments are required. For example, when pianists play in the higher registers, the COG shifts to the right and slightly forward over the BOS and hence the required movement adjustment would be transferring weight to the right buttock with a sideways rocking motion of the pelvis being the most efficient way of transfer. Weight would be transferred through to the right leg whilst the spine remains correctly aligned. Looking from behind, the spine would no longer be perpendicular to the stool but instead angled to the right to create an acute angle. Another

example is when pianists are required to move forward towards the keyboard. They need to bend forward by bending at the hips without disrupting the neutral curves of the spine. The COG shifts forward (away from the ischial tuberosities) and movement adjustments are made by shifting more weight through to the thigh and leg in a rocking forward motion. These adjustments are a combination of small movements and result from the body-brain connections anticipating which muscles are necessary to maintain balance during a task (Carr et al 2010). Furthermore, research has shown that focusing on an external visual cue rather than on postural control itself is a better way to teach movement adjustments for balance (McNevin 2002). For example, for the pianist this would mean giving instructions to focus on the target key in the required register rather than focusing on which muscles to activate.

Movement and Stability at the Spine during piano playing

Movement and dynamic stability at the spine are achieved through the careful timing of different muscles with different roles (Martuscello et al 2013). Passive stability on the other hand comes from specific bone features, ligaments, and other connective tissue. In considering dynamic stability and the role of deep stabilising muscles, it can be helpful to consider Panjabi's model for dynamic stabilisation of the spine (Panjabi 1992). Panjabi proposed that the brain-body connections must accurately co-ordinate the sequencing and timing of proximal stabilising muscles (muscles closest to the joint) in order to maintain adequate distal muscle activity (muscles further away from the joint), and therefore stability at that joint. Panjabi's theory was soon after substantiated in the spine. During anticipation of a limb movement in healthy subjects, a feedforward activation of transversus abdominis (a deep abdominal stabilising muscle) occurs prior to the activation of the movement muscles and other trunk muscles (Hodges and Richardson 1996). More recent research showed that the diaphragm contracts together with the transversus abdominis to increase lumbar spine stability (Finta et al 2018). The findings of Panjabi and Hodges was developed into the concept of 'core stability'. The 'core' refers to body regions of the trunk which include the spine, pelvis, scapulothoracic area, hips, and shoulders. There are numerous core muscles which include transversus abdominis, multifidus, internal obliques, external obliques, erector spinae, quadratus lumborum, rectus abdominis, psoas major, pelvic floor muscles, and the diaphragm (Martuscello et al 2013). Some of these form a deep abdominal stabilising corset (Selkow et al 2017). Their activity is best understood as the pre-programmed combination of specific trunk muscles working to provide stability to the areas closest to the body in order to facilitate movement in the distal limbs (Brukner et al 2017). The research shows a sequencing pattern where muscles closest to the centre of the body turn on before the muscles that are further away from the body (Putnam 1993). This sequencing has also been shown more recently in pianists (Verdugo et al 2021), where trunk and pelvic muscles were activated prior to shoulder muscles which were activated prior to elbow and wrist muscles during the key attack anticipatory phase in piano playing. It has been commonly accepted and substantiated by the literature in the Sports Medicine, Orthopaedic Medicine, and Neurorehabilitation fields, that core muscle activation and control is necessary not only for optimal movement but also for injury prevention (Bliven 2013). This research can guide pianists to an understanding of the significance of activating core stabilising muscles during playing and the role that these muscles have in setting up the arm for optimal movement and force production. This should compel pianists to prioritise a good seating set up at the piano and maintain correct posture using the deep core muscles of the spine and abdominal area. Furthermore, the research gives us the knowledge that continual movement adjustments will take place during playing and are essential for maintaining balance. The pianist needs to be aware that good alignment needs to be maintained throughout these adjustments.



Skeletal alignment of the pelvis, hip and leg during piano playing

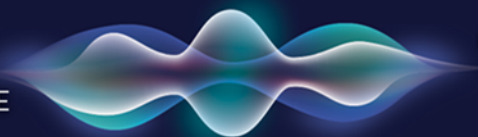
The joints of the pelvis include the lumbosacral joint, the sacroiliac joint, the pubic symphysis, and the sacrococcygeal joint. Movement is not a key feature of these joints. Rather they are designed for transferring loads from the trunk to the bony prominences of the buttocks (ischial tuberosities) when sitting, as in the case of piano playing. Radiographic investigations of pelvic alignment in sitting show a backward tilt of the pelvis with a forward opening of the hip bone to allow bending at the hip and avoid impingement with the femur bone (Lazennec et al 2020). Passive stability of the sacroiliac joint is achieved through form closure. Form closure involves the interlocking of the ridges and grooves on the bony joint surfaces (Pool-Goudzwaard et al 1998). These create a tight locking stabilising mechanism in the pelvic area that support movement in distal limbs. Form closure at the sacroiliac joint will be optimal when the pelvis is in the correct sitting alignment mentioned above. Research can guide the pianist to understand the importance of the position of the pelvis during playing and its relationship to other limbs.

The hip joint is a ball and socket joint formed by the head of the thigh bone (femur) acting as the 'ball' and the acetabulum of the pelvis as the socket (Palastanga 2012). Because of its structure, it has a wide range of motion available to it. The hip connects the lower limb to the trunk and is capable of supporting the entire weight of the body as well as providing a stable transference of weight. At different times the joint must possess either great strength or stability and sometimes both. Strength is not required by pianists however stability is essential during piano playing.

Movement and Stability at the pelvis, hip, and leg during piano playing

The muscles involved in stabilising the pelvis and the hip are considered to function like 4 stabilising slings and are part of the force closure system. The muscles involved include muscles in the buttocks (gluteus maximus/medius and minimus), muscles of the torso (lattisimus dorsi, internal oblique), muscles in the thigh (biceps femoris, adductor longus, tensor fasciae latae), and back (erector spinae) (Vleeming et al 2012). The muscles achieve force closure (active stability of the pelvis) by influencing the orientation of the bones and how they interlock with each other (similar to form closure), but also by increasing the tension in the ligaments and fascia. This interlocking allows for distal joints to work optimally (Snijders et al 1995). This research can guide pianists to understand that the key role of the lumbopelvic muscles is not only to support the torso and provide balance, but also to stabilise the torso, pelvis and hip so that the leg can work freely when using the pedal.

In the sitting position, the role of the leg and feet is three-fold. Firstly, when the feet are supported, they reduce loads in the spine, they help maintain the upright position, and they contribute to balance. In studies of reaching forward beyond arm's length, leg muscles were activated before the arm moved at both fast and slow speeds (Crosbie et al 1995). In these instances, the leg muscles are critical for maintaining upright sitting. When thigh support is reduced, which is how pianists commonly sit when sitting on the front part of the piano stool, the contribution of the leg muscles increases. If both feet are off the floor, the BOS is now only the thighs. Consequently, postural adjustments cannot be made using the large muscles which cross the knees and ankles, and the feet cannot be stabilised on the floor. Instead, with this smaller base of support, the pelvic and trunk stabilising muscles will need to work harder than usual (Dean et al 1999). Research shows that reaching sideways, which also commonly occurs in piano playing, is more destabilising than reaching forward (Sekiya et al 2004). Furthermore, reaching within arms-length would cause anticipatory activity of the back and hip extensors. Reaching further than arms-length would recruit additional leg muscles (Curtin



et al 2017). This research guides pianists to consider the importance of the pelvis and leg during playing. Correct sitting positions are imperative so that the feet are properly supported and hence able to contribute effectively to stability and movement adjustments at the torso, pelvis, hip, and arms.

Skeletal alignment of the head and neck whilst sitting at the piano

Optimum alignment of the head and neck involves determining the centre of gravity of the head and optimal visual gaze angle (Yogananda et al 2009). Calculations have determined that the visual gaze of a person should be directed 30 degrees downwards in relation to the horizontal. This gaze angle is now commonly recommended by ergonomists for establishing good working position of the head and neck for people using computer screens (Woo et al 2016). Common deviations from this optimal alignment usually presents as a decrease in curvature of the neck with forward head translation (Khalil 2018). In this incorrect alignment, the upper part of the neck bends backwards while the lower part of the neck bends forward. This incorrect alignment has been shown to increase disc pressure as well as EMG muscle activity, and causes tension to the cervical spinal cord, brainstem, and nerve roots (Dvorak 1991). Although strains on the cervical spine in the sitting position appear to be related to increased forward translation of the head, this position is commonly adopted by desk workers, typists, and drivers of different machinery (Harrison et al 1999) and pianists. The above findings are significant and directly applicable to pianists. Pianists spend varying amounts of time looking down at their hands and fingers whilst adopting the forward and flexed cervical position or at times looking up to the music rack to read their music. In these positions, their gaze would commonly be outside the recommended 30°. Priority needs to be taken to teach students to maintain correct alignment of the neck even when it is necessary to look downwards, as well as to avoid forward movement of the head whilst bending at the neck occurs. Furthermore, pianists who are reading repertoire for extended periods need to check on their gaze angle in relation to the height of their music on their music shelf and make necessary modifications to be able to maintain good alignment.

Movement and Stability at the head and neck during piano playing

The muscles in the neck that are particularly significance to pianists can be narrowed down to the deep stabilising muscles and the superficial movement muscles. Studies have shown that smaller muscles involved in motor control and stabilisation have large proprioceptive numbers whereas muscles recruited for larger movement are comparatively low on proprioceptors (Peck et al 1984). Proprioceptors are involved in the communication system between the brain and the body and hence muscle involved in precise postural adjustments need more input from this system to achieve better control of movement. The deep stabilising muscles of the neck (longus capitus, longus colli, cervical multifidus) are classified as postural muscles (Boyd-Clark et al 2002) and together the longus capitus and longus colli are commonly referred to as the deep neck flexors. These deep neck flexors act on the neck in a similar way as the core stabilisers act on the spine and pelvic regions. They allow correct alignment in the neck region to be maintained so that the superficial muscles can function appropriately in resting or active states. If these deep flexors are dysfunctional, the superficial muscles turn on as part of an altered brain-body communication system attempting to compensate for weakness or faulty functioning of the deep neck flexors (Falla et al 2004). Research has revealed that patients with neck pain show a reduced activation of the deep neck flexors and an increased activity of the superficial movement muscles such as upper trapezius and sternocleidomastoid (Edmondston et al 2008). These findings indicate the importance for pianists to be aware of their neck posture, their deep neck flexors and any overactivity in superficial muscles which usually presents as tightness or pain in the neck

region. There is also a clear correlation between recommended gaze angle and optimal function of the deep neck flexors (Lee 2020). It will prove most effective to address gaze angle and deep neck flexor function simultaneously when considering the neck.

Conclusion

The research shows that the stabilising muscles of the torso, neck, and legs play an essential role in setting up balance and optimal movement and power at the arms and there are numerous practical implications for pianists. We are now in an era where research in our own field as well as other fields is able to guide our profession into the evidence-based realm. This has a wealth of implications for piano teachers, performers, students, and researchers alike. An evidence-based approach to piano technique empowers pianists to be able to explore their own technique solutions in the light of movement science and current research as well as examine and appraise established methods and approaches. This means that we no longer need to rely solely on hearsay and tradition. An evidence-based approach to piano technique also has the potential to spark advances in the aetiology, diagnosis and management of injuries among pianists by uncovering unexplored areas of research such as the stabilising muscles. Finally, it gives us the opportunity to stand alongside other professions, with our own benchmark in pedagogy that is grounded on movement science and supported by current research in various fields. Such a benchmark can enable us to better equip our teachers to teach piano technique and improve the quality of teaching that is delivered to students.

(Abstract 485)

The Legacy of Beethoven as a Teacher, seen through the Eyes of his Students

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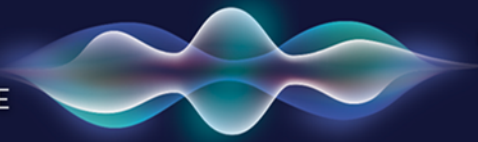
Abstract

In the recent “year of Beethoven” 2020 we have all experienced hearing many of his magnificent and monumental works. But rarely do we hear anything about the great genius as a teacher and what he was really like as a person. There’s no better way, I think, to find this out than through the eyes of his students.

This paper traces Beethoven as a teacher from the age of twelve until his death, when he gave lessons from 6am anytime until evening, sometimes four to five hours in length. Not only did he teach the piano, but composition, languages, keyboard harmony and improvisation.

Have you ever wondered what a lesson with Beethoven would be like? This paper traces his relationship with many of his students, including the best-known, Czerny, who later taught Liszt, from his first audition when Czerny thought Beethoven looked like Robinson Crusoe, throughout his lifetime.

We also often wonder how Beethoven could have taught after he became deaf. Through the eyes of many of his students, this paper gives us a peek into the master’s character as well as his teaching methods. For example, Beethoven emphasized a legato cantabile tone, a revolutionary treatment of dynamics, and demanded expression above accuracy. He distrusted



metronome markings, saying that the right tempo is the one which sustains the psychological response intended to keep one's interest.

The paper ends with seven important lessons and insights learned from Beethoven as a teacher that apply to all of us as music educators in the 21st century. Through the eyes of his students, we can perceive Beethoven's humanity, his frailties as well as his strengths and how he was able to persevere through the adversities in his life to leave such a treasure of music to enrich, comfort and uplift us. He is a visible voice from the past who is as relevant today and will continue to be so, empowering all music educators around the world. We are all his students and the great master can continue to inspire all of us.

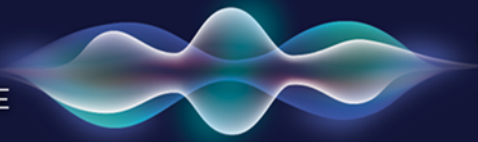
Keywords: Beethoven, Teaching Methods, Czerny, Legacy

In the recent "year of Beethoven" 2020 we have all experienced performances of many of his magnificent and monumental works. But rarely do we hear anything about the great genius as a teacher and what he was really like as a person. There's no better way to find this out, I think, than through the eyes of his students.

Beethoven started teaching at the age of twelve to help supplement his family's small income and continued to teach until his death. He taught not only piano but composition, usually a combination of both. Most of his teaching was done in his own home or in his students' houses, like a tutor. Although he normally charged a fee, sometimes he taught for free. He was very diligent about teaching regularly, but on occasion would miss a lesson due to composing or preparing for a concert. When he was a teenager, he would sometimes miss lessons due to laziness! Frequently he would teach students more than once a week. Once he gave Thérèse and Josephine von Brunswick a lesson every day for 16 days without missing a single one. These lessons were often four or five hours long! However not everyone received such generosity. Sometimes he would teach at 6am anytime until evening. Some records say that a few times he even gave lessons in his dressing gown, slippers and a tasseled cap! His students appeared from an array of social classes and varying skill levels, from amateurs to virtuosos.

Beethoven's most famous student was Carl Czerny who was introduced at the age of ten to the master. As a young boy, his first impression of his new teacher was that he looked like Robinson Crusoe! He also noticed the medicated cotton in Beethoven's ears, his hairy hands, and very broad fingertips. Czerny played for him Mozart's "Concerto in C, K.503" while Beethoven played orchestra parts with his left hand in the treble of the piano. Can you imagine auditioning for Beethoven? Since Beethoven seemed satisfied after the concerto, Czerny felt confident enough to continue with the "Pathétique Sonata" and was accepted as a student twice a week. When Beethoven auditioned a new pupil, he also perused their compositions. Czerny's own father was a piano teacher but Beethoven complained once that he was not strict enough, to which the father replied that he was their only child. Obviously, he wasn't the typical prodigy parent!

Czerny, who later became the teacher of Liszt, possessed amazing abilities for memorization. He was engaged almost daily to play for Prince Lichnowsky who would indicate any opus number, and Czerny would play the Beethoven Sonata from memory! Carl Czerny's close association with his teacher continued until his master's death. As a young teenager he had been so affected by Beethoven's first two symphonies that he had proceeded to copy out the instrumental parts.



We often wonder how Beethoven could have taught after he became deaf? Czerny said that his teaching was unaffected until 1812, but after that time he often became irritable, and is known to have even bitten a student on the shoulder who was making lots of mistakes. I've sometimes tried to imagine how I would teach if I were deaf!

Beethoven dedicated so much quality music to another student, the Archduke Rudolph, including "Les Adieux" when Rudolph and the royal family had to leave Vienna during its siege and occupation by the French army. Rudolph collected a huge library of printed music which was also a safe place for Beethoven's scores. He also perfected the craft of copying out and organizing the music of great composers e.g., Mozart (2-piano versions of "Don Giovanni" and "The Magic Flute"), Handel, JS Bach, CPE Bach plus his own compositions. Some of these transcriptions were probably assignments from Beethoven, including Handel's "Messiah", which Beethoven greatly admired.

Another honor bestowed on some of his students was allowing them to premiere the first performance of his works. For example, Czerny was requested to perform the first performance of the first and fifth Concertos, while Ries performed the Third Concerto for the first time publicly. His students were also given the responsibility and honor of arranging his symphonies and other works for piano duet or making various other transcriptions.

Schindler met Beethoven when he was 18 and became his secretary and servant. Primarily an excellent violinist, he played the piano for the master and Beethoven would then play for him explaining the interpretation of the particular movement. Both thought alike that the piano was a representation of the entire orchestra.

Another student, Baroness Ertmann, from 1803-1818, was one of Beethoven's finest interpreters. Schindler described her sense of "free tempo" as instinctive, adding that nobody had reproduced his own manner of playing as closely as she did. Mendelssohn wrote to his sister that she played Beethoven pieces beautifully, often exaggerating the expression and rubato. In dedicating his "Sonata op.101" to her, Beethoven wanted her to accept it as proof of his devotion both to her artistic aspirations and to her as a person.

Beethoven seemed to treat his mostly adult students as friends, giving them sometimes free lessons, loaning them money which sometimes became gifts as the loan was never repaid! And Beethoven would often attend concerts and social gatherings with his students.

There is much supposition about his relationship with his female students. He seems to have fallen in love with Maria von Westerholt, an early student who later married Baron von Elverfeldt. He also fell in love with Countess Kleflevics, to whom he dedicated his "Sonata op.7", and supposedly titled it "The Maiden in Love." Some suppose that he even proposed to one of his pupils Countess Julia Giuccardi, who later married the Count instead.

We don't normally think of Beethoven as a patient man, but apparently he displayed much of this virtue with his pupils. Countess Thérèse Brunswick wrote that he never grew weary of holding down and bending her fingers, which she had been taught to lift high and hold straight. Ries said that during lessons, Beethoven was particularly patient, once insisting that he repeat a passage 17 times!

Let's now explore some of Beethoven's Teaching Methods.

First of all, when anyone performed a work of his, Beethoven's first question was always "How were the tempi"? Czerny tried to indicate the appropriate tempi using the metronome, but Beethoven wasn't sure if metronome markings could really indicate the tempo at which a piece should be played. Both of them realized that the right tempo is the one which sustains the psychological response intended to keep one's interest. A traditional tempo marking such as Presto, Allegro, or Andante, Beethoven compared to one's body, whereas words and phrases describing the character of a work were compared to one's spirit. Czerny, in setting Beethoven's metronome markings, tried to avoid the virtuosic inclination of the day. But today we still tend to take the tempi livelier than Beethoven probably would have wished. Once Schindler was helping Beethoven set metronome markings for his "9th Symphony" to send to the Philharmonic Society in London. Then a set of markings made a few days earlier turned up in Beethoven's messy apartment and all movements revealed a discrepancy. Beethoven's reaction was to declare all metronome markings as useless and unnecessary for perceptive musicians, and meaningless for the unmusical, for whom nothing would help!

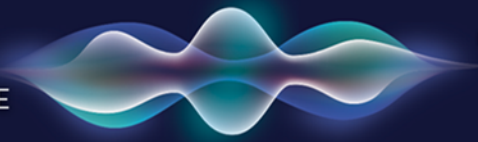
Beethoven's revolutionary treatment of dynamics is due to his use of raw sound as a structural element, in places where the harmonic movement is static and only the dynamic contrast is able to sustain the listener's attention. This unrefined sound produces a psychological response which allows the listener to accept these passages as points of reorientation, like a signpost that something important is going to happen. For example in the "Moonlight Sonata" last movement the *ff* chords are like exclamation points. Beethoven pushed every expressive means to the limit of its possibilities including dynamics.

Czerny assembled a large vocabulary to describe the effect of Beethoven's music if played as intended. Some of the colorful adjectives include: unruly, roaring, virile, noisy, shrill, jocose, bewitching, complaining, melancholic, exalted, profound, and flattering to name a few.

Have you ever wondered what a lesson with Beethoven would be like? According to Czerny, first came scales with proper fingering. Next came practice pieces from CPE Bach's "Essay on the True Art of Playing Keyboard Instruments", Clementi's "Introduction to the Art of Playing the Piano", and Beethoven's "Variations on a theme by Sussmayer". Then followed Beethoven's own pieces including sonatas and concertos, the "Choral Fantasy", "Archduke Trio" etc. Czerny recalls that at one lesson he was given the "Waldstein Sonata" to sightread!

Beethoven was extremely demanding regarding interpretation. Ries once said that if he made a mistake in passages or missed notes and leaps, Beethoven seldom said anything; but if he was faulty in expression, in crescendos etc., or in the character of the music, the master grew angry because mistakes were accidental while lack of character disclosed lack of knowledge, feeling or attentiveness.

One of the main features of Beethoven's technique was a legato cantabile tone. Czerny wrote that he went through CPE Bach's treatise, making him aware of the legato of which he had such an unrivalled command, and which all other pianists considered unfeasible at the fortepiano. Somewhat choppy and detached playing was still in favor then as it had been in Mozart's time. Beethoven created a new kind of singing tone and many unimagined effects by his use of the pedal.



Beethoven once told his student von Breuning that he intended to write a Piano Method, which unfortunately never happened. This would have included performance instructions and program descriptions for his different piano sonatas. Can you imagine!

In summary, following are seven important insights and lessons we can learn from Beethoven, the Teacher.

- He was an all-round teacher who taught improvisation, composition, keyboard harmony and even languages. We should encourage our students and ourselves to improvise, as Beethoven often did during lessons as well as helping them to write their own cadenzas.
- Beethoven never wanted his students to mimic himself. Let's approach each of our students differently and draw out the unique and individual qualities in each one of them.
- He didn't want his students to play from memory all the time as this weakened their sight-reading and they forgot the details in the score. Let us not over-value memorization at the expense of other musical skills like sight-reading.
- He wanted students to concentrate on interpretation and creating a beautiful tone, not endlessly repeating technical exercises that had no musical purpose. This is a good reminder for us as music educators to focus on the "music".
- Beethoven never gave up on patience yet demanded that students bring out the character and expression behind the notes. Don't give up on our students!
- He was aware that metronome markings don't necessarily indicate the exact tempo. The correct tempo is really one that keeps the listener involved! This is wonderful advice.
- Beethoven passed on his ideas as a pedagogue to an amazing legacy of students through Czerny, Liszt and so on until the present. However, our value and worth as a teacher should not be dependent on the fame of our students.

Through the eyes of his students, we can perceive Beethoven's humanity, his frailties as well as his strengths and how he was able to persevere through the adversities in his life to leave such a treasure of music to enrich, comfort and uplift us. He is a visible voice from the past who is as relevant today and will continue to be so, empowering all music educators around the world. We are all his students and the great master can continue to inspire all of us.

(Abstract 487)

"Finding Yourself to Be a Foreigner": Phenomenology of Music Teaching in American International Schools

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There is a lack of available research on the lived experience of music teachers working overseas. Music offerings in public and private schools in the United States are often accompanied by a sense of place and school tradition. Alternatively, music offerings in international schools or American schools abroad can fluctuate regularly in both the topics covered and in the teacher's strategies. The purpose of this phenomenological study was to explore American music teachers' perspectives on teaching music in international schools,

from a practical view on pedagogical strategies and a sociological view on the music program's sense of place. Data took the form of interviews with 19 American music teachers who were currently teaching at international schools in 16 countries. Data collection took place from September to December 2019. Results included numerous examples of how music teachers altered their mindset and pedagogical strategies to develop culturally responsive practices. Results also contained perspectives on how the school music program was impacted by the musical and educational history of the host country. The results yielded implications about Westernization and culturally responsive pedagogy (CRP).

Research Questions:

1. According to American music teachers, how do international music teaching positions differ from American music teaching positions at the same grade level?
2. According to American music teachers, how are pedagogical strategies adjusted in order to meet the needs of the international music teaching position?
3. From the music teachers' perspectives, how does the international music program's place in the school community differ from the American music program's place in the school community?
4. From the music teachers' perspectives, how does the international music program incorporate elements of the school's home culture?

An earlier version of this research was accepted for the ISME World Conference in Finland. Since that time, a small portion of the data was presented at the 2020 Ohio Music Education Association state conference. Data collection and analysis is now complete, and some alterations have been made to this proposal. The full research has not been presented at any prior conference, and the study has not been submitted for publication.

(Abstract 492)

Past, present and future: Towards more prosperous organ teaching and culture in Mainland China

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Abstract

The pipe organ is a traditional European musical instrument and is hailed as the “King of Musical Instruments” by Wolfgang Amadeus Mozart. Since 1287, the Catholic Church in Milan approved the pipe organ as “the only instrument that can be used in religious ritual”, the pipe organ has always occupied a place in the European music education system. However, the history and current situation of the pipe organ in Mainland China is relatively complex, although the first organs appeared in the country during the 13th century.

This article reviews the history and development of both pipe organ and professional organ teaching in Mainland China, ending up describing the current status of the organ art as an ancient musical heritage. Through a comparison between the university-level organ teaching syllabus in Finland and in China, one can see that the organ culture is still in its infancy in

China. Even though conservatories have successfully opened professional performance degrees, the curriculum and syllabus are not yet sound.

However, thanks to instrument investment and strong support from the Chinese civil society, we can positively predict that the organ art and its culture will be established more deeply in China in the near future. Another small sign of that is the first organ history book written in Chinese that fills the gaps in the domestic theoretical field, but there is not yet scientific guidance written in Chinese for domestic professional music conservatories and amateur organ enthusiasts in the field of teaching.

Keywords Pipe organ, pipe organ culture, pipe organ history, pipe organ teaching, pipe organ music education

Introduction

Organ has long and prosperous history in Western Europe, but in China, especially in Mainland China, organ has not achieved similar attention. However, in China where music is highly appreciated and traditional instruments are still used in playing, organ as a historical and magnificent instrument should have a fertile ground to take a stronger position.

In this article, we first review the history of organ in China since its arrival for almost 800 years ago. In mid-20th century, due to political reasons, music and culture had some drawbacks that affected also the organ area. In the following section, we take a look at this phenomenon and especially its impact on professional organ teaching. Moreover, we also make a comparison on recent organ syllabuses between the Sibelius Academy in Finland, part of the University of Arts Helsinki, and the Shanghai Conservatory of Music in China. Through the comparison, we show some key development areas in the organ teaching in China. Then, we look at some positive examples from the civil society and private industry side to support the organ culture development in China as well as review the current penetration status of organs in China. Finally, in the concluding remarks we also point out some potential development issues in organ culture promotion in China in the near future.

General situation of the development of pipe organ in China

According to the literature (Williams, 1980), the first pipe organ was built in Greece around 200-300 BC and gained some popularity in the coming centuries, but with the fall and decline of the Western Roman Empire in the 5th century, the pipe organ disappeared from Western Europe inexplicably. It was not until the 8th century AD that the pipe organ was once again passed back to Western Europe from the Eastern Roman Empire, and between 900 and 1200 AD, the pipe organ gradually became a church instrument.

The earliest pipe organ in China appeared just prior to the Yuan Dynasty (1271-1368). According to History of Yuan – Yuan Shi (1370), during the Yuan Zhongtong (1260-1263 AD) years, a gift – instrument called “Xinglong Sheng” – from an Islamic area was given to the Yuan court. Based on the recorded text, “the instrument is shaped like a clip-on screen, with a sharp top and a flat surface, and a gorgeously decorated exterior. The nanmu sound box has 90 pipes made of purple bamboo standing on the box, using bamboo as the spring”. We can infer from this that this should be a small Byzantine-style pipe organ, and it should also be the earliest – or at least one of the earliest – pipe organ that appeared in Mainland China.

In 1287, the Catholic Church of Milan passed a resolution to recognize the pipe organ as “the only instrument that can be used in religious etiquette”. Since then, the pipe organ has always occupied a place in the European music education system. Coincidentally, in the same year (1287), Emperor Kublai Khan of the Yuan Dynasty sent Sao Ma (a Nestorian from religion and Uyghur from nation) to Europe, and the envoy arrived in Rome the following year (1288), when the new Pope Nicholas IV was in the position (at some time during 1287-1288 there was no Pope in Rome). After the envoy visited the Pope, Pope Nicholas IV sent missionaries to China to preach and they can be considered having brought also the first encounters to the religious use of the pipe organ (Zuo, 2006).

Hundreds of years later, China also had a typical Baroque-style pipe organ, again coming with missionaries. For example, in year 1600 (the 28th year of Wanli Empire of the Ming Dynasty with the Emperor Zhu Yijun), it is said a pipe organ was made and shipped to Nanjing by the priest Lazzaro Cataneo based in Macau and dedicated to Wanli Empire through missionary work. The organ had one row of hand keyboards, containing 45-49 keys, and it might have had 3-4 registrations according to later investigation (The Pipe Organ in China Project, 2021).

This instrument was a typical positive organ, which appeared and prevailed in Europe already before the Baroque period:

A “typical” Baroque-era organ in China would have been a single-manual tracker instrument, blown by a pair of Spanbalg bellows producing very light wind pressure, containing on average of two hundred pipes, with a four-octave keyboard. Such an instrument was, in some respects, fifty to one hundred years behind the technical and aesthetic norms for European organs of the day, yet it was serviceable enough (Urrows, 2017).

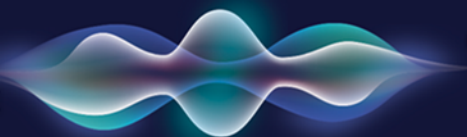
This might have been the first Western European organ to appear in China (different from the previous Byzantine organ).

With the development of missionaries in China, especially in the late Qing Dynasty (1644-1911 AD), after the outbreak of the Opium War (1839-1842 and 1856-1860), as churches were built across the coast of China, the organ culture also developed significantly in China and spread to a certain extent among the people.

Since the founding of the People’s Republic of China in 1949, organ music education has been developing slowly in Mainland China, especially during the special movement period around the mid-20th century, when most of the pipe organs in Mainland China were destroyed for political reasons. However, in the recent years, organ music education has made significant progress in China. Major music conservatories have sent a few students abroad for studying organ playing, and in 2016 an organ performance bachelor’s degree program was opened in the Shanghai Conservatory of Music in Shanghai, China for the first time.

Professional Teaching of Pipe Organ in China

According to the research in The Pipe Organ in China Project (n.d.) that was initiated at Hong Kong Baptist University in 1989, until the early 1990’s almost all pipe organists in Hong Kong were from overseas. It was not until the mid-1990’s that organists who had studied abroad returned to Hong Kong to work. Therefore, pipe organ performance and professional teaching of pipe organ are very scarce in China, even in international trading ports like Hong



Kong. The situation in Mainland China is even more bleak, and the promotion of pipe organ culture has been in a state of stagnation due to political reasons.

In recent years, organ performance has gradually emerged, as even bachelor's and master's degrees have been established in some music conservatories in China. In 2016, the Shanghai Conservatory of Music opened the first domestic bachelor's degree in organ, and in 2021 it began to recruit graduate students for the master's degree in organ performance major that will start in 2022.

However, due to the lack of a cultural foundation for the organ art, the domestic teaching work in the discipline field of pipe organ is challenging. The theoretical knowledge is not solid enough, and the performance teaching is not systematic enough. This is an urgent task that requires a large amount of investment and development in the teaching of pipe organ profession in Mainland China.

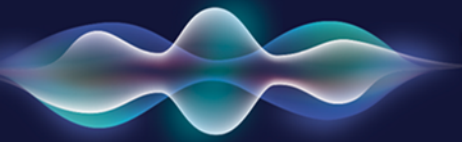
The curricula of the European conservatories of music are very different from that of China, mainly in the systematization of the curriculum. The Western academic achievements are rich and rigorous, but this academic quality is closely related to the traditional discipline construction behind it. While studying their own majors, students should or must receive comprehensive training in other related subjects, which is crucial for becoming a real musician and music scholar in the future – these aspects are to some extent lacking in teaching in Mainland China, where the tradition is to put emphasis on technical playing skills with limited repertoire.

Below (Table 1), a three-year bachelor's degree programme (major courses) of the “Church Music and Organ Performance” major of the Sibelius Academy, part of the University of Arts Helsinki, in Finland and the four-year bachelor's degree programme (major courses) of the “(Electronic) Organ Performance” major of the Shanghai Conservatory of Music in China (the 2015 version is still used so far) are taken for comparison. Although the progress in China is positive, one can infer that there are still shortcomings in the construction of the professional discipline of pipe organ in Mainland China. For instance, there is too less relevant music theory (basic support lacking) and limited amount of music history with almost no organ history included. Furthermore, there is also not enough teaching on organ pedagogy or practical knowledge given regarding the structure of organ (e.g., one does not learn on how to tune the organ). Finally, most of the current teachers themselves do not usually have background fully on real pipe organs, but on electric organs.

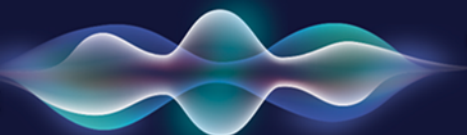
Table 1: Three-year bachelor's degree programme (major courses) of the “Church Music and Organ Performance” major of the Sibelius Academy in Finland and four-year bachelor's degree programme (major course) of the “(Electronic) Organ Performance” major of the Shanghai Conservatory of Music (the 2015 version is still used so far)

Shanghai Conservatory of Music (the 2015 version is still used so far)

Main subject studies	Course
Sibelius Academy, part of the University of Arts Helsinki, in Finland	
Instrument and ensemble skills	Organ performance



	<ul style="list-style-type: none"> · Keyboard performance · Organ structure and maintenance
Masterclass	
Organ improvisation	<ul style="list-style-type: none"> · Organ improvisation (year 1) · Organ improvisation (year 2)
Ensemble	<ul style="list-style-type: none"> · Ensemble (year 1) · Ensemble (year 2)
Proficiency demonstration and maturity	Proficiency demonstration, classical
essay	instrument performance
Maturity essay (includes language checking)	
General music skills	<ul style="list-style-type: none"> · Structural awareness of music 1
	1. Aural skills
	2. Applied analytical skills
	3. Structural awareness of music
	assignments (optional)
	<ul style="list-style-type: none"> · Structural awareness of music 2
	1. Aural skills and repertoire workshop
	2. Applied analytical skills
	3. Post-tonal music workshop
	4. Assignments (optional)
	<ul style="list-style-type: none"> · Advanced structural awareness of music
	(optional)



			· History of Western art music		
		1.	History of Western art music		
		2.	History of music essay (optional)		
		3.	History of organ performance		
Pedagogical skills			· Pedagogical skills A (optional)		
		1.	Organ pedagogy 1		
		2.	Organ pedagogy 2		
			· Pedagogical skills B (optional)		
		1.	Introduction to pedagogy		
		2.	Introduction to instrument pedagogy		
Study and career skills and ergonomic studies					
Elective studies (optional)					
Shanghai Conservatory of Music in Shanghai					
Basic courses	<ul style="list-style-type: none"> · Solfeggio and ear training (4 semesters) · Music theory (1 semester) · Harmony (2 semesters) · Polyphony (1 semester) · Musical analysis (2 semesters) · Computer music technology (4 semesters) 				
Major courses	<ul style="list-style-type: none"> · Solo performance (8 semesters) · Ensemble (8 semesters) 				
Maturity essay	<ul style="list-style-type: none"> · Thesis (1 semester) 				
Elective studies	<ul style="list-style-type: none"> · Introduction to arts (2 semesters) 				

- Chinese music history (2 semesters)
- Western music history (2 semesters)
- Other elective courses

There are also sporadic, non-degree seminars in Mainland China that provide organ performance teaching. However, due to the low-level performing students who have applied to the seminars, they have been unable to embark on a professional path in organ performance. The East China Theological Seminar, located in Qingpu District, Shanghai, can be regarded as an example of the highest professional-level teaching in China, but even there the level of organ performance remains rather moderate compared to the European standards.

In addition, there is currently no systematic teaching materials for organs in Mainland China. Klemettinen (2021) was the first organ history book written in Chinese to fill the gaps in the domestic theoretical field, but there is not yet scientific guidance written in Chinese for domestic professional music conservatories and amateur organ enthusiasts in the field of teaching.

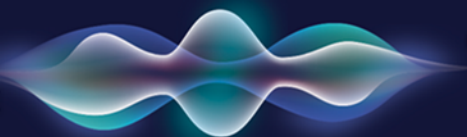
From this, it is not difficult to see that there is still a long and arduous way to explore the discipline construction and academical research in organ culture of the conservatories in Mainland China, as well as the cultivation of talents. In addition, there is lack of professional teachers in the field of organ teaching in Mainland China. Although in the past few years, China has sent a few students to study organ performing in European and American countries, almost all students have background on double-row electronic piano or piano playing. They return to teach in China after studying abroad for a few years. Although it can make up for a temporary need, the resulted teaching is not systematic and scientific enough.

The social support of pipe organ education in Chinese society

It can be said that the traditional organ has no native soil in China. In a country like China with almost no history of Western religions (Catholicism, Christianity), it is indeed difficult to promote organ culture. More than ten years ago, Professor Shen Fanxiu of the Central Conservatory of Music in Beijing made great contributions to the development of pipe organ culture in China but having to rely solely on the personal efforts of musicians one cannot create the desired impact.

What is pleasing is that the active support and enthusiastic response of Chinese civil society to organ music has contributed to the promotion of organ culture in Mainland China. Shanghai Xuhui District Pipe Organ Association, formerly known as the Shanghai “Weizhen” Organ Art Salon, was established in February 2012. In March 2014, it became a registered association after being approved by the Shanghai Xuhui District Societies Bureau. The association is the first organ related civil society organization in Shanghai and even in the whole Mainland China. The members are all volunteers and pipe organ enthusiasts from the public community.

So far, the Xuhui District Pipe Organ Association has held many popularization lectures, organized exchanges of pipe organ art with Hong Kong, Taiwan, the Netherlands, Finland



and Germany, and has established long-term partnerships with Finland and Germany. Also, the Xuhui District Pipe Organ Association and Shanghai No. 4 Middle School cooperate to offer (electronic) organ courses, starting with the electronic pipe organ or virtual organ, but additionally popularize pipe organ history and pipe organ music works among middle school students. The teaching materials used in the teaching refer to the organ teaching materials from Hong Kong Baptist University and the repertoire of the different conservatories and music academies in Europe. Meanwhile, the Crescendo company registered in China by the Dutch Noorlander virtual pipe organ company has also provided long-term help for the promotion of pipe organ culture in Mainland China for free, including free use of the virtual organ and lifetime maintenance of it.

However pleasing the local volunteering work and private company contributions are, they remain still small-scale actions in a country like China with huge population and land area. Thus, larger-scale activations and supporting resources would be needed – ultimately backed up by different music conservatories, institutes, associations and private companies across the country in a coordinated manner. However, this would call for more theoretical and practical teaching materials in Chinese to be available.

The construction and installation of pipe organs in China

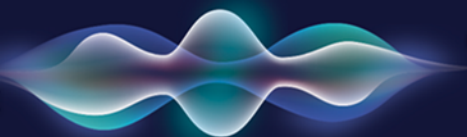
Although the promotion of pipe organs in Mainland China has been slow since the establishment of the People's Republic of China, in terms of the number of pipe organs that have been built and installed in China, the domestic investment in pipe organ instruments is still rather gratifying.

In 1990, the first domestic pipe organ built by the Czech Rieger-Kloss company was completed in the Beijing Concert Hall; in 2005, the pipe organ built by the Austrian Riegel Pipe Organ Manufacturing Company and installed in the Shanghai Oriental Art Center was the largest pipe organ in China at that time; then in 2007, the pipe organ of the Beijing National Grand Theater was built, and so on. Nowadays, concert halls in cities such as Hangzhou, Nanjing, Guangzhou, Wuhan, Hefei, Qingdao, Nantong and Xi'an have all customized and installed pipe organs.

By early fall 2021, there are more than 40 professional-level pipe organs in Mainland China. Among them, the pipe organs produced by the Austrian Riegel Pipe Organ Manufacturing Company (including new construction and reconstruction/restoration) account for the highest proportion. Riegel organs are spread throughout Hangzhou, Shenzhen, Henan, Jiangsu, Fuzhou, Dongyi, Xiamen, Nantong, Shanghai, Beijing, and other places. In addition, there are two Riegel organs in Hong Kong, China. The pipe organs currently being constructed or rebuilt and installed in China (including Hong Kong, China) by the Austrian Riegel pipe organ manufacturer are listed in Table 2.

Table 2: Pipe organs constructed or reconstructed and installed by Riegel in China (including Hong Kong, China)

The location of the organ	Installation year (including new construction and reconstruction)
1. Shanghai Oriental Art Center Concert Hall	Year 2005
2. Hangzhou Grand Theater Concert Hall	Year 2006



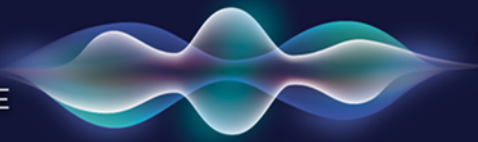
3. Shenzhen Concert Hall	Year 2007
4. Henan Art Center, Zhengzhou	Year 2008
5. Shanghai Conservatory of Music, Small Concert Hall	Year 2016
6. Jiangsu Grand Theater	Year 2017
7. Huaxiang Christian Church, Fuzhou	Year 2017
8. Gulangyu (CN) Gallery Organ, Xiamen	Year 2018
9. Gulangyu (CHN) Chancel Organ, Xiamen	Year 2018
10. Zhengzhou Grand Theater	Year 2021
11. Nantong Grand Theater	Year 2021
12. Beijing City Sub-center Theater	Estimated year 2022
13. Hong Kong Academy for Performing Arts (Hong Kong)	Year 1986
14. Hong Kong Cultural Center (Hong Kong)	Year 1989

Even if there begins to be reasonably many nice pipe organs installed in China to different concert halls, there are still very limited opportunities for the organ players to use those organs – they are either not available for playing (excluding some special concerts) or they are too expensive for normal organ players. This is a big difference compared to Europe, where the pipe organs typically located in churches are either available for free or against a small informal music matinée for organ players.

Concluding remarks and future work

This article reviewed the development of the pipe organ as an ancient musical heritage in Mainland China at the current stage from four aspects: general development of pipe organ in China, professional teaching of pipe organ in China, Chinese society's support for pipe organ education, and construction and installation of pipe organ in China.

It was showed through a comparison between Finnish and Chinese university degree programmes that the organ music education is still in its infancy in China. Even though professional conservatories have successfully opened professional performance degrees, the curriculum and syllabus are not yet sound, so further development is needed.



In order to penetrate the organ culture and to increase the amount of skilled players, more professional teachers would be also be needed in China. Similarly, one would need more scientific and practical teaching materials in Chinese for domestic professional music conservatories and amateur organ enthusiasts. Furthermore, joining the efforts of different music conservatories, institutes, associations and private companies across the country in a coordinated manner could help in promoting the organ and getting required attention. Finally, enabling organ players to utilise more the excellent instruments installed in China during the past years would bring new experience for both the organ players and music-loving audience that appreciates old instruments.

In case one can step-by-step improve on the above aspects, one can positively predict that the organ art and culture will be established more deeply in China in the near future to complement the rich musical scene with – as Wolfgang Amadeus Mozart noted – the “King of Musical Instruments”.

(Abstract 495)

Improving Students’ Practice and Performance of Music by Incorporating Cognitive Science into Conservatory Curricula

Kathleen Agres and Natasha Ureyang

National University of Singapore Abstract

Relatively few music educators integrate relevant research findings from the field of cognitive science into their classroom teaching, despite the many benefits that engaging with this area can have for the practice and performance of music. In this paper, we examine a new module that aimed to teach cognitive and performance science to conservatory students. The findings from our study suggest that the module helped students practice more efficiently, tackle challenges during practice sessions, approach practice more analytically, discover mind-body connections, and perform more confidently. Further, the module fostered a sense of community among the students. The successes of this module provide a strong case for the benefits of incorporating cognitive science into the curriculum of higher music education.

Keywords

Psychology, Performance Science, Higher Music Education, Interdisciplinary Pedagogy, Conservatory Curricula

Introduction

Cognitive science (CS), including psychology and performance science, has informed best practice in a range of applied areas such as sports and pilot training (e.g., Williams & Leffingwell, 2002), and is increasingly providing insights into the practice and performance of music (e.g., Parncutt & McPherson, 2002; Williamon, 2004; Thompson, et al., 2006). Despite the growing literature connecting CS and music performance, there is little awareness and engagement with this knowledge from most university-level music students, primarily because it is not being taught in their classrooms. Indeed, modules related to the psychology of music performance are not offered in many conservatories of music, with the notable exception of Juilliard and a small handful of other institutions.

Due to this gap, we aim to evaluate the impact of teaching cognitive and performance science to conservatory music students. A new module entitled 'The Psychology of Music Performance' that was taught by the first author to undergraduate music students at [conservatory name] was evaluated for this purpose. This module presented relevant findings from the psychology of music and performance science through a blend of traditional teaching methods (e.g., lectures, readings) and student-centered learning approaches in order to introduce music students to psychological concepts in an immersive and interesting way. The module aimed to help students add analytical, empirical tools to their set of practice and performance techniques, thereby bringing maximum benefit to their practice and performance of music. We believe that our findings on the efficacy and impact of the module support the case for greater integration of CS concepts into the classrooms and curricula of higher education in music.

Methods

Participants

13 out of 21 students enrolled in The Psychology of Music Performance module volunteered to participate in this study (participation refers to allowing the research team access to their de-identified module materials for analysis). All but one of the participants were music performance majors enrolled in [conservatory name]; the remaining student is a serious musician who plays in the [university name] symphony orchestra. All student data were coded using participant numbers (P1-P13) before analysis.

Module Overview

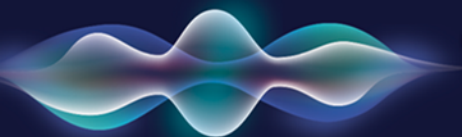
Lessons in the 13-week module were comprised of interactive lectures, in-class discussions, and activities (e.g., educational games, demos). The topics discussed in the module include:

- Introduction to the Psychology of Music and Cognitive Science
- Mind and body connections
- Efficient and deliberate practice techniques; problem solving approaches; motivation and concentration
- Strategies and meta-strategies for individual practice, ensemble practice, sight-reading, and improvisation
- Anxiety and stage fright; relaxation techniques
- Memory and memorization

- Pitch and key perception; timing and rhythm perception
- Learning and expectation mechanisms
- Emotion and Expressiveness
- Communicating musical structure and emotion
- Performance aspects; musical and psychological factors that influence performance assessment
- Analytical practice vs performance flow
- Musician's health and wellness

Student Assessment

Students completed two main assignments in the module, a weekly blog post, which prompted students to reflect on how the weekly topic(s) relate to their practice and performance of music, and an individual research project. In the project, students



implemented a strategy of their choice (from those presented in class) for one month, collected “data” on themselves, wrote a report, and gave an in-class presentation on their findings. The breakdown of research topics included: Deliberate practice (5), performance anxiety (4), sight-reading (2), health and wellbeing (1), and memory (1). An in-depth discussion of the module’s teaching and learning methods is not possible here and will be presented in another paper.

Focus group discussion

At the end of term, semi-structured focus group discussions (FGDs), facilitated by the teaching assistant, were held with 6-7 students per group. The FGDs were conducted online and lasted approximately 90 minutes. The audio recordings were transcribed, proofread, and then double-checked to ensure accuracy of transcription. Sentence fillers such as “um” were removed from the quotes below for ease of reading.

Thematic Analysis

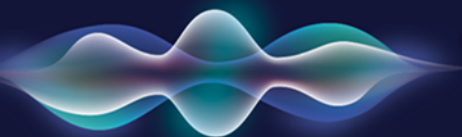
To analyze the FGD data, we used thematic analysis (Braun and Clarke, 2006; Nowell et al., 2017). First, the FGD data were coded according to the meanings that emerged from the text through an inductive, interpretive approach. After this process, clusters of codes were identified as themes. These themes were then evaluated by both authors and revised in order to comprehensively assess whether or not the module was beneficial for the students, and in what ways.

Results and Discussion

From our thematic analysis of the focus group discussions, we identified six themes in the data, as shown in Table 1.

Table 1. List of themes, their descriptions, and the total number of mentions during FGDs (with the number of unique student mentions in parentheses).

Theme	Description	Number of mentions
1. More efficient practice	Reduction of practice time through goal-setting, stopping mindless repetition, and employing specific practice strategies	11(7)
2. Better at solving problems during music practice	Exposure to a range of problem-solving strategies through application and learning to choose suitable, personalized strategies for a given problem	19(12)
3. Analytical approach to	Increased familiarity with quantitative	6(6)



monitoring practice and performance	methods and forming a habit of analytical reflection	
4. Better understanding of the mind-body connection and the importance of health for music performance	Realizing that exercise, adequate rest and good posture have a strong positive influence on music production	9(4)
5. Performing more confidently	Finding new ways to manage performance anxiety	8(7)
6. Fostering a musician community	Sharing and learning from peers	10(10)

Theme 1: More efficient practice

Students reflected in the FGDs that the module influenced their mindsets and practice habits by encouraging them to be more intentional with their practice sessions, learn and implement specific strategies, and utilize techniques to structure practice. This allowed students to increase the efficiency of their practice sessions. For instance, some students learned to set goals for their practice sessions, which improved their motivation and ability to assess the extent of their improvement. Setting goals provided clear parameters of what to achieve instead of simply aiming to be “better” or “perfect”. By setting clear goals and being aware of the pitfalls of autopilot mode, students were able to limit “mindless repetition” during practice sessions. When asked about their biggest takeaway from the module, five students mentioned goal-setting; for example:

I think [my biggest takeaway] is the practice strategy... you should make a plan and practice it and then you should evaluate yourself and then... you make another plan. I think it's very useful. Because we always [want to] be perfect, but it's hard to find a healthy way to develop a healthy practice. Sometimes we just struggle and don't know what to do. (P3, FGD1)

Other students mentioned that specific strategies, such as mental rehearsal, interleaved memorization techniques, or simply taking more frequent breaks during practice, improved the efficiency of their practice sessions. During the FGDs, three students explicitly mentioned that the implementation of strategies covered in the module helped them shorten their practice sessions:

Before [taking this module], I never really learned about practice that in-depth. So practicing was more like a routine... I just take my instrument, then I just run through it over and over again. I didn't realize that, what I was doing was actually kind of wasting time, it was not very effective. Then, after this module, I feel like... I was able to know what I was doing... I had a goal, like what I want to achieve for each practice session... it was more productive for me. (P1, FGD1)

Deliberate practice was the most popular topic for the individual research projects, with a total of 5 students attempting to either set goals, structure their practice sessions, or use new techniques to analyze/learn their score. Students often uncovered useful insights on their practice through their research projects, where they explored the applicability of different strategies for their practice.

Theme 2: Better at solving problems during music practice

Students came into the module with a diverse range of challenges, and many expressed that the strategies they learned in the module helped them address these problems. This was possible due to the breadth of topics explored, as well as the opportunity for in-depth, applied learning through individual projects.

Regarding the breadth of the module, students found that exposure to many strategies was akin to a list of troubleshooting techniques. Virtually all students remarked that they took away something valuable from the module in this regard, whether it was a particular technique or a shift in mindset. In fact, all students mentioned, either in the FGDs or research reports, that they would like to carry forward at least one strategy from the module.

Beyond breadth, students were provided with the opportunity, in their research projects, to apply a strategy of their choice to tackle a musical or practice-related challenge, which they found to be particularly helpful. Students had varying degrees of success with their strategies, but all students gained a greater understanding of how to approach their challenges:

When you do the readings... you know some concepts, but you don't know... if [they] actually work for you. So I think the individual project is really to try out things... [and see] whether it works for you or not. (P2, FGD1)

A contributing factor to the perceived usefulness of the module comes from how the strategies were presented in a structured and comprehensive way. This helped to provide an easy reference to troubleshoot their current and future problems.

Moreover, students also displayed analytical problem solving skills by choosing strategies that were well-suited for their particular situation. Such discernment is possible due to an in-depth understanding of strategies and seeing connections between topics. Some students also decided to do further research (outside of class) when they did not understand a topic or wanted more information. The following example illustrates how increased self-awareness helped a student see how to use less conventional methods to solve their problem:

[For] some anxiety-coping mechanisms like working out or breathing, some things that were mentioned it was like... 'okay, I am already kind of doing these things, but I still experience anxiety'... So for my project, I had to kind of think my way out of this, like maybe if I applied deliberate practice... like ways that I can remember the

score better, maybe that will help, so... maybe that strategy was taught to help us play better, but for me it was helping me for my anxieties, in a sense. (P5, FGD1)

Theme 3: Analytical approach to monitoring practice and performance

The ability to monitor one's progress and reflect analytically on practice and performance is crucial to the life of a musician. Thus, students valued the discussion of these skills in the module. For instance, the instructor explained how musicians can monitor their progress quantitatively by assigning measurements to abstract concepts (e.g., by having peers or instructors provide ratings of emotion conveyed during performance, or by quantifying the number of bars performed without error while sight-reading an excerpt, etc.) in order to evaluate their progress and improvement. A student remarked that it is helpful to quantify and visualize more intangible concepts (e.g., "appropriateness of style", "musicianship", "expression", etc.), while another student remarked that they internalized this mindset by the end of the module (even though most students were initially unfamiliar with this quantitative, analytical approach).

In addition to quantifying and analysing aspects of practice and performance, students also reflected regularly on class material through their weekly blog posts. Many students claimed that this allowed them to better understand themselves, and recognize their strengths and weaknesses, while digesting the course material. The assessment format (requiring weekly reflective posts) imposed what was generally seen as a welcome structure, with one student summarizing the learning regimen as "forced, but in a good way", because reflection was seen as a positive but often neglected habit due to time limitations, for example:

I think, because of the student-centric approach, like all the... research, the blog entries, it really forced us to get to know what we are learning on that week itself... because we are forced to read all the readings so that we can reflect, and I mean, reflecting is always good. (P2, FGD1)

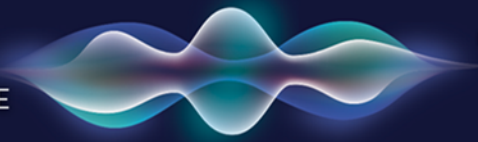
Some students aim to adopt regular reflection moving forward, as a means of approaching their practice more analytically.

Theme 4: Better understanding of the mind-body connection and the importance of health for music performance

An often overlooked area in music education is that of musicians' health and wellbeing. Hence, it was encouraging to see that students seemed to pay more attention towards their physical and mental health due to the module. For instance, after realizing the benefits of exercise for performance, three students mentioned that they decided to incorporate exercise into their lifestyle or pre-performance routine, with one implementing this change during the semester and discovering its efficacy for reducing performance anxiety (this topic will be further explored in the next theme).

For the performance aspect, [I remember] how Prof [Name] mentioned about exercising, so I went to try that, like I really went on the treadmill to run before my performance, and I'm not sure [whether] it is a psychological effect or it really worked, but yeah, I was less nervous. (P1, FGD1)

Other students benefitted from taking breaks in-between their practice sessions and using mental rehearsal as an alternative to playing their instruments to conserve energy and



physical demands on their body. A few students also implemented strategies related to health and wellbeing in their individual research project, or during their own practice. In addition, two students cited that some of the techniques taught on well-being were beneficial in improving their body awareness.

Theme 5: Performing more confidently

Music performance anxiety (MPA) is closely linked with the mind-body connection theme, as well as becoming better at solving problems during music practice (as shown in quote from P5, FGD1). This is because MPA often manifests physiologically as well as psychologically and can thus be addressed through physiological techniques (e.g., breathing exercises) or problem-solving techniques. Many students found that the methods taught for tackling performance anxiety, such as cognitive behavioural therapy (CBT) techniques and pre-performance routines, yielded positive results:

For me, I think the biggest takeaway... which will stay with me is probably the concepts that we learned [about] performance anxiety... One of them is probably the behavioral cognitive therapies that we learned. So, for example, mental rehearsal and imagery. That will probably stay with me for a really long time. (P6, FGD1)

For the individual research project, 31% of the sample decided to implement strategies to reduce their music performance anxiety. The effects that they felt from these strategies were a reduction of anxiety symptoms, as rated by themselves and/or observed by external raters. Furthermore, students found that the quality of their performances tended to improve as a result of decreased nervousness, which further demonstrates the effectiveness of the strategies. In fact, all students remarked that they want to continue incorporating the strategies they tried, and/or build on their observed results by trying other strategies related to MPA.

Theme 6: Fostering a musician community

Lastly, the interactions facilitated by the module, such as in-class discussions and especially blog posts, helped students learn about their musician peers. Students generally found it interesting to see the variety of struggles that people face, whether similar or different from those they encounter personally. Students also learned from the ways their peers overcame the challenges they faced, especially if they face the same issues. Moreover, the blog fostered a sense of community among peers, which many found to promote important discussions that do not normally occur:

[The blog] also helps me to be more empathetic towards my friends, cause, when I'm reading, when we are commenting on the blog posts, then I get to read their posts as well, so I found out that like, 'I'm not the only one having this problem,' so it kind of made me feel like we are all in the same boat and in the same community. So it really helped us to understand each other more, and we try to help each other as much as we can. (P6, FGD1)

Conclusion

The results of the thematic analysis applied to the post-module FGDs suggest that this module on The Psychology of Music Performance has significantly influenced students' practice and performance of music. This is evident in how students learned to practice more efficiently, how they became more adept at solving musical challenges through the concepts/strategies learned, and how they became more analytical while monitoring their

music practice and performance. Students also understood the mind-body connection more clearly, which led them to expend more effort on their physical and mental health. Many students also reported a reduction of MPA. Finally, students benefitted from a “musician community”, facilitated by the module, in which they could freely share and solicit feedback.

This range of outcomes would not be possible without the interactive teaching and learning methods employed, which allowed students to study strategies in-depth, and helped them internalize a problem-solving mindset to tackle future challenges. The findings from this study suggest that including psychology and performance science in the standard music conservatory curriculum is advantageous in order to foster problem-solving skills and analytical thinking in the future generation of musicians.

(Abstract 512)

Interculturally responsive teaching: Towards a new philosophy problematizing intercultural music education and multiple identities

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Abstract

As modern societies are more and more multicultural and as we are implementing more intercultural education for that understanding, we need to examine how multiple identities influence the structure, design and implementation of multicultural education. The concept of identity is very prominent in pedagogical theory and practice today, as it may influence the ways people teach, experience and learn. Given the fact that all people experience multiple identities as far as social, ethnic, national, cultural, musical, religious, and communal characteristics, we need to acknowledge and research more the impact of multiple identity reality in an increasingly intercultural education. Our paper seeks to draw connections to unite theories on identity with theories on intercultural music education. We attempt to pinpoint concepts and issues on intercultural education that appear to help and strengthen the feeling of the sense of place with achieving a stronger understanding of identity as it is understood by self and perceived by others. The experience of multicultural living and intercultural interactions paired with exploration of one's identity or multiple identities, leads us to believe that a move from culturally responsive teaching and awareness is needed towards a more 'interculturally' responsive approach. By using a philosophical research approach in review of several fields of literature, we combine bibliographies from the fields of identity, multicultural and intercultural music education, and ethnomusicology through our inquiry. The research has shown that we cannot discuss matters on intercultural music education without discussing issues on identity. The more we support 'a sense of place' approach in music education, the more we strengthen intercultural education communities and the more we strengthen the evolution of multiple identities. We posit that this can be achieved with a shift from the current understanding of cultural responsiveness to a more 'intercultural' responsiveness.

Keywords

culturally responsive teaching, music identity, interculturalism, multiculturalism, intercultural music education

Introduction

Through this philosophical inquiry we employ concepts of identity in order to examine the layers of multicultural learning and intercultural experiences and their potential contributions to identity development, exploration, and multiple identities. As culturally responsive teaching gains traction in education circles, new needs are realized through practice of applied theories. As we saw with the first steps of multicultural education, an eventual shift was necessary towards more intercultural interaction. The study of multiple cultures in music education practices yield little benefit when conducted as individual units or in a vacuum, and rather, the study of multiple cultures through interaction and experience with other multiple cultures led us to new practices of intercultural music education.

As we explore the 'status' of one's identity and its perception by oneself and others (Erikson, 1968; Tarrant, North, & Hargreaves, 2002), it is understood that no teacher can be familiar with all aspects of identity, much like no teacher can be familiar at depth with all cultures (Campbell, 2004). The difficulty encountered in culturally responsive teaching is the gap of knowledge at depth for multiple cultures. We posit that a truly intercultural education, with not only understanding of multiple cultures, but with the interaction of multiple cultures, will lead us towards implementing a shift from culturally responsive teaching to 'interculturally' responsive teaching. We posit that this can be achieved through Dionyssiou's (2017) framework on intercultural music education by developing and fostering a 'sense of place' for students.

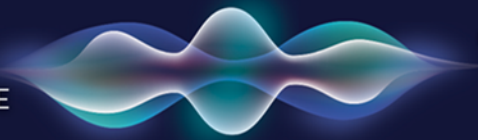
Identity: perspective and status

Identity is a highly significant concept in educational psychology. One of its key issues has been the examination of how individuals find their place in society. While the concept of identity has been given special attention in educational psychology (Erikson, 1968), it continues to be a key term in understanding people's place and role in society. Marcia (1966) and Erikson (1968) developed an ego-identity status theory, focusing especially on adolescents, and proposed the four 'states' of identity: diffusion, foreclosure, moratorium, and achievement.

- a) Diffusion takes place when there is no commitment to a particular identity.
- b) Foreclosure is met when commitment to an identity is achieved with no previous crisis.
- c) Moratorium is the state of exploring one's identity and is an on-going process in which no commitment to one particular identity has been achieved.
- d) Achievement has occurred when exploration of identities has taken place and a commitment to pursue an identity has started (Marcia, 1980; Erikson, 1968; Tarrant, North, & Hargreaves, 2002).

It is worth examining those states in connection to multicultural and intercultural education theories. The identity of an individual may have multiple layers. The way individuals experience their identity is influenced by how other people see them. Hence, our perception of individuals of other cultures may determine the way we see and experience other cultures.

Tarrant and North (2004) used the social identity theory to explain adolescent behavior and confirmed in their studies that adolescents use statements about music in order to establish a



better connection within their peer group (p. 143), often attributing positive self-evaluations to their group in comparison to others (p. 144). Based on three studies conducted on human behavior as it relates to identity in the context of the individual, in a group, and its association with music, Tarrant, North, & Hargreaves (2002) define identity as twofold: 'status' and 'perspective' (p. 134). 'Status' for them seems to be the personal opinion of the individual's self, while 'perspective' seems to refer to how individuals are perceived by others. This is usually a matter of social identity among group members and how they distinguish their group from other groups. Hence, it seems that in social identity theory, the perspective of self and others is far more important for shaping one's identity. Among the findings of their studies is that the individual's identity is noticeably influenced by settings, whether the individual is in a group or alone. We believe that this finding is true in multiple contexts, beyond those studies in the previous literature.

Hargreaves, Marshall and North (2003) consider four pillars that determine the relationship between music and identity. First, personal characteristics, associated with personality, gender, age; second, interpersonal relationships between individuals and their peers; third, institutions like school, family, community in which they belong, and fourth, the cultures they associate with. Musical identities are in constant change throughout the life span. Also, music education may influence teenagers' musical identities in various ways, such as their self-image, self-efficacy, and self-esteem. What people make for themselves in relation to music (musical self-image), how good they are for their network of peers in music (musical self-efficacy), how they evaluate themselves in relation to music (musical self-esteem), are some of the parameters that contribute to the development of everyone's music identity (Mills, 2008).

Research on the sociology of music education claimed that formal education did not pay much attention to help children develop their musical identities and make connections between music education and their music preferences and practices. This lack of connection creates a gap that may lead to a lack of interest in music teaching and learning by students of all ages (Jaffurs, 2006; Green, 1999). Literature also supports the idea that informal music learning and everyday music experiences help children in the development of their musical identities, more than traditional schooling does (Green, 2011; Boal-Palheiros & Hargreaves, 2001). Therefore, it is teenagers' personal perception in relation to music (self-image and self-esteem) that leads them to the formation of their musical identity and characterizes their personal relation with music in their lives later on (Lamont, 2002). O' Neill (2007) identifies six characteristics that help people in developing their musical identities: confidence, character, commitment, connection, competence, and contribution (p. 469).

The four states of 'status' in identity as traditionally defined should be applied to further complex applications of the idea. Musical identity as it relates to national, ethnic, or cultural identity is a multifaceted complexity, as music is a tool that most often shapes identity. The multicultural reality of the world and of most nation-states also posits another dimension; that of multiple identities. Immigrants, children of immigrants, multinationals, and more, are people that may experience the state of 'moratorium', as their identity may be influenced by differing and altering societies and communities. It is here that we can examine how O' Neill's (2007) six characteristics intertwine with the four states of 'status'. We may also explore a connection between the influence of music on multicultural societies, intercultural relations, and multiple identities one may experience. Folkestad (2002) investigates how music contributes to understanding identity at a national level:

Music [...] provides a means of defining oneself as an individual belonging to and allied with a certain group, and of defining others as belonging to other groups which are separate from ones own. The development of a musical identity is not only a matter of age, gender, musical taste and other preferences, but is also a result of the cultural, ethnic, religious and national contexts in which people live (Folkestad, 2002, p. 151).

For our study, which focuses on cultural and ethnic issues, 'status' may refer to documentation, to the given characteristics of an individual, within the community, locality, ethnicity, or nationality. It may also mean where one stands within the four states of identity explained above (Erikson, 1968). For example, a person may find themselves in any of the four mentioned states (diffusion, foreclosure, moratorium, and achievement), yet they may be perceived in a particular identity by others. For example, a Greek-American may feel and experience Greek culture and identity and be perceived as "Greek" within American communities but be perceived as "American" within Greek communities. The 'status' refers to both the actual documentation of the individual and where they find themselves within the above framework. 'Perspective' refers to how an individual makes sense of themselves and how the various forms of societies acknowledge the individual. Social identity theory has led to considering individuals within their groups, as the group seems to influence one's identity more than anything else. This experienced dichotomy has been the motivation for the present study.

Multicultural and intercultural music education for strengthening identity

A lot of early literature on multiculturalism made good faith efforts to explain and enter musics and identity studies on multiple cultures into the music curriculum. However, by broadly generalizing cultures, the 'multi-' prefix lost its true meaning, and 'multiculturalism' became a style or genre of its own, which could be experienced by someone of that culture as more damaging than inclusive (Bradley, 2007).

Literature in multicultural and intercultural music education has not given much attention to issues of identity (Hargreaves, Purves, Welch, & Marshall, 2007). While there is much reference to ways of understanding and acknowledging other cultures mostly outside the classroom, teachers' and students' identities are not much acknowledged (Ballantyne & Grootenboer, 2012). Intercultural education has been widely accepted as the prominent approach in curricular design. Multicultural education approaches largely moved towards intercultural education approaches, because the study of many cultures without understanding how they work together left a gap in achieving the goals of multicultural education (Ilari, Chen-Hafteck, and Crawford, 2013). It remains, however, an issue that many teachers do not understand the intercultural workings of the multiple cultures that are found in a given classroom (Cain, 2015; Schippers, 2010; Campbell, 2002). In order to understand how many cultures work together in an intercultural setting, the multiple cultures need to be understood autonomously, so that to understand the individual person within their multiple identities. For this, issues of identity need to be problematized specifically in the context of intercultural education.

In a study on the teaching of traditional Greek music in Music Schools of Greece, the concept of identity was found to be a key issue determining students' musical preference and practices. Students who were competent learners of Greek traditional music were often in friendship groups with students of similar music preferences, while students who chose classical music groups were in similar friendship groups. Therefore, music styles determined

the friendship groups and vice versa (Dionyssiou, 2002), a phenomenon we similarly see in the case studies of Tarrant, North and Hargreaves (2002) with shifting musical preferences and identity when compared to self and differing groups.

Ethnomusicological studies and the emergence of place

Similarly to social identity theory, ethnomusicology - the study of music 'in and as culture' (Nettl, 1983) - placed the focus on the community. The concept of shared identity is a prerequisite within a community. The customs, practices, values, meanings and experiences acquire meaning only when people share meanings among their community members. Music has a special role to play in order to unite people, helping them to experience and understand their identity as 'lived experience'. This characteristic of music to connect people is particularly strong in music events and other festivals and social events of villages or communities. As Rice (2007) mentions, "musical performance provides the opportunity for communities sharing an identity to see themselves in action and to imagine others who might share the same style of performance" (p. 35).

Current ethnomusicological studies place more emphasis on the lived experience among a community, as opposed to earlier studies that were based on accurate documentation through sound and video recordings (Campbell, 2003). The concept of lived experience seems to be relevant to the concept of identity, as the way one experiences culture and human relationships both within the framework of social identity theory and one's 'status' and 'perspective'.

Multicultural and intercultural music education approaches fall short if we fail to understand and connect with culture. Dionyssiou (2017) developed a three-strand intercultural education framework to support the power of music 'in and as culture' within the school and beyond. This framework places emphasis on: a) the process of creation, b) the music event and c) the sense of place. The suggested framework aims to offer a hands-on approach to interculturalism, through building sensitivity towards ours and other musical traditions in order to support intercultural sensitivity. The framework is based on the following ideas:

- a) the process of creation means that artistic creation in any 'traditional' culture is not a personal act; it is a communal action that takes place among community members during performance. 'Tradition' (referring to music, poetry, dance and any other popular artistic forms) is never static or given, but it is always being shaped through a process of constant recreation. It is an action best described by Aristotle's term 'mimesis', that includes the activities of selection, comparison, correlation and rejection that are shaped among members of communities that share certain social rules and conventions. The process of creation is an on-going dialogue between stability and change, preservation and innovation (Bohlman, 1988; Sifakis, 1988).
- b) The music event is the central action where all community members are gathered in order to share the tradition, to interact with it, and to evaluate it at the same time. The music event is the place where all people contribute in shaping the tradition through performing, singing, dancing, or listening. Meaning in 'music events' is created by participants through social interaction, with reference to present and past cultural experiences (Bauman, 1992; Rice 1994).
- c) The sense of place means the power of locality and its community members to give birth, to re-create and adjust their tradition. It refers to the unique ability of the community to receive feedback from all its members to be in alignment with its past and present in order to keep its music alive. The parameter of locality is one of the

most important aspects in a music culture, as national or ethnic ideologies alone cannot shape local traditions (Finnegan, 1989).

The above framework has been used to guide and assess intercultural music teaching among Mediterranean cultures (Dionyssiou, 2017; Anselmi et. al, 2017).

The 'sense of place' for 'interculturally responsive' music teaching and learning

The sense of place guides the concept of belonging in music culture and in music identities. Multicultural music teaching brought diverse musical traditions in school. It first seemed to offer opportunities to students to experience a cultural pluralism and get an idea from a variety of music cultures. It also made it a priority for students of diverse groups to call for equal educational opportunities. Multiculturalism gave access to numerous recordings, videos, and new teaching material (Campbell, 2004; Abril, 2013), but not to the idea of how cultural products are constructed and how they constantly interact with others. We saw from an overly generalized curriculum that many cultures were tokenized, and multicultural music education meant only a different repertoire, just another music genre. Hess (2015) deconstructed this practice of tokenism to lead ourselves in a new intercultural dialogue towards cultural responsiveness. Interculturalism brought new elements in this debate, as it valued exchange, communication and cooperation between different cultural groups, it allowed people to interpret new ways in which individuals and groups negotiate the diversity of their musical worlds (Swanwick, 1988). Interculturalism empowered everyone living in any part of the world to access education, to develop multiple identities and to legitimize their plurality for themselves and others. This gave emphasis to culturally responsive teaching. Cain (2015) concluded that the success of multicultural nations is based on inclusiveness.

Culturally responsive teaching as a pedagogical approach differs from multicultural education.

While multicultural teaching puts more emphasis on the material being taught, culturally responsive teaching views learning as dependent on social interactions and lived experiences (Abril, 2013). Therefore, culturally responsive education seems to be in alignment with praxialism (Elliott, 1995; 1996). While multicultural and intercultural music education supported the study of 'music as culture', culturally responsive teaching gave emphasis to music education for human understanding and cultural understanding (Abril, 2006).

“preserving one’s cultural identity cannot be the focus of education, because in that case education loses its main power, that is, to transform and transcend boundaries in people’s lives [...] interculturality is about being open to the ‘other’, being able to understand, reflect and participate in the music of the ‘others’, in parallel to one’s ‘own’ music.” (Dionyssiou, 2017, p. 118-119).

Therefore, intercultural responsive teaching will give hope and guidance to educators who are trying to understand and improve education practices for all students.

Conclusions and implications for further research

Identity and culture are innately intertwined. People are complex, therefore the pursuit of understanding them is also complex. Movements in education to explain and foster care as it relates to the student and teacher are necessary endeavors for progress. However, over-generalizations and term branding can produce opposite than desired outcomes which can produce psychologically demeaning experiences, such as in cases with tokenism. The

'status' of one's identity and its perception to oneself and to others is not a standard and unmoving form. Identity fluctuates in ways similar to, and often along with culture. Because the world and most societies are multicultural, multiple identities are often experienced by peoples of various and diverse backgrounds, particularly when immigration, source countries, and host countries are factors. Not all multicultural societies are the same, and so the pedagogy, curriculum, and frameworks cannot be the same. The intercultural interactions of multiple cultures will differ depending on the cultures interacting, the locations, and/or host countries, of which they are found. Ethnomusicological studies have shown us that the lived experience has value in forming community and bridging the exploration in identity. Dionyssiou's (2017) framework highlights the power of music 'in and as culture' within the school and beyond and gives us the path towards an interculturally responsive design for teaching, learning, and curriculum development.

Researchers focusing on culturally responsive teaching should make connections between the field of identity, multiple identity issues, multiculturalism, and intercultural music education. Because we can see that intercultural education cannot be separated from identity, and that a person's culture can be complex, particularly when of multiple backgrounds, ethnicities, nationalities, and immigration, multiple identities and crises can be experienced. In this regard, intercultural music education is connected with intercultural responsiveness, and by fostering a 'sense of place' this can be achieved.

(Abstract 519)

Research on the Problems and Strategies of Teaching Chinese Folk Music in Primary and Secondary Schools: An Analysis Based on Teachers Investigation

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Abstract

In recent years, the teaching of folk music in Chinese primary and secondary schools has become a trend and a topic of concern. No matter from the practice or National policy, folk music is required to be an important content of music teaching in primary and secondary schools. After the 18th folk Congress of the CPC and the consequent awakening of interest in folk culture, Chinese folk music has gradually attracted attention, becoming a stronger cultural force. Teaching and learning folk music in the classroom is an important way to transmit and develop excellent national traditional culture. From a practical perspective, however, the efficiency of the teaching still does not meet the requirements laid out by the Chinese national culture strategy, failing to meet the current demand of transmission and development.

In order to reveal the problems of teaching Chinese folk music, an unstructured questionnaire was used to investigate the music teachers in primary and secondary schools. Based on the grounded theory analysis(bottom-up) of the data, this research encodes the data, and finally forms 86 first-level codes(totally 5746 reference points), 5 second-level codes and 2 third-level codes.

From the perspective of educational subject-object, this study revealed the structural relationship between the internal problems (teachers and students) and external problems (involving teaching conditions, subject contents, and organizing strategies) for teaching folk music in class based on the data coding . This research also gave insight into the logical relationship between teaching's core problems (as the direct element of teaching-teachers, students, contents, and strategies) and the supporting problems (guarantee conditions) based on the perspective of internal-external classroom.

And then, this paper pointed out the subjective attribution, core structure, and supporting factors of problems about teaching folk music in primary and secondary schools in China . Finally, we proposed three suggestions for improvement of teaching folk music in China.

Keywords : Chinese folk music, problems and strategies, primary and secondary schools, teachers

1 Background

In the 21st century, especially in the time since 2012's 18th folk Congress of the Communist Party of China, the inheritance and development of Chinese folk culture has been paid increasing levels of attention at the folk level. Through the introduction of a series of documents, this focus has led to strengthening schools' work in aesthetic education, promoting the overall development of excellent Chinese folk culture education, and always emphasizing the inheritance and development of such culture; after all, publicity and popularization have proven to be an important part of school aesthetic education. The Ministry of Education issued Guiding

Outline of Perfecting Chinese Excellent traditional Culture Education in 2014, pointing out that the integration of this folk culture and its education should be promoted in different stages of primary and secondary schools. In 2017, the State Council of the Central Committee of the Communist Party of China issued Opinions on Implementing the Project of Inheritance and Development of Chinese Excellent traditional Culture, calling for the integration of folk culture in all fields of cultural knowledge, art, and physical education. In 2020, the State Council of the Central Committee of the Communist Party of China issued The Opinions on Comprehensively Strengthening and Improving School Aesthetic Education in the New Era, pointing out that we should strengthen this kind of cultural education, cultivate people through aesthetic education in schools, and enhance cultural confidence.

School is an important place to implement aesthetic education, and teaching is the main way of imparting an aesthetic education in school. This generation of teenagers and primary and secondary school students are the best hope for folk cultural development. Carrying out folk music teaching for primary and secondary school students is a necessary link for promoting a student's confidence in folk music culture and cultural inheritance. At present, the proportion of folk music content included in the current versions of music textbooks becomes gradually richer. The Current Compulsory Education Music Curriculum Standard (2011) and The Ordinary High School Music Curriculum Standard (2017) both regard "promoting national music" as one of the concepts of primary and secondary school music curriculum.

Since the 1990s, it has been clearly put forward the goal of establishing "Chinese culture as the mother tongue of music education"(Xie, J. X., 1996), but, after nearly 30 years of development, the effectiveness of current folk music teaching in primary and secondary schools falter when compared with the requirements of the folk aesthetic education policy

and cultural development strategy in the new era; there are still many difficulties to be overcome, with the relevant scholars pointing out the current difficulties at different levels, such as “the weak inheritance of folk music” (Fan, Z. Y. & Xie, J. X., 2008), the arrangement of folk music teaching curriculum, the teaching content setting, and deep interpretation of culture and student s’ “practical skills of music” (Qiu, B. & Sun, J., 2018). As both a leader and participant of folk music teaching, teachers have an important “speech right” to folk music teaching. Thus, it is urgent to study the teaching of Chinese folk music from the perspective of teachers, exploring its problems and causes.

2 Method

Grounded theory was proposed by American sociologists Anselm Strauss and Barney Glaser in 1967. Grounded theory is not a specific theory, but, rather, a research path or method (Chen, X. M., 2015). It is a bottom-up “constructive method”, intended to collect data, construct the core concept of factual phenomena, and establish relevant “theories” (Chen, X. M., 1999). The construction of grounded theory can effectively find the core content in this field, allowing for the construction and development of this field. In this study, grounded theory is used as the method and paradigm, and Nvivo12 qualitative analysis software is used to conduct open coding, spindle coding, and selective coding for the existing problems for the teaching of folk music in primary and secondary school classrooms. The core categories are formed by layer-by-layer construction, and the core problems are summarized.

The first step is to determine the survey content and data collection methods. In order to obtain direct question feedback from music teachers, this study adopts an open questionnaire for its investigation. The survey mainly focuses on what problems arise when music teachers teach folk Chinese music. Initiated teachers list between one and three key issues based on their own teaching experience, distributing them across the country through the data research platform (questionnaire star). Then is the collation of data information and the systematic coding of research content. Finally, through the construction of grounded theory, the problems present in the classroom teaching of ethnic music in primary and secondary schools are summarized, analyzed, and interpreted. In order to ensure better reliability and validity, this study invited relevant researchers to assist in the process of coding and analysis, as well as discussing and unifying the "consistency" in the process of data analysis. At the same time, the data collection is supported by music teachers and researchers in various provinces and cities throughout the country. The purpose of the investigation is made clear throughout the process, and a relationship of trust is established between the respondents. In the coding, the relevant participants are questioned to ensure the validity and credibility of the data.

This study collected a total of 4224 questionnaires for music teachers in primary and secondary schools. The research samples cover almost all regions in mainland China. Among them, there are 1688 samples from Northeast China (accounting for 40%), 1510 samples in East China (accounting for 36%), 628 samples in Central and South China (accounting for 15%), and 315 samples in Southwest China (accounting for 7%). The remaining 83 samples are from North China and Northwest China. According to each teacher's professional development stage and the actual situation of music teaching, there is a uniform distribution in the teachers' teaching age structures and the distribution of the teaching periods. The structure of the number of years taught by the music teachers is as follows: 1243 (29%) in 1-5 years, 843 (20%) in 5-10 years, 985 (23%) in 10-20 years, 908 (22%) in 20-30 years, and 245 (6%) in 30 years. At the same time, in different stages of this teaching age, it covers all grades from primary school to high school, so it can be seen that the sample size reflects “heterogeneity”.

The coding results are shown in Tables 1 and 2, two third-level nodes (selective coding), five second-level nodes (spindle coding), and 86 first-level nodes (open coding) are generated through the analysis of open coding, spindle coding, and selective coding of the grounded theory data. Table 2 is mainly divided into two categories based on different perspectives. With the perspective of educational subject-object, it was divided into internal problems and external problems. Based on the relationship between inside and outside classroom teaching, it was divided into two aspects—core problems and support problems.

Table 1. First-level coding (open coding) and second-level coding (spindle coding)

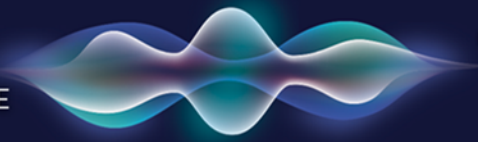
Open coding (Point Numbers)	Spindle coding (Point Numbers)
Students lack interest in traditional music (1014); Students ' traditional music knowledge is weak (580); Students ' understanding of traditional music is not deep enough (223); Students have less contact with traditional music (196); Students ' traditional music learning difficulties (61); Students know too little (28); Students ' traditional music learning attitude deviation (do not attach importance to) (28); Students lack a correct understanding of traditional music culture (27); Students cannot appreciate the beauty of traditional music (10); Students ' traditional music skills performance (practice) poor (9); Student discipline issues (8); Students ' low aesthetic identity (2)	Students ' learning foundation and cognition of traditional music (2186)
Teachers ' traditional music knowledge (literacy) is insufficient (701); Teachers lack awareness of traditional music (education) (256); Limited faculty (111); Teachers lack of traditional music knowledge training (80); Teachers do not attach importance to (68); Teachers ' teaching ability is poor (53); Teachers lack the ability to teach and research traditional music (12); Less development of teaching materials (18); Insufficient development of traditional music teaching in class (5); Teachers ' lack of awareness of inheriting traditional music (5)	Teachers ' traditional Music Cognition and Teaching Ability (1309)
Textbook content (traditional music) is not rich (296); Teaching (content) lacks systematic (99); The selection of teaching materials and students ' actual contact is less (80); The students in the teaching materials have poor acceptability (difficulty) (66); Less teaching materials (58); Cultural differences and limitations of traditional music (region) (43); The content of teaching materials keeps pace with the times (cannot meet the needs of the society and students) (24); Traditional music itself is complex, profound (8); Lack of traditional music perceptual materials (7); The teaching material lacks features (5); traditional music classroom teaching content fusion is not enough (4); Textbook repertoire quality is not high (3); The repertoire lack of emotional resonance with students (3); Less contact with traditional music teaching content and form (1); Limited to textbook content (1); The curriculum is unscientific (7); Traditional music classroom teaching arrangement is not reasonable (6); Cultural differences (16); Traditional music not recognized (1)	Content Structure and Curriculum of traditional Music (728)
Traditional instruments into the classroom (learning and practice) less opportunities (148); Lack of students ' personal experience and practice (110); Teaching forms and methods are not rich (107); The popularity of traditional music teaching is not high (71); Less popularity of traditional music teachers (53); Teaching methods do not work (25); Teachers cannot effectively mobilize students ' interest (22); Teachers ' explanation depth is not enough (21); Teachers only talk about knowledge and ignore the cultural connotation of traditional music (15); Teachers ' teaching demonstration is poor (less) (10); Traditional music practice is limited (10); Let students learn the method is not clear (in-depth study) (9); Insufficient community activities (9); Teachers lack guidance to students (6); Traditional music classroom (practice) activities are limited (6); Teachers ' teaching of traditional music is not in place (6); Traditional music teaching goal formalization (6); School music education and traditional music heritage disjointed (6); Insufficient use of teaching aids (5); Singing difficult (5); Teachers can not effectively design teaching (4); Focus on repertoire analysis, cultural connotation explanation less (4); Teaching listening, lack of broadening (4); Teaching too much emphasis on technology (skills) (3); Teaching traditional music with western thinking (3); Teaching is a mere formality (3); Traditional music classroom teaching effect is poor (3); Lack of the latest traditional music propaganda (3); Teachers ' teaching methods are dull (2); Classroom teaching efficiency is not high (1); Lack of implementation (11); Difficulties in implementation (10)	Traditional music teaching strategy and practice (701)
Lack of teaching related resources (audio and video, text data) (219); School traditional music teaching conditions are inadequate (148); Schools do not attach importance to (134); No attention (108); Insufficient classroom teaching resources (46); Poor learning atmosphere for traditional music (43); Parents do not pay enough attention (42); Limited classroom time (41); Less music class hours (26); The gap between urban and rural areas is obvious (rural difference); 12. Students ' heavy schoolwork (3)	The External Environment Influence of traditional Music Teaching (822)

Table 2. Second-level coding (spindle coding) and third-level coding (selective coding)

Spindle coding (Point Numbers)	Selective coding (Point Numbers)	Perspectives
Students ' learning foundation and cognition of traditional music (2186) Teachers ' traditional Music Cognition and Teaching Ability (1309)	Interior problems (3495)	Perspective 1
The External Environment Influence of traditional Music Teaching (822) Content Structure and Curriculum of traditional Music (728) Traditional music teaching strategy and practice (701)	External problems (2251)	
Students ' learning foundation and cognition of traditional music (2186) Teachers ' traditional Music Cognition and Teaching Ability (1309) Content Structure and Curriculum of traditional Music (728) Traditional music teaching strategy and practice (701)	Core problems (4924)	Perspective 2
The External Environment Influence of traditional Music Teaching (822)	Support problems (822)	

3 Results

Through grounded theory, three-level coding, and system analysis, the results of this study are summarized according to the following three aspects.



3.1 Subjective attribution: The key problem of “Human” in teaching folk music

The problems faced by teachers and students are the key problems in the current approach to folk music classroom teaching. The reason why this overall issue is called “key” is that the main body of education are the people involved. People have initiative and development, which determine the basis and direction of education.

According to the data analysis, the current students' interest in folk music learning is low, the basic knowledge of folk music is weak, and the understanding of folk music is insufficient. Students lack correct understanding of the content in folk music, preferring pop music. As something closely tied to "native language", folk music has become a "strange field" in the minds of students; this "emotion" is one of the biggest barriers faced by teachers in teaching "folk music".

At the same time, teachers are the main body of teaching, so data feedback has been collected about a lot of their problems. Teachers' folk music discipline foundation, understanding, and ability are also the sources of outstanding problems in current folk music classroom education. Teachers themselves lack in-depth understanding of and rich experience with folk music. In the face of the content theme of "folk music", most of them are using "professional accumulation" or temporary "knowledge remedies" in the student era (here, we should affirm the enthusiasm of teachers' learning, but still need to strengthen the persistence and systematic nature of their own learning). In the current situation, teachers lack a grasp of the “repertoire form” and “cultural connotation” of folk music embodied and stipulated in music textbooks and music curriculum standards. The author also identifies some other relevant content in this survey. The results show that only 41% of music teachers have an above-average understanding of ethnic music (4% of them know it well), and, in the course of their own ethnic music knowledge advancement, this proportion has increased by 74% through "music curriculum standards and teaching materials", 46% through "books and documents related to ethnic music", and no more than 30% through the categories of "relevant training/lectures", "network resources", and "skills and cultural background". This also confirms the weak folk music foundation of teachers, their singular approach to knowledge accumulation, and the lack of learning and training opportunities.

Of course, what is pointed out here is only one of the common problems, and there are current examples of excellent teachers should not be ignored. The “people” problem in teaching folk music in the classroom is the key problem. As the “drivers”, “practitioners”, “developers”, and “beneficiaries” of folk music classroom teaching, people are the key to realizing how to effectively teach folk music.

3.2 The core structure: The “Practice” dimension of ethnic music classroom teaching

The teaching of folk music in a classroom setting is the practical interaction between teachers and students, with folk music content as the carrier and folk music teaching strategies as the means. This dynamic “collection” composed of students, teachers, contents, and strategies is the core structure of folk music teaching. These prominent problems are, then, the core problems faced in such teaching. The reason why this problem is considered “core” is because it originates from the internal classroom teaching—the direct reflection of practice—and occupies the main component of node coding.

According to the data analysis, in addition to the “subject” problem of teachers and students, the knowledge structure, capacity, diversity, and systematic nature of folk music content in

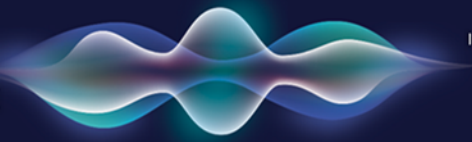
current textbooks still need to be further improved, and, though there are problems of “keeping pace with the times” (in terms of teaching content), “the actual connection and emotional resonance of teaching content and students” are more prominent issues. The problem of teaching materials has always been the focus of the folk music teaching research, and the construction of folk music teaching materials using Chinese characteristics is the common aspiration of and direction for today's scholars. Of course, as mentioned at the beginning of the study, it is a certain fact that the richness and importance of folk music content have been gradually strengthened in both textbooks and curriculum standards. There is still room for improvement when they are compared with the development needs of China's cultural strategy in the new era and the practices of music teaching.

At the same time, the organization strategy and practice path of folk music classroom teaching are also core problems of current folk music teaching. In practice, the problems of “insufficient entry of folk instruments into the classroom”, “lack of students' personal experience and practice opportunities”, “only paying attention to knowledge explanation and ignoring cultural connotation”, and the “lack of effective teaching demonstration” are more prominent. Through this survey, it can be found that the practical ability of primary and secondary school music teachers has played a key role. The author believes that although the current situation has feedback on students' problems and teaching materials, in general, teachers cannot carry out effective teaching (design and implementation). As the leader of classroom activities, the important reason is that teachers cannot effectively transform the static “teaching material content” into the “teaching content” of students' learning, and cannot transform the “understanding of folk music culture” acquired by themselves into the “cognition of folk music culture” of students. This reflects the lack of teachers' deep understanding of the content of folk music and “school-based development”, the lack of systematic cognition and long-term planning of students' folk music learning, so it is unable to construct effective folk music teaching practice strategy.

3.3 Supporting factors: The conditional guarantee of teaching ethnic music

The external guarantee of folk music teaching is the supporting problem of such teaching, which depends not only on its “attribute” outside teaching in the classroom and supporting the classroom, but also on its “contribution” in the periphery of the content node in the grounded theory construction.

According to the data analysis, there are some problems in the current teaching approach, such as the “limited resources” covering folk music teaching, the “lack of attention” paid to the curriculum and folk music culture, and the lack of a class guarantee of music that is actually folk. These problems mainly manifest in two aspects—one is the insufficiency of a safeguard of folk music teaching's “material entity”. This includes teaching-related external resources (folk songs, operas, instrumental music, dance music, and other audio, video, and text reference materials, etc.), teaching facilities (concert halls, multimedia classrooms, cultural centers, etc.), teaching equipment (folk instruments, clothing, etc.), and the arrangement of music courses, amongst others. Secondly, the folk music teaching's “external concept” of guidance is also insufficient. At present, there is still insufficient attention paid by schools, parents, and society to ethnic music culture and its teaching in schools, which also produces an atmosphere and external environment that are not conducive to effective ethnic music teaching. The external support problem cannot be directly intervened and influenced by the internal factors of classroom teaching; instead, fixing them is restricted by external “management” and “social factors”.



4 Discussions and suggestions

4.1 Highlighting the important value of people as the subject of aesthetic education with the goal of literacy improvement

The Compulsory Education Music Curriculum Standard(2011) pointed out that excellent folk music is an important part of music teaching, and that, through learning, students familiar with and loving the motherland's music culture enhance folk consciousness and cultivate patriotism. The Ordinary High School Music Curriculum Standard (2017) also pointed out that students, through folk music learning and artistic practice, become familiar with and love the music culture of the motherland, enhance folk cultural confidence, and cultivate patriotism. The curriculum also pointed out that students need to accept the influence of folk music culture from childhood, establishing the importance of inheriting folk music culture consciousness. Although the curriculum standard does not specify the requirements of teachers' folk music literacy, there is no doubt that their own folk music literacy and understanding have a key impact on the effectiveness of teaching.

In order to improve the folk music literacy of students and teachers, this study believes that, at the conceptual level, teachers and students must establish the subject consciousness of their own folk music culture and enhance the identity consciousness and inheritance consciousness of said culture. Only with such an understanding and concepts as the premise can the practice of folk music teaching be truly implemented. At the content level, the "repertoire form" (genre, form, means of expression, etc.) and "cultural connotation" (style, habit, emotion, etc.) of folk music embodied in and required by music teaching materials and curriculum standards should be used as the main indicators of students' development and teachers' teaching, and the generation of "teaching content" based on "material" should be emphasized. At the method level, we should strengthen the training of teachers when it comes to folk music, as well as the scope of teaching and research, so that they can play the guiding role of teachers to students, enriching the methods and paths for improving students' folk music literacy.

4.2 Improving the key ability of folk music teaching based on folk music PCK

At the core dimension of the problem, it can be seen that the solution of the current issues in the classroom should focus on teachers, improve the "key" ability of teaching through the development of teachers' own folk music pedagogical content knowledge (PCK) and realize the "substantive" solution of folk music classroom teaching problems. From the data analysis, it can be seen that the core problem highlighted in the classroom teaching of folk music in primary and secondary schools in China is the embodiment of the specific elements and basic connotations of folk music PCK.

PCK makes up the core knowledge of teachers' teaching, which determines the core competence of such teaching. It was proposed in 1986 by Shulman, an American scholar, and has been rapidly developed and applied in China since 2000. PCK is based on the consideration of students' development, emphasizing that "teachers transform the knowledge of the subject into the process of students' understanding/internalization of knowledge when teaching specific content" (Chen, D. L. & Zhang, Y. Z., 2016). So, folk music PCK is the core knowledge teachers have when teaching within the theme of "folk music". It is the combination of the concept of "leading" in folk music teaching, the knowledge of folk music content, the cognition of students' folk music learning, and the strategy needed by teachers of folk music in a classroom setting. Understanding the PCK of the concept is the attribute of

“knowledge”, but it implicitly reflects a tendency of “ability”, which has been agreed on by relevant scholars (Veal, 1999; Mavhunga & Rollnick, 2013).

Improving teachers' “key” teaching ability based on folk music PCK is the core path to solving the current problems. To truly solve the problems present in classroom teaching, we should start from the perspective of teachers and improve their ability to transform folk music teaching. As Wang Cesan, a famous educator in China, said, “Teachers determine the direction, content, method, process, result and quality of teaching. Students are developing and growing, and all aspects are not mature. Their learning motivation, action mode and result cannot be subjectively self-generated and spontaneous, and they are mainly affected by teachers” (Wang, C. S., 1983 & 2018). The folk music PCK is the core embodiment of teachers' folk music teaching ability. This key ability based on the folk music PCK is the “comprehensive ability” to solve students' folk music learning difficulties and problems through the use of the corresponding folk music teaching strategies for establishing the cognition of students' folk music learning, guided by the dominant concept of folk music teaching, and taking the “teaching content” of folk music as the carrier.

4.3 Strengthening the guarantee of external support: Promoting the efficient operation of folk music teaching classroom

The importance of folk music teaching, the guarantee of teaching resources, and the guarantee of folk music class hours are determined by external management departments or social influences. Only by increasing the emphasis on folk music education, strengthening investments in education funds, and improving the conditions and equipment support can we ensure the scientificity, rationality, and diversity of classroom teaching, ensuring its smooth development (Wan, P. G., Li, Y. F., & Chen, F. M., 2019). The Compulsory Education Music Curriculum Standard(2011)points out that “music teaching equipment is the guarantee to achieve curriculum objectives, should be configured according to the needs of different students of all kinds of teaching equipment.” At the same time, we should strengthen the positive guidance of the social and cultural environment for teaching ethnic music in schools. In today's society, the influence the ideas of "modern popular culture" and "Western mainstream culture" have on the teaching of folk music is still serious, and the use of a "Western discourse system" in the teaching of folk music still exists. In the face of today's new situation, it is necessary to strengthen the support and guarantee of school music aesthetic education, improve the understanding and support of the concept of Chinese folk music teaching, and take the teaching concepts of “Chinese culture as the mother tongue” or “Chinese music school” as construction goals. Education administrative departments at all levels, ethnomusicologists, music educators, and composers should take the policy and concept guidance as a starting point, drawing the blueprint of folk music education in China (Zhang, L. H. & Yin, A. Q., 2012). In this way, the efficient development of school aesthetic education can be realized, the cultural education value of Chinese folk music teaching can be achieved, and the understanding, identification, and practice of folk culture can be realized.

5 Acknowledgement

This work would not have been possible without the support of professional researchers and teachers from Zhejiang, Jiangsu, Shandong, Guangdong, Hunan, Liaoning, Jilin, Sichuan, Henan, Beijing, and Chongqing, who assisted in the data collection and analysis. We would like to express our special appreciation and thanks to Du Hong-Bin, Pan Li-Qin, Sun Hong, Yang Jian, Xue Hui, Dong Wei, Fu Yu-Kun, Xu Wei, Zhou Jun, Qi Hong, and Xie Xiao-Mei.

(Abstract 539)

Development of Evaluation Tool for Primary School Music Creative Teaching Academic Achievement

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Abstract

Purpose: The purpose of this research is to develop an effective and reliable academic achievement evaluation tool for music creation teaching in primary schools for use in improving music creation teaching in primary schools.

Method: According to the relevant requirements of the "Creative Field" of China's "Compulsory Education Music Curriculum Standards (2011 Edition)" and related literature on music creation teaching, the academic achievement evaluation tools are divided into two parts: paper and performance evaluation tools. prepared by. Regarding the pen-and-paper evaluation tool, the evaluation content is based on animals and labor scenes and contains a total of 10 items; regarding the performance evaluation tool, the evaluation content is based on the sounds of nature and the sounds in life and contains a total of 4 items. item. After the preliminary establishment, two rounds of tests were conducted on 351 fourth-grade students in three schools, and the opinions of experts and front-line teachers were solicited.

The results show that after two rounds of tests and revisions to the evaluation tools, the reliability and validity of the evaluation tools for academic achievement in music creation teaching in primary schools are good; the difficulty is moderate, with coefficients above 0.5; the discrimination is good, with coefficients all in the range 0.4 or more.

Conclusion: The evaluation tool of this study is a good, effective and reliable performance evaluation tool suitable for fourth-grade students' music creation teaching.

Keywords: music creation teaching; academic achievement; evaluation tool

1.Introduction

The academic level of a student is a direct manifestation of the quality of education and a direct response to the effect of the curriculum. Academic-related abilities have an impact on students' future life and work. Therefore, student academic performance is the basic content of basic education quality assessment (Yufang Bian & Lichan Liang, 2015). Music creation teaching is an important part of basic music teaching, and it is also an important way to stimulate students' creative potential on the basis of guiding students to exert their imagination and explore creative thinking. At the same time, music creation teaching needs effective evaluation to reflect the effectiveness of education. To evaluate the essence of students' creative behavior, that is, to measure the progress and achievements of students. (Baohua Liang, 2014)

The music creation teaching in this research refers to music teaching activities in which teachers can cultivate students' creativity through different learning areas in music teaching. The academic achievement evaluation tool refers to a method that can objectively evaluate students' academic performance in school education. The evaluation tools of this study refer to test questions and evaluation standards.

2.Methodology

2.1 Basis for tool development

Analysis of Curriculum Standards: The requirements for creating fields in the "Standard (2011 Edition)" include: Explore sound and music, Improvisation and Creative practice, and there are different requirements at each stage.

Textbook analysis: There are a total of 265 pieces of textbook music for grades one to four, of which a total of 190 pieces have clear requirements for the arrangement and creation, accounting for 71.7%. It shows that music creation teaching is an important part of primary school music teaching. The types of test questions in the textbook mainly include six categories: exploring sound and music, creating melody, accompaniment to songs, rhythm solitaire, arranging lyrics for melody, and filling in the blanks of phrases. The subject content is mainly based on life scenes and natural scenes.

The scoring standard is compiled based on the dimensions of the Torrance Tests of Creative Thinking scoring standard. The Torrance Creative Thinking Test was compiled in 1966 by E.P. Torrance, a professor of psychology at the University of Minnesota, and is currently the most widely used creativity test. The advantage of this test is that it is suitable for people of all ages, including three parts: speech creative thinking test, picture creative thinking test and sound and word creative thinking test. These tests are organized and presented in the form of games, and the test process is easy and pleasant. The Torrance test includes two sets of speech creative thinking test and picture creative thinking test, and there are two sets of equivalent A and B volume tests. The scoring standards are carried out from the four aspects of fluency, flexibility, originality, and precision (Guoliang Yu and Panpan Zeng, 2001). Fluency refers to the speed and quantity of responses under a certain stimulus; flexibility refers to the number of types of ideas that are reacted under a certain stimulus; originality refers to the novelty of the response under a certain stimulus; fineness, that is, the modification of the answer Sophistication (Shide Shen and Weiping Xue, 2002).

2.2 Development of tools

2.2.1 Tool Framework

The tool framework is mainly designed based on the dimensions of the "creation" field in the "Standard (2011 Edition)", and the paper-written test questions are based on the requirements of the three dimensions of "exploring sound and music", "improvisation" and "creative practice" Two items are prepared for evaluation. In the dimension of "Explore Sound and Music", each set of test items includes a total of five items. The performance test consists of four items, which are mainly based on the requirements of the two dimensions of "Explore Sound and Music" and "Improvement Creation".

2.2.2 Tool structure

The test question structure includes two parts: the instruction and the question. In the preparation of the instruction, the purpose of the evaluation and related matters for attention were mainly elaborated. The guideline of the paper-and-pencil test questions in this study is as follows:

(Paper-written test questions) Examples of instruction:

The following questions contain some music-related questions, some of which you need to answer directly, and some questions that you need to answer after listening to music. The answer is not based on whether it is correct or not. You can associate this work with stories,

pictures, etc.; you can also explain some of the fragments you hear in words. If your answer is different, then you have succeeded.

2.2.3 Selection of Tool Questions

The purpose of writing the question is to test the creative thinking of students, so it is mainly based on the convergent thinking and diffuse thinking in the intelligent structure mode of Guilford (1967) as the thinking mode of creating music. Therefore, the question types of this study are mainly open questions. Through the setting of open questions, it gives students endless space to play and create. In the consideration and preparation of test questions, students use diffusion thinking, through different imaginations, to explore different ways of musical expression; in the process of forming answers, through convergent thinking, infinite possibilities are presented as complete works through creation.

2.2.4 Selection of Tool Content

Regarding the selection of the content of the test questions, the main music textbooks of the People's Music Publishing House are used to select the content. The eight textbooks in grades one to four are presented in the form of themes. Therefore, the content of the paper-written test questions in this study are presented in the form of themes, which are the theme of "animal" and the theme of "labor".

The evaluation criteria are compiled in accordance with the test content of the test questions and the requirements of the "Standard (2011 Edition)", based on the fluency, flexibility, originality, and elaboration of the Torrance Creative Thinking Test.

2.3 Data collection

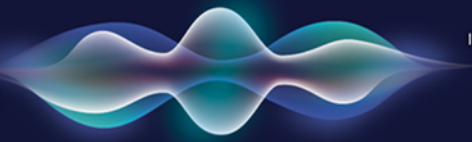
Cognitive development theory believes that there is a "critical period" from quantitative change to qualitative change in the development of elementary school children's thinking from concrete thinking to abstract logical thinking. This critical period is in the fourth grade of elementary school (about 10-11 years old). The sample of the paper-and-pencil test is a total of 231 students from six classes in three schools: Y primary school, W primary school, and F primary school. 231 test questions were issued, 230 test questions were effectively recovered, and one test question was invalid. Among them, 112 are boys and 118 are girls. Since the test questions are divided into A and B papers, one class of each school is selected to test A paper, and the other class to test B paper.

During the paper-and-pencil test, students listened to the instructions and test questions through audio. The answering time is in accordance with the time standard of Torrance's creativity experiment, and the answering time for each question is three minutes. The entire test took 28 minutes.

The sample of the performance test is to select 6 students from each of the six classes in three schools of Y primary school, W primary school and F primary school, for a total of 36 students, including 18 boys and 18 girls. The performance test uses video recording to record the student's performance.

2.4 Data analysis

The data on the paper-and-pencil test and performance test are analyzed from four aspects: reliability, validity, difficulty, and discrimination.



3.Results

3.1 Analysis of the first test results

3.1.1 Reliability analysis

The reliability analysis of the tool is carried out according to the degree of consistency of the grader to the tool, and the analysis results are shown in Table 1.

3.1.2 Validity analysis

The validity of the tool was obtained through the recognition of experts, and experts' recognition of test questions is above 94%. In paper-and-pencil test A, the experts' recognition of the test questions are: 95.6%, 96.1%, 95.5%, 97.3%, and 98.5%; in paper-pencil test B, the experts' recognition of the test questions are: 94.7%, 95.3% , 96.4%, 97.7%, 98.1%. In the performance test A, the experts' recognition of the test questions were 96.6% and 95.3%; in the performance test B, the experts' recognition of the test questions were 97.2% and 95.5%.

3.1.3 Difficulty analysis

In this study, the analysis of the difficulty and discrimination of the test questions is mainly based on the students' scores on the test questions. Use Excel statistical software to count the test questions, and get the following results through the following formula:

$$P = \frac{P_H + P_L}{2}$$

From the perspective of the difficulty coefficient, 0.3-0.7 is in the range of moderate difficulty, and the difficulty of the paper-and-pencil test (A) is generally moderate. The difficulty of the first question is 0.34, the difficulty of the second question is 0.57, and the difficulty of the third question is 0.49 , The difficulty of the fourth question is 0.58, and the difficulty of the fifth question is 0.19. The fifth question is more difficult and needs to be modified; there are two difficult items in the paper-and-pencil test (B), including the first question with a difficulty of 0.2, the fifth question with a difficulty of 0.23, and the other three questions with moderate difficulty , The second question is 0.63, the third question is 0.43, and the third question is 0.46.

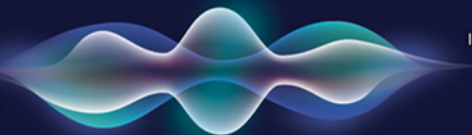
The difficulty of the performance test (A) is generally moderate, all within a moderate range, the difficulty of the first question is 0.56, the difficulty of the second question is 0.55; the difficulty of the performance test (B) is also within a moderate range, the first question is difficult It is 0.44, and the difficulty of the second question is 0.46. From the overall difficulty of the performance test, the moderate degree of the performance test (A) is better.

3.1.4 Discrimination analysis

The specific formula of the index of discrimination is as follows:

$$D = P_H - P_L$$

The range of discrimination (D value) is between -1 and 1. The larger the D value, the better the discrimination effect. The D value is above 0.4, and the distinguishing effect is very good. Judging from the results of the paper-pencil test (A), the overall discrimination is above 0.4, and the discrimination effect is good. The discrimination of the first question is 0.77, the discrimination of the second question is 0.62, and the discrimination of the third question is 0.66. The discrimination degree of the fourth question is 0.44, and the discrimination degree



of the fifth question is 0.49. From the results of the paper-and-pencil test (B), the overall discrimination is above 0.4. The discrimination of the first question is 0.62, the discrimination of the second question is 0.6, the discrimination of the third question is 0.69, and the discrimination of the fourth question is 0.69. It is 0.64, and the discrimination degree of the fifth question is 0.46.

The discrimination of performance test (A) is better, all above 0.4, the discrimination of the first question is 0.63, the difficulty of the second question is 0.53; the discrimination of performance test (B) is all above 0.4, the first question The degree of discrimination is 0.5, and the difficulty of the second question is 0.57. From the above data, we can see that the discrimination of performance test questions is generally better.

3.2 The tool conducts a second test and analyzes the results

Judging from the results of the first pre-test of the tool, the fifth item of the paper-and-pencil test in Volume A, the first and fifth items in Volume B are relatively difficult due to their low degree of difficulty. to modify. Therefore, the three test questions with lower difficulty coefficients are grouped and re-predicted. The sample of the test is 120 students in three classes of Y primary school, W primary school and F primary school. 120 test questions were issued and 120 test questions were effectively recovered. The test results are as follows:

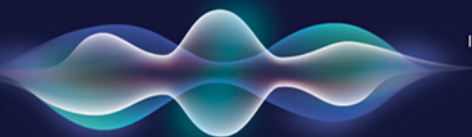
Judging from the difficulty data of the second test, the difficulty of the first and second questions is lower than that of the first test. The third question is moderately difficult, with the difficulty of the first question being 0.28 and the difficulty of the second question being 0.28. The difficulty of the third question is 0.31; from the discrimination data, the discrimination of the three items is better, all of which are above 0.4. The discrimination of the first question is 0.41, the discrimination of the second question is 0.40, and the discrimination of the third question The degree is 0.47.

4. Discussion and conclusion

For students, the primary school music creation teaching performance evaluation tool provides a medium for students to give full play to their music creation performance. It not only provides a more comprehensive evaluation content, but also has rich evaluation methods. Students can use it to give full play to their imagination and create different musical expressions. In addition, students can compare their own music creation performance through evaluation criteria and broaden their own music creation horizons.

For teachers, primary school music creation teaching performance evaluation tools provide a guide for teachers to effectively control music creation teaching. This evaluation tool gets rid of the traditional test-taking ability test results and gives students unlimited space for development. It examines the students' ability to combine the knowledge they have learned, give full play to their imagination and connect with the reality of life. Therefore, the preparation of this tool provides a new goal for teachers' teaching. Teachers cannot train students in the way of exam-oriented education but take the cultivation of students' creativity as the main teaching goal for teaching.

(Abstract 584)



Communication and collaboration in music composition gaming: A case study of children with ADHD

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Abstract

While game-based learning has been found to reduce off-task behaviour and improve learning in domains such as mathematics and reading in children with Attention-Deficit Hyperactivity Disorder (ADHD), there is scant literature on these students' engagement and collaboration in music composition in music technology/game-based learning environments. In the current study, two volunteer children (n=2, aged 10–11 years) diagnosed with ADHD engaged in collaborative composition with non-ADHD pairs of children (n=4) in inclusive music classroom settings using a) a mobile composition game and b) mobile sequencer software. Based on quantitative and qualitative analyses, the findings indicate that the game context promoted collaborative, active and focused participation in children with ADHD and their non-ADHD pairs. The children with ADHD played a more leading role than their non-ADHD pairs.

Keywords: ADHD, mobile composition game, collaboration, communication

Introduction

Composition has become a prominent component of general music education. In schools, music is typically created collaboratively in pairs or in small groups of students. Along with the development of digital devices and music apps, students are developing both their compositional and technological skills. In inclusive music education, the learning environment and pedagogy should be suited for all students. Teachers often find it difficult to differentiate their music teaching in classes that include children with Attention-Deficit Hyperactivity Disorder (ADHD). Typical symptoms of ADHD include developmentally inappropriate levels of inattention, impulsivity and/or hyperactivity and pose a risk to these students' learning, social development and self-esteem (Barkley, 2002).

The main focus of educational research related to ADHD has been on self-regulation and task performance in laboratory settings. Computer-assisted/game-based instruction is a promising strategy for helping children with ADHD to learn mathematics (Mautone et al., 2005; Ota & DuPaul, 2002; Tobar-Muñoz et al., 2015) and reading (Clarfield & Stoner, 2019; Park et al., 2019). While a small body of research has mapped successful music learning conditions and teaching strategies for children with ADHD (Hansen, 2012; Mullins, 2017; Wilde, 2018), there are few studies on how children with ADHD engage in musical education in a music technological environment.

In this paper, collaborative music composition is explored using a loop-based mobile JamMo 3-6 Composition Game (Advanced) and 7-12 Sequencer. This software was developed in an EU UMSIC FP7 research project for children at risk of marginalisation, including those with ADHD, to support their social inclusion (Fredrikson et al., 2009). Based on an investigation of the on-task behaviour of children with ADHD and their non-ADHD peers in JamMo gaming, Pelamo (2012) reported positive results. The present research focusses on these children's communication and social role when composing with JamMo.

Theoretical background

ADHD is an early-onset, clinically heterogeneous disorder of self-regulation, including inattention, hyperactivity and impulsivity (Biederman & Faraone, 2005; Faraone et al., 2003). As a result of ADHD symptoms, children with ADHD experience learning difficulties and social conflicts with their peers. General instructional principles, which have been found to improve the self-regulation and learning of children with ADHD, include increasing intra-task stimulation and novelty, structuring tasks from easy to advanced, breaking tasks into smaller units, direct instruction, avoiding long verbal instructions, repeating task instructions, providing support and direct positive feedback and presenting the task vibrantly and enthusiastically (Barkley, 2002; Grossen, 2004; Jitendra et al., 2004; Slocum 2004).

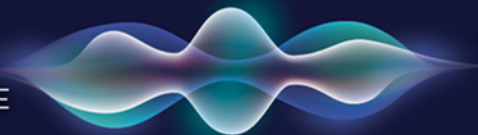
Research on the engagement of students with ADHD in music education is limited. However, it is consistent with aforementioned instructional principles. For example, Mullins (2017, p. 77) surveyed piano teachers regarding the best practices for teaching piano to students with ADHD, finding that the most frequent strategies the teachers reported were ensuring that the student understood the tasks, positive feedback, free choice of musical repertoire, teaching specific skills, setting goals, using shorter tasks and allowing short breaks during lessons.

Hansen (2012) interviewed adolescents with ADHD about their experiences in a school band with non-ADHD peers. The participants' positive social experiences were related to the director's effective teaching strategies, nonverbal teaching and high expectations for students. Students' own leadership was highly appreciated by the participants. Similarly, Wilde (2018, pp. 334–335) reported that the necessary preconditions for successful development of musical skills in children with ADHD include positive attitudes toward and high expectations of students as well as effective pedagogy and classroom design. In Wilde's study, music composition was included in the music lessons but not in the music technological learning environments.

Game-based research

Games have gained researchers' interest, as young people with ADHD are no more impulsive than their non-ADHD peers when playing commercial computer games (Shaw et al., 2005). This may be related to flow and immersion in gaming and to the fact that these children need more mental stimulation than their peers in order to perform and concentrate well in tasks (Farrell, 2009). Computerised tasks or games have been shown to reduce off-task behaviour, increase on-task behaviour and dramatically improve task performance for students with ADHD in mathematics (Mautone et al., 2005; Ota & DuPaul, 2002; Tobar-Muñoz et al., Baldiris 2015), reading (Clarfield & Stoner, 2019; Park et al., 2019) and both (Ford, Poe & Cox 1993). User-centred game design is crucial to support. A mismatch between the task demands and students' skills increases off-task behaviour (Ford et al., 1993).

JamMo software is designed for children aged 3–12 years. The game features and software functionalities are structured to support music composition for children with ADHD, following the findings of ADHD-related research literature and general principles of inclusive education (Paananen, 2010; Paananen & Myllykoski, 2011). The design of the game's musical materials is based on music therapy research related to ADHD: clear rhythmic structures, salient beat and faster tempi (Saarikallio et al., 2010) as well as popular music genres (Abikoff et al., 1996; Wiebe, 2007) are included in the backing tracks and loops. The researchers recommend using the game in a peer-tutoring context to enhance positive social interaction and peer-acceptance in pairs or small groups, with headsets allowing gamers to communicate nonverbally (Paananen, 2010; Paananen & Myllykoski, 2011).



In classroom settings, Pelamo (2012) explored the self-regulation of two children with ADHD with that of their non-ADHD pairs during music composition with the JamMo 3-6 game and JamMo sequencer and compared the results to a more traditional music lesson. In the JamMo 3-6 pair game, the ADHD off-task behaviour was only 6% (non-ADHD 9%); it was as high as 35% with the sequencer (non-ADHD 22%) and 53% with the teacher-centred lesson.

The present study explores the differences and/or similarities in verbal/nonverbal communication and social role taking between children with and without ADHD in the JamMo 3-6 pair game and in non-game composition with JamMo 7-12 Sequencer.

Methods

Participants

The intervention was situated in two different 4th grade classes in two different schools. Two volunteer children (aged 10–11 years) with diagnosed ADHD participated in the study: Boy 1 (School 1) and Boy 2 (School 2). Both boys composed collaboratively with randomly selected non-ADHD classmates. Boy 1 composed pairwise with peers A and B, and Boy 2 with peers C and D. All children in these classes composed collaboratively. The two 4th grade music teachers had been introduced to the structure of the intervention and were responsible for instruction. Informed consent was received from the parents of all children participating in this study.

Data collection

Lesson 1 Pair game composition: JamMo 3-6 Advanced (2 tracks for loops, backing track)

The children played the JamMo 3-6 Advanced composition game in pairs with shared devices and individual headsets. They were allowed to choose their own game theme from three different themes, including different backing tracks and loops. A 10-minute section (600 ms) of video was extracted for time analysis from the beginning of the game-based composition.

Lesson 2 Non-game composition: JamMo 7-12 Sequencer (4 tracks for loops, backing track)

The children composed with JamMo Sequencer 7-12 in random groups of four consisting of two pairs of children, with shared devices and individual headsets. Each group was assigned a different backing track to compose with. One of the pairs started to compose with rhythmic loops, and the other pair started with effect loops. Subsequently, the group members listened to and discussed each other's uncompleted compositions. Then, every pair continued its collaborative composing, using different type of loops from in the beginning. A 10-minute section (600 ms) of video was extracted for time analysis starting 30 seconds after the teacher's instructions and continuing into the pair composition.

Analysis

Time analysis

All selected video sections were analysed with annotation software and calculated with Excel. The duration and percentage of different social roles and types of communication of the target children and their peers were calculated from the randomly selected 600 ms period of time in both game and non-game contexts. The roles in musical collaboration were classified as leading (=manipulating the software), attending (=actively observing what the



pair is doing) and non-participating (not following what is going on in the software, off-task actions). Non-verbal communication was classified as positive (= smiling, laughing, happy), neutral (=no specific emotional expression) and negative (=not content, unhappy). The duration and percentage of all verbal communication over the entire composition period (600 sec) was calculated for the game and non-game contexts.

Qualitative analysis: Combining log files and video

After time analysis, the actions of each 'leading' event were analysed by synchronising the time of the video to the logs, which include detailed information about users' behaviours: exploring loops (=listening to materials), manipulating loops (=creating) and listening to the uncompleted product (=feedback). The process of each pair was analysed qualitatively according to these actions. Video was used to define each specific moment when the user of the shared device changed.

Results

Time analysis

Time analysis for ADHD (n=2, Boys 2 and 2) and non-ADHD (n=4, pairs A, B, C D) in game and non-game situations resulted in the following findings:

The children with ADHD were leading 50% (non-ADHD 27%) of the time, attending 32% (non-ADHD 58%) of the time and non-participating 18% (non-ADHD 15%) of the time (2400 ms measured). Verbal communication occurred in ADHD children 7% of the time and in non-ADHD children 5% of the time. Nonverbal communication was neutral in ADHD children 77% (non-ADHD 74%), positive in ADHD children 22% (non-ADHD 25%) and negative in ADHD children 1% (both) of the time.

Pair game context

Boy 1 (ADHD) was leading 49% and Pair A (non-ADHD) was leading 24% of the measured time (600 ms). Boy 1 was attending 41% and Pair A 66% of the time. Non-participative behaviour occurred in both children 10% of the time. Boy 1 communicated verbally 11% and Pair A communicated 4% of the measured time (600ms). Boy 1's non-verbal communication was positive 7% of the time, and for Pair A it was positive A 20% of the time; it was neutral for Boy 1 90% of the time and for Pair A 80% of the time. Negative communication was almost absent in both children (Boy 1 3%, Pair A 0%).

Boy 2 (ADHD) was leading 37% and Pair B (non-ADHD) was leading 27% of the measured time. Boy 2 was attending 48% and Pair B was attending 54% of the measured time. Boy 1's behaviour was non-participative 15% of the time, and Pair B was non-participative 19% of the time. The amount of time spent in verbal communication was equal for Boy 2 and Pair B (6% of the measured time). Boy 2's non-verbal communication was positive 19% of the time, while for Pair B it was positive 30% of the time. Boy 2's non-verbal communication was neutral 81% of the time, and for Pair B it was neutral 70% of the time. No negative communication was observed.

Non-game workshop context

Boy 1 (ADHD) was leading 36% and Pair C (non-ADHD) 47% of the measured time (600 ms). Boy 1 was attending 28% and Pair C 39% of the time. Boy 1's behaviour was non-participative 36% of the time, and for Pair C it was non-participative 14% of the time.

Both children communicated verbally 8% of the measured time (600 ms). Non-verbal communication was positive in Boy 1 41% and in Pair C 33% of the time, and it was neutral in Boy 1 59% and in Pair C 65% of the time. Negative communication was almost absent in both children (Boy 1 0%, Pair C 2%).

Boy 2 (ADHD) was leading 88% and pair D (non-ADHD) 0% of the measured time. Boy 2 attended 6% and pair D attended 80% of the measured time. Boy 2's behaviour was non-participative 36% of the time, and it was non-participative in Pair D 20% of the time. Boy 2 communicated verbally 3% and Pair D 1% of the measured time. Positive nonverbal communication was observed in both children 19% of the measured time. Nonverbal communication was neutral in Boy 2 80% of the time and in Pair D 81% of the time; it was negative in Boy 2 1% and in Pair D 0% of the measured time.

Qualitative analysis: Combining log files and video

In the JamMo 3-6 game, Boy 1 started the process by selecting the game theme Fantasy. He started listening to two different percussion loops and then added one of them to the track. Each boy added one or two loops in turn with a fast tempo. The process was imitative: they tended to add loops that the pair had already added before. Boy 1 replaced or changed the temporal position of the loops many times. He actively sought to achieve a goal but appeared unhappy with the loop materials of the theme. Therefore, the final number of loops in the end product remained quite low. At the end of the process, he opened another game theme but quit it.

In the non-game context with JamMo Sequencer 7-12, Boy 1 again started the process, now with Pair C. The boys worked in turns, each one exploring loop materials and adding one loop before switching the device. They collaborated well. Boy 1 did not appear as critical toward the loop materials as in the JamMo 3-6 game. He did not remove any loop from the track this time.

In the JamMo 3-6 game, Boy 2 and Pair B collaborated in a goal-oriented manner. They added many loops quickly and worked without pauses. Pair B, who started the game, explored loops and then added the first ten loops to the composition. He continued exploration and then passed the device to Boy 2, who first listened to the uncompleted composition. Boy 2 started to explore new materials. He added seven loops, listened to the composition and added three more loops, without needing to re-listen to them. In the end, the two boys added mainly different drum loops in turns. The need for feedback was decreased, and the goal appeared clear. Boy 2 elaborated the temporal order of the loops and added previously listened to materials to the track, finally completing the product.

In the non-game context with JamMo Sequencer 7-12, Boy 2 led the compositional process all of the measured time. He manipulated the sequencer independently, while Pair D watched and listened. The process began with exploration of different musical materials and then moved to testing certain materials (feedback) and selecting some materials for the composition. By the end of the analysed period, Boy 2 had reorganised the loops, elaborated the product and listened to the incomplete composition independently. The process was explorative. The number of added loops was relatively small. The reason for a shorter and simpler composition could be that the JamMo 3-6 game was easier or more interesting than JamMo 7-12 Sequencer, which is not a game and includes a higher number of loop materials.

Discussion

Both boys with ADHD collaborated for the majority of the analysed music composition periods. However, the two boys with ADHD played a more leading role than their non-ADHD peers in the collaborative composition sessions. This finding is in line with Hansen's (2012) study, in which adolescents with ADHD appreciated being in a leading role in a band instruction context.

Each pair had a different rhythm in turn-taking, with some taking shorter and others taking longer turns. Social 'chemistry' and personality-related features might have had an effect on the pace of turn-taking as well as the musical materials. Non-verbal communication was mostly neutral in all children, probably as a result of intense concentration. The use of headsets likely helped to remove distracting elements and increase the children's concentration. Positive expressions occurred 21% (ADHD) to 25% (non-ADHD) of the total time analysed. Negative expressions were extremely rare in both groups. The software promoted more positive than negative behaviour, even though the collaboration involved randomly selected pairs, who might not be friends.

Focussed, participative and collaborative behaviour was observed in the game. Both boys with ADHD collaborated more actively in the game context than in the non-game context. The technical simplicity, visuals and fantastic game elements of JamMo 3-6 may have created more optimal conditions for flow than the more complex JamMo 7-12. Moreover, the non-game task included a period for verbal talk without headphones, which may have tempted the children to engage in off-task discussion. These findings are consistent with Pelamo's (2012) findings of successful self-regulation during JamMo games and less successful self-regulation with the sequencer.

In teacher-centred situations, students with ADHD show more frequent off-task behaviour—up to 50% or more of the time (Pelamo, 2012; Wilde, 2018, p. 216).

The atmosphere of the lessons was tranquil and focussed in both schools. With headsets on, children shared their positive experiences through facial and bodily expressions by smiling and 'jamming'. In conclusion, JamMo gaming appeared to be a beneficial pedagogical approach in an inclusive music class.

(Abstract 588)

Lisbon Toy Orchestra and the Classroom: a different paradigm for heritage repertoires

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Abstract

This paper intends to dismantle the philosophy and the main contents which are beyond the visible side of an emerging independent orchestra that reached more than 40.000 children in the first 64 performances for the school project in Portugal and Brazil. We will also look at the repertoires covered by this unusual orchestra whose abrupt ascension was interrupted by

the lockdown which forced the cancelation of more than 50 concerts that were scheduled for 2020. The Lisbon Toy Orchestra is getting back on stage in an entertaining journey throughout some of the most outstanding works of the history of Western erudite music. But the seduction capacity of this orchestra is not on stage, but rather on the proposals for the classroom work held beforehand, which is shared here, throughout this article.

Key Words: Audience development, Concerts for children, Listening engagement

Paper Article

Introduction

The Lisbon Toy Orchestra arises from the will of Foco Musical's Portugal music teachers team. It promotes satirical performances where orchestral and operatic repertoire is interpreted by the fragile plastic musical instruments and other toys that characterize this renowned orchestra, in a fun journey through some of the most remarkable works in the history of Western "classical" music. These performances have in its genesis a series of complementary intentions. Firstly, it intends to be a way to dive into erudite music repertoire, commonly called "classical music". In this classical music world, we can make a first division between instrumental and vocal genres. In instrumental music there is a tool that allows the increase of complexity in terms of its construction, due to the richness of the plurality and diversity that it contains: The Orchestra. In vocal music, perhaps because of the presence of the orchestra but also because of its way of merging with other arts, we probably have the most noble genre in The Opera. These are the two worlds that the Lisbon Toy Orchestra intends to honor, democratizing its access. Making them visible to a larger audience. And not only through the project work process – with the imperative complicity of the pedagogical teams and educators who are interested in the issues of Art Education – but also through satire, comedy, which plays, perhaps surreptitiously, with the pomp which gradually led to the esoterism of the world of the so called classical music. Indeed, the vast majority of its agents seem to insist, paradoxically, on promoting it in an airtight manner, keeping away the general public, namely children, whose natural way of being in a concert hall, as in any other space, is not consistent with what is usually required of them in the rooms of the venues reserved for these musical genres. So, if reason and emotion are, after all, intimately linked, it follows that in order to fall in love with the magnificent world of the erudite music we will necessarily have to get to know it. This is the intention of this project. It starts by getting to know some of the artistic objects that marked the evolution of the history of orchestral music and that had, at the same time, the ability to become tangible by common mortals. From orchestral music and from opera. Perhaps the affection promoted here by the parodic versions raises the appetite for the knowledge of the original versions, which will undoubtedly have another charm.

Pedagogical Background of the Project

References

Foco Musical Portugal's Music Education program (Lisbon Toy Orchestra promoters) has its target audience in the Nursery School, Kindergarten and Primary School. Resuming, it is designed to serve children up to 12 years old. With an original architecture and construction based on empirical knowledge, Foco Musical Portugal's Music Education Project board quickly realized the need to frame its program and projects with state-of-the-art scientific and academic knowledge, consolidating its presence in the context that naturally always belonged. Three main pillars sustain the action of this Music Education Program: (1) Access

to Music as an Art / Sensitiveness for the Erudite Music; (2) Ensemble Music Practice; (3) Creating Music in the Classroom. If we look at Keith Swanwick's systematization, from the relational triangle that we can establish with music (we can be related to music as listeners, as performers or as creators) we can conclude that according to this author the perfect music education class will be the one that touches on the 3 respective key competences – (1) Audition, (2) Performance, 3 Composition - towards its skills development (Swanwick, 1979:45). Back to the three main pillars of Foco Musical's you can easily find a parallel concern: (1) Access to Music as an Art → Audition skills development; Ensemble Music Practice (which promotes singing and playing instruments in the classroom) → Performance skills development; (3) Creating Music in the Classroom → Composition skills development. We will soon get back to the complicity with Swanwick explanation model to reintroduce the genesis of the Lisbon Toy Orchestra's action. Nevertheless, we outcrop his co-working with June Tillman about the Sequence of Musical Development. Although their study is specifically based upon the classroom composition assessment, we can and we shall make the most of the logical of the 4 levels they establish from the quoted Musical Development: (1) Materials; (2) Expression; (3) Form; (4) Value. We will also get back to this item. Moving forward to other author of reference we shall take note of Edwin Gordon's work to reinforce and fundament the idea that a child's musical development is processed in measurable steps. The child starts through a phase of (1) Acculturation, goes through a phase of (2) Imitation from the references absorbed in the meantime, until entering a phase of maturation regarding the semantic understanding of music - Musical Literacy - which he calls (3) Assimilation stage (Gordon, 2000).

Theoretical Background

Foco Musical's Music Education Program is not built on a logic of precedence, considering the music experience promoted as a whole project (this is a case-to-case issue for each teacher's management according to each class), however, the priorities for the projects' investments are carefully defined. Getting back to the three main pillars which are correlated with the Swanwick's music relational triangle, for Foco Musical's Music Education Program they are settled per priority order. Just like Maslow's Hierarchy of Needs (Maslow, 1943) the music relational triangle should, actually, be a pyramid. It is not reasonable to expect good interpreters (Performance) if we don't provide them the access to the best references (Audition). In the same line of reasoning, considering we are talking about children who do not master score writing, it is necessary to have the basic skills to play a musical instrument in order to have tools to express original music ideas (Composition) whether in an individual context or in a small group. Besides this metamorphosis of the triangle into a pyramid, there is also a correlation of the three phases of the Musical Development supported by Gordon with the three triangle vertices: Acculturation → Audition; Imitation → Performance; Assimilation → Composition. To guarantee the perception of this idea it is inevitable to resort to the Figure 1 scheme (see below).

Besides the match of the adulterated match from Gordon's and Swanwick's systematization, we can also see in the left side of the Figure 1 the Tillman's development levels. In this case, the intention it is not to match with the pyramid, but rather to explain that although those levels were organized to facilitate the assessment of the children's compositions, we can make the most of them to explain the music educator's role right from the pyramid basis (see Figure 2).

But how shall we use the Tillman's levels for the acculturation process?

For a child without music listening practice, an orchestra can be just a sound machine that, eventually, is debiting strange sounds and, therefore, perhaps the rejection is the natural reaction. We are on the (1) Materials level. It is up to us, while educators, to elevate this listening perception to a different level. The child shall notice that there is something interesting beyond the "noise" that didn't seduce him in a first carefree audition. When the child finds out a communication bridge which at least makes his body swing somehow, we are on the (2) Expression level. And then comes the hard work. Considering the reason and the emotion are straightly connected, as sustained by António Damásio (Damásio, 1994), we will have serious difficulties in getting to a fully delight music listening level if we don't understand it at all. So, the (3) Form level is the big step. The children have to understand what's going on to be able to enjoy it. That's where the Active Music Listening has a preponderant role. The main difficulty to grab the children for an erudite piece of music is that the simultaneous information quantity is such that the chance of getting lost is very high. Music is a temporal art. Unlike the visual arts where we can focus our look on something we don't understand at first sight until we get the point. Besides, in a painting, for example, when we pay attention to a specific detail (being because of the light treatment or the colors or whatever) our visual range is always helping us with the context. It is there, in front of you. To get the context of a music piece, in each moment we delight ourselves with, the before and after which is actually lacking. We need to process each of the past moments at the same time we are processing the sounds of the present moment to get the logics for which probably we will have to wait to the end. It is in fact a complex brain work. Considering this complexity, all the multisensorial help we can get is welcome. Fortunately, we know that the more simultaneous stimuli we experience, the more effective the memorization will be (Godinho, 2001) as José Carlos Godinho sustains in his *Playing-in-the-Audience and Listening-in-the-Audience* thesis. Playing along with our own instruments, moving our body with a small choreography or following a color scheme while listening, as long as the criteria of the conception of the information reinforcement is based on a kind of kinaesthetic approach, any strategy is valid to facilitate the understanding of the whole. From then on we should recognize we are dealing with an art piece that has its beginning, its development and its ending. And when we get there, we are already on the (3) Form level. At this stage a child is supposed to have the skills to be touched by the beauty of a masterpiece, recognizing the added value of an artistic object. The child will be capable to listen in the (4) Value level.

Participated Music Listening Concerts

Foco Musical's Participated Music Listening Concerts are a pretext for curricular project work. More specifically, they are concerts for orchestra presentations, produced for children up to 12 years old in a school context, during school schedule, where the children play a fundamental intervening role from the audience. The score is written for the audience considering it as an extra section of the orchestra. The audience completes the work by taking on the interventions which they previously prepare in the classroom. Considering the described process, the repertoire choice always fell on original works specifically commissioned for this purpose. This way, the contribution to the contemporary creation of orchestral music for children also became an added value of this project.

The Genesis of Lisbon Toy Orchestra

Some years later (Swanwick, 1999), Keith Swanwick has aggregated to the 3 relational triangle vertices, 2 other main starting points through his clasp neologism (C: composition; L: literature; A: audition; S: skills; P: performance). The S for skills sounds more like a reminder for the real role of the music educator, keeping in mind that the music teacher must be much more than an entertainer. But considering to the aggregation of the word Literature

to the pillars of the music education, it brought an effective debate among those who teach the early childhood levels. We can look at the word Literature under many possibilities – music theory, musical concepts, music culture, musical heritage – being the last example the one which is behind the upcoming of Lisbon Toy Orchestra. After 16 years debuting original repertoire for the schools, Foco Musical's team felt it was necessary to insert also the heritage repertoire into the project dynamics that is regularly promoted by the Participated Symphonic Concerts. A conventional orchestra for conventional repertoire would make no sense. The answer became the Lisbon Toy Orchestra.

Repertoire and Impacts

The Lisbon Toy Orchestra is a peculiar orchestra fully formed by music teachers. It was created thinking exclusively about the school audience, but it quickly gripped plural fans and the media, forcing it to share its work beyond the sphere of the school community. Its genesis is, curiously, endogenous. It is in the need of its elements keeping themselves alive as musicians in the search for the preservation of their own skills as music educators. Its mission is to promote the heritage repertoire on stage through a Participatory Music Listening process that begins with project work in the classroom. On stage, the main strategy focuses on the assumption of satire on the formalism that characterizes the ritual of a conventional orchestra's concert, parodying and, paradoxically, paying homage to leading composers and performers, hoping to promote in the target audience the curiosity and appetency for the original models. With clear pedagogical and didactic intentions behind the appearance, orchestral and operatic repertoire it is interpreted by fragile plastic musical instruments and other toys which, definitively, consign their presentations to a Music Comedy label. These peculiar characterizing elements call the attention of the media and call to the attention of the peers accelerating the dissemination process and gathering more participation than a conventional orchestra. The current program is already promoting the following repertoire in the classroom:

Orpheus / Overture (1607) - Cláudio Monteverdi (1567?-1643); Canone in D (1680) - Johann Pachelbel (1653-1706); Rinaldo / Lascia Ch'io Pianga (1711) - Georg Friedrich Händel (1685-1759); Air in D (1717) - Johann Sebastian Bach (1685-1750); Concert for Clarinet / extracts from 1st and 2nd movements (1791) - Wolfgang Amadeus Mozart (1756-1791); Die Zauberflöte / Queen of the Night aria (1791) - Wolfgang Amadeus Mozart (1756-1791) | 5th Symphony / extract from the 1st movement (1804-1808) - Ludwig Van Beethoven (1770-1827); L'Elisir D'Amore / Una Furtiva Lacrima (1832) - Gaetano Donizetti (1797-1848); Carmen / Habanera (1874) - Georges Bizet (1838-1875); Rigoletto / La Donna è Mobile (1851) Giuseppe Verdi (1813-1901); Piano Concerto n.º 1, op. 23 / extract from the 1st movement (1875) – P. I. Tschalkowsky (1840-1893); New World Symphony / extract from the 4th movement (1893) – A. Dvorak (1841-1904); Also Sprach Zarathustra / extract from the 1st movement (1896) – R. Strauss (1864-1949).

Foco Musical has provided a documentary about the learning impacts that is now collecting data among some of the participant children and teachers. The documentary including the comparison between the results before and after the intervention project through the Lisbon Toy Orchestra approach will be available by the Brisbane conference.

Figures



Music Education in Project Philosophy

Structure of the Education Actions Priorities:
from the Hierarchy of Needs (Maslow) applied to an adulterated
match of Swanwick's, Tillman's and Gordon's systematizations

Figure 1. A scheme of the structure of the music education action priorities

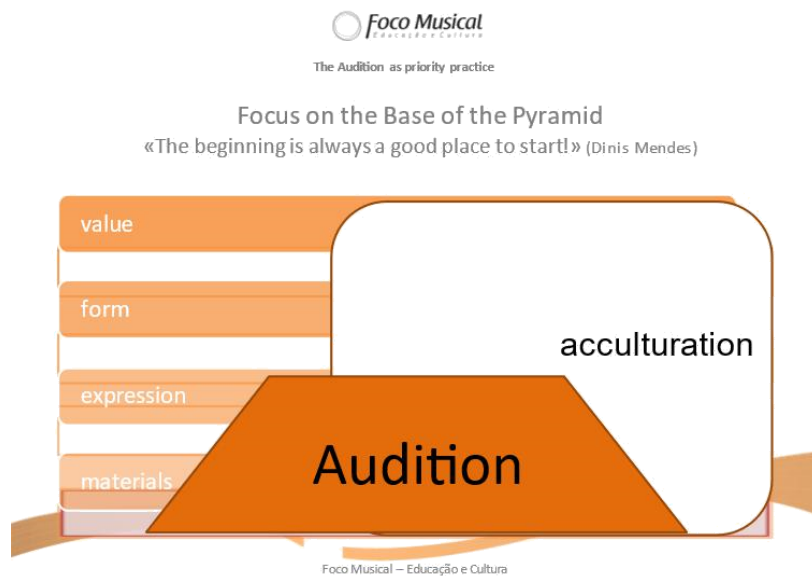


Figure 2. A scheme of the levels of Audition Perception

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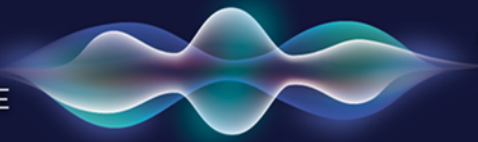
Avinu Malkeinu: The Origins of an Ancient Song with a Contemporary Voice

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Abstract

In recent times pop stars like Lior Attar and Barbara Streisand have chosen to sing a very special song on the world stage. A song which conveys a juxtaposition of humanist and transcendental qualities and clearly represents historical significance. However, the origins of the song are somewhat speculative. In this article, it is revealed that Isaac Nathan (c1791-1864) was the first musician to notate the ancient Hebrew melody known today as the



Avinu Malkeinu under the name of the *Prayer of the Dying*, and that his version precedes the earliest known transcription of the song by 100 years. The inclusion of these songs in his treatise provides an example of the institutionalisation of Jewish Liturgical Music in prospectus curricula on the *Italian vocal tradition* presented in his *Essay on the History and Theory of Music* (1823) and the second edition of this work entitled *Musurgia Vocalis* (1836). These theoretical works appear to have had an esoteric influence in Australian music education and enact the principals of the *Haskalah* movement.

An ancient melody on the contemporary pop circuit.

Today the *Avinu Malkeinu* is performed regularly in Synagogues, School Choirs and by pop stars. In 2013-2021, Lior Attar and Australian composer Nigel Westlake collaborated on a song cycle called *Compassion* which featured the *Avinu Malkeinu*.¹ Barbara Streisand in her performance for the President of Israel in 2013 explained that the *Avinu Malkeinu* “asks God to have compassion for us and our children. To help bring an end to war and famine. To cause all hate and oppression to vanish from the earth. We pray that can happen”.² Lior and Westlake discussed their interpretation of the music and the melody itself probably derived from an ancient source, Westlake explains that “that song, whenever I hear it, fills me with all sorts of emotions because it has in a sense become a form of salvation for me It was my ticket back into creativity. It was my way back into writing music, and by taking that song and orchestrating it, it gave me a focus...it was a calling. So it [had] a very profound impact on me.”³ Lior explains that one line translates as “Instill me with the greatest sense of compassion so I may be liberated” (Happy and Well, 2015, 11.00-11.32).⁴ Both contemporary Australian artists seemed to intuitively understand the historical context and the humanitarian morality of the song as if it had been woven into their artistic thinking. Lior came to Australia from Israel when he was 10 years old, and Westlake who came to this project through grieving for his son has some Jewish family history. Neither Lior nor Westlake are religious but they identify the word for compassion stems from the word for God in both Hebrew and Arabic languages which they used in their work *Compassion*. They approached the project from a universal humanist perspective drawing upon Judaism and Islam in the development of the song cycle. The collaboration began when Westlake heard Lior sing the *Avinu Malkeinu* or *Prayer for the Dying*. Geraldine Doogue quoted Westlake “The music sounded like an ancient chart exhumed from the long lost tomb somewhere on the shores of the red sea” (Happy and well, 2015, 13:20).⁵

In order to trace the ancient history of this powerful song, Tamar Zigman, found several versions of the song. The version of the song most like the contemporary performances was transcribed by Max Janowski in Chicago, 1950. Notably his version evolved significantly from 1948 version by Rabbi Shneur Zalmon which is presented in volume 1 of the *Sefer Ha Niggunim*.⁶ Zigman consulted Professor Eliyah Schleifer who referred to volume 10 of the *Otzar Negino Yisrael* [Thesaurus of Hebrew Melodies] specifically with regard to *Hassidic Songs (Gesange der Chassidim)* and identified that the earliest known transcription of the melody for *Avinia Malkeinu* was published in 1932.⁷

Ex. 1. *Avinu Malkeinu* as it is presented in the “*Otzar Neginot Yisrael*” Vol 10. Leipzig, 1932.

Ovinu malkenu

The image shows a musical score for the hymn 'Ovinu malkenu'. It includes a piano introduction marked 'Lento' and 'mp'. The score is divided into sections for 'Solo Recitando' and 'Choir'. The lyrics are in Hebrew with Latin transliteration: 'O - vi - nu mal.kê - nu - Cho - nê - nu va - nê - nu o - vi - nu mal.kê - nu cho - nê - nu va - a - nê - nu ki ên bo - nu ma - a - sim, - a - sê i - mo - nu tze - do - koh vo - che - sed, - a - sê i - mo - nu tz' do - koh vo - che - sed ve - hô - shi - ê - nu, - a - sê i - mo - nu tze - do - koh vo - che - sed ve - hô - shi - ê - nu.' The score uses various musical notations including treble clefs, time signatures (3/4 and 6/8), and dynamic markings.

The themes of *Life and Death* come up quite often within Nathan's theoretical writings. He refers to all the ancient civilisations but gives special attention to the practices of the Jews in Antiquity especially where those practices have survived. Nathan writes in his *Essay 1823* and also his *Musurgia Vocalis 1836* about the contemporary use of the ancient Jewish *Prayer of the Dying* and provides musical examples which he harmonised. Nathan writes:

Since the captivity of the Jews in Babylon, and the destruction of their temple, 606 B. C., the use of musical instruments being forbidden them, they have, with increased tenacity, preserved their ancient melodies, and bequeathed them by memory from one generation to another, with the same jealous care that a miser would his most valued treasure, and as the last melancholy relics left to remind them of their 'kingdom past away

One of the most affecting of these melodies excites a deeper interest than the rest, from being sung in the chamber of the dying; the expiring man, as long as the ebbing tide of life permits, joins with those around him, and when the fragile weakness of mortality prevents him, they still continue singing until the soul has departed; for they believe music to be so incorporated with the ethereal essence, that it assists the disembodied spirit to soar to the presence of the Most High, and join the angels in their hallelujahs * When Jacob wrestled with the angel, as the dawn advanced, the angel entreated Jacob to let him depart, saying, "Let me go, for the day breaketh," which Rashi, in his comments on the Bible, thus explains.

שלחני כי עלה השחר וחייב אני לומר שירה

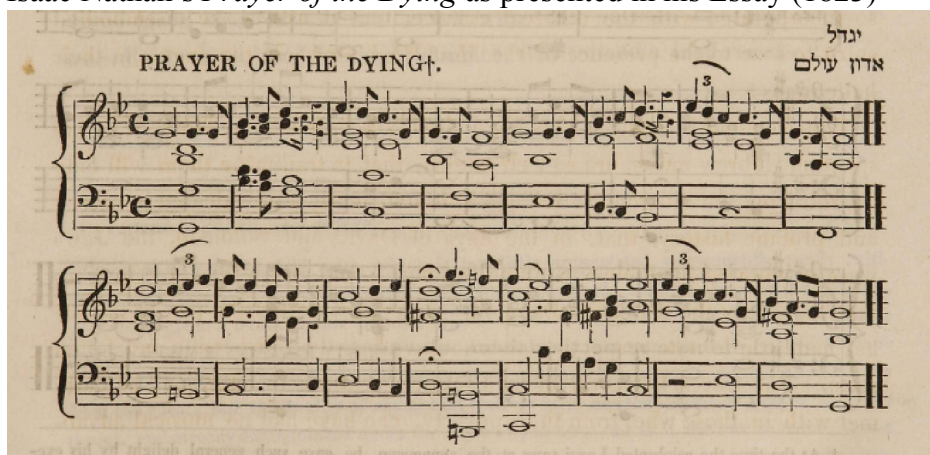
"let me go, for the day breaketh, and I am obliged to say song."⁸

With regard to the *Prayer of the Dying*, Nathan explains “this melody is also sung on the most solemn occasions in the synagogue, under peculiar circumstances, that render it equally awful and impressive”. In his *Essay on the History and Theory of Music* and his *Musurgia Vocalis*, Nathan explains that the *Prayer for the Dying* comes from the Talmud:

From the Talmud and Rabbi Maimonides we learn that the ancient Hebrews attended their dead with funeral music. The husband upon the death of a wife, was obliged to provide mourners to weep at her funeral, according to the custom of the country. The poorest persons among the Israelites never engaged less than two flutes and one mourner. The expence [sic] and pomp of the ceremony was proportioned to the wealth and dignity of the parties. Josephus 1. iii. c. 9., Matthew x. 23., Chro. xxxv. 24.⁹

It is likely that the *Avinu Malkeinu* also comes from the Talmud, and a comparative analysis of the melody of the scores for the prayer for the dying and *avinu malkeinu* shows that they share elements of melodic contour and genesis. Significant adjustments would need to be made to Nathan’s transcription to bring it in line with modern transcriptions, however the changes evident in the 1948-1950 versions of the song make that a possibility. If some of the melodic figures were changed within the chord down a third, or up a third, and if we repeated some of Nathan’s sections then the melody of prayer of the dying, more than one hundred years earlier, would resemble that of the 1950 version and possibly also the contemporary version of *Avinu Malkeinu*. The *prayer of the dying* is presented in both Nathan’s *Essay on the History and Theory of Music* and also his *Musurgia Vocalis*. As such, if considered a representation of *Avinu Malkeinu* אָבִינוּ מַלְכֵנוּ which is thought to have been originally composed by Rabbi Akiva (d.135) then this would be the earliest known notation of the ancient song. *Avinu Malkeinu* means “Our Father, Our King” and this line is used as the opening of each verse of a Jewish Litany and generally recited from Rosh Hashanah through to Yom Kippur for ten days and other solemn occasions. In the UK, Hertz described the *Avinu Malkeinu* as being the “oldest and most moving of all the litanies of the Jewish Year.”¹⁰ Spector hypothesises that Nathan used more ancient melodies that have yet to been identified, and clarifies that it is “not that Nathan stopped using liturgical sources but that Musicologists stopped looking”.¹¹ Nathans *prayer of the dying* published in *An Essay on the History and Theory of Music and the Qualities & Capabilities of the Human Voice* (1823)¹² and *Musurgia Vocalis* (1836) if considered to be an early example of the Avina Malkeinu, predates the records in the *Thesaurus of Hebrew Melodies* by 109 years, and therefore they may be considered the earliest settings of the ancient jewish prayer. The Hebrew in the top right-hand corner indicates that this song was used for Yigdal and Adon Olam. As such, it may not have been considered Avinu Malkenu in 1823, and if considered to be an early example, then the context of its use may have changed.

Ex. 2. Isaac Nathan’s *Prayer of the Dying* as presented in his *Essay* (1823)



Ex. 3 Isaac Nathan's *Prayer of the Dying* as it appears on p 102 of his *Musurgia Vocalis* (1836).

PRAYER OF THE DYING.*

יגדל
אדון עולם

Nathan uses the melody from the *Prayer of the Dying* as discussed above, in his song “I saw thee weep” from the *Hebrew Melodies* which is an example of Nathan codifying authentic Jewish liturgical music in April 1815. Intriguingly, and perhaps in further support of Spector's argument that Nathan inverted the meaning of the original melodies, Nathan describes Byron's text as an example of “amatory effusion... [with] a fine distinction between opposite feelings”.¹³

Here amorous love is juxtaposed against the original prayer of the dying, which originally asked for compassion. Nathan also changes the meter to 6/8 time. Nathan used the prayer for the dying in the song “I saw the weep” from the *Hebrew Melodies*. He has changed the time signature to compound duple 6/8 time, and the tempo is marked *Andante* (see Ex. 4). Table 1 below represents ten of the Hebrew melodies and their original source melodies. Perhaps from an Australian perspective it is particularly interesting to note that Nathan came to Australia in 1841 and used his *Essay on the History of Music* and his *Musurgia Vocalis* as the curricula for his academy of singing.

Ex. 4. The melody from the prayer for the dying is used as inspiration for “I saw thee weep” from the *Hebrew Melodies*.

I saw thee weep

Andante

The Words by Lord Byron
London, Pall Mall, 3, Old Dard Street

The Music by Is. Nathan.

VOCAL

PIANO

FORTE

ANDANTE.

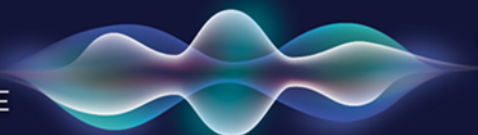


Table 1. Isaac Nathan's Hebrew Melodies and their original source as well as the musicologists who identified the source

3. If That High World	<i>Kaddish</i>	Burwick Douglass)
4. The Wild Gazelle	<i>Yigdale</i>	Burwick Douglass)
5. On Jordans Banks	Ma'oz Tzur	Burwick Douglass)
6. Oh Weep for Those That Wept by Bables Stream	1) Blessings of the priests 2) Kol Nidre	1. Francis L. Cohen 2. Burwick Douglass
7. Oh Snatched away in Beauty's Bloom	1. Eli Tzion 2. Le David Barukh.	1. Douglass 2. Crowden
8. My Soul is Dark	(Same as Weep for those)	Douglass
9. Thy days are done	Kol Nidre	Douglass
10. I saw thee weep	Prayer of the Dying	Crowden

Nathan's arrangement of *Hebrew Melodies* is preceded by those of Benedetto Marcello. Seroussi, considered Marcello's Hebrew Melodies (1724-1726) to be one of the "earliest ethnomusicological projects in music history."¹⁶ Marcello identified eleven authentic melodies originating in the Venetian-Jewish synagogues were used by Marcello in his *Estro Poetico-Armonico*.¹⁷ Seroussi reported on divided opinions in the discourse from music critics at the time. One viewpoint "attributes to Marcello the great merit of being the first to record for posterity authentic Jewish music; the second poses serious doubts to the authenticity of these melodies, presenting them as corrupted".¹⁸ Interestingly, Dr Charles Burney one of the founding fathers of the field of musicology "pronounced the music of the Hebrews *rough and deserving of little attention*".¹⁹ In response Nathan stated: "This assertion, I must also pronounce erroneous' and diving so deeply as he has into the researches of ancient music, I am surprised that the beauty and originality of Hebrew music did not

tempt him to enter more warmly into its merits.”²⁰ Nathan found that Sir John Hawkins also described Hebrew Music as “uncouth and barbarous” and that only the story of Saul’s conversion that “seems to stand in the way of his opinion”.²¹ Nathan agreed with Hawkins that the March of Saul had was a powerful piece of music:

I cannot instance any music that has a more forcible effect on the soberer feelings, than the Dead March in Saul, performed by a military band. Solemn, impressive, and sublime, it melts the heart; so powerful is the illusion that nature, bereft of all her attractions, fades from the view, while the dark mansion of the grave is presented to the imagination; and, as the air slowly dies on the ear, a calm and pleasing sadness will remain for a time on the spirits. If the feelings can be thus moved by instrumental sounds, what may not be affected by the human voice, which is the instrument of heaven’s own.²²

However, with regard to Sir John Hawkins, another *founding father* of musicology, Nathan wrote that the scholars opinion of Jewish music was prejudiced and closed minded

I am really at loss to respect the opinion of any man who so peremptorily decides the point without first making himself acquainted with what the Scriptures contain on the subject ; I must be allowed to observe that we have no melody that surpasses that of the ancient Hebrews, either in pathos, grace, simplicity or in originality, although I am by no means prepared to exclaim with Kircher in reference to their music, " that the greatest improvements of modern times are but barbarous compared with it.²³

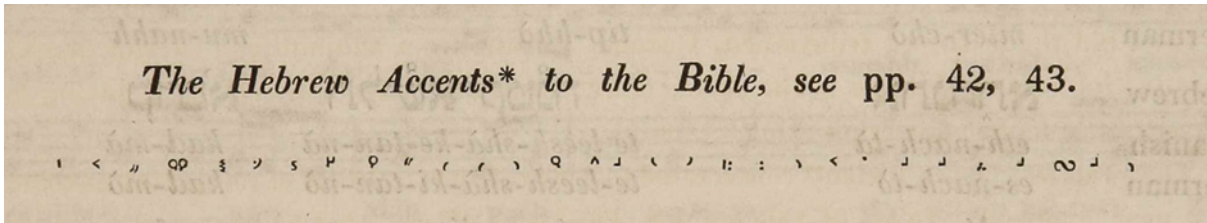
Nathan implies that two esteemed musicologists who established the field took up a prejudiced and closed-minded perspective which essentially omitted the Jews contributions to music from Antiquity to the present in the leading textbooks on the history of music. This seems to have triggered a fire in Nathan to restore the status of the Jews contribution to the discourse of the development of music and human civilisation. Advocacy of such a position was unique and politically progressive. For Isaac Nathan a 32-year-old Anglo-Jewish in London in 1823 to challenge Dr Burney was certainly a bold move.

Doctor Burney, in his elegant and instructive History of Music, implies a doubt of these musical accents being genuine, and observes that "Kircher pretended they were sung during his time," but had the learned Doctor applied for information to any of the Hebrews, he would have been satisfied that, from time immemorial, these musical accents were known and sung with the Bible, and that they are invariably the same among the Jews of every country.*

The Spanish Jews, indeed differ in some respects from the Germans ; and within the two last centuries, by occasionally calling in the aid of modern composers, have forfeited their claim, in a great measure, to originality. ²⁴

Nathan supported Athanasius Kircher’s position that the accents were indeed sung during his time by calling upon the authority of two main Rabbinical sources. Nathan identifies Rabbi Schelemoth Jarchi (Rashi) as a learned commentator on the Jewish manner of chanting the Bible and the Rabbi Aaron Ben Aser (c. 5thC) who invented characters or abbreviations to represent accents & tones for 27 sounds (See Ex.5 below).²⁵

Ex. 5 Nathan's depiction of *The Hebrew Accents* is discussed on p42-43 of his *Essay* 1823 and examples are provided in an Appendix on Page 227.



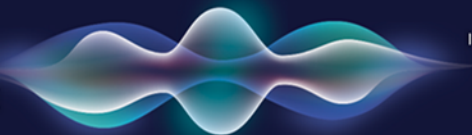
In his Encyclopedia, Jolles identified verification of the authenticity of these accents Jewish neqinot (ta'amim hamikra המקרא טעמי) [Hebrew Cantillation of the bible using accents, notes or trope symbols] by noting that Nathan's examples "have been reproduced in Victor Tunkel".²⁶ Nathan's notation of the Jewish neqinot was identified by Jacobson as one of "the first to publish the te'amim in Western notation".²⁷ Although they were originally codified in written form by the Masoretic scholars in the 8th century.

Ex. 6. Nathan's transcriptions of ta'amim ha mikra המקרא טעמי (cantillation marks).

The Hebrew accents, under which are affixed the Notes (forming long or short phrases) they each represent. 229
Read from right to left.

The same adapted for the convenience of those who may find any difficulty in reading backwards.

Pash-tā munāhh Zar-ka munahh segoal- munahh- munahh
re-bhee- ngee Māh e-pach pash-ta Za' kaiph kā-toan Zākaiph gā-doul
mairchā tip-hhā mu-nahh eth nahh-tā te leesh-shā-ke-tan-nā
Kad-mā ve-az-lā Az-lā-gai-raish Gair-sha-yee-m
teleshshā ge-do-lā Pā-zair- Dar-gā the vheer
shel-shai-le th
Kar-nai pā-rā mair-chā-che-phoo-lā Ye theebh-
pe seek- soaph-pā-sook-



Nathan's transcription of the *prayer for the dying* in 1823 may well be the earliest known version of the *Avinu Malkeinu* and in 1815, Nathan codified this Jewish Liturgical Music into the song "I saw thee weep" in his *Hebrew Melodies* song cycle which may be considered one of the earliest important ethnomusicological studies of the time. As such, we may consider that Nathan was a leading authority on Jewish music and the Hebrew language in the early-nineteenth century. It is remarkable that Nathan's books were forgotten about and routinely dismissed within the musicology field in Australia and abroad for nearly two hundred years. Nathan's ethnomusicological contribution is an example of an enduring culture living through song. This study reveals the possible origins of a song which has found a new voice and a new meaning in contemporary culture, and we reflect on the biases, prejudices of two of the leading authorities who helped to found the field of musicology who dismissed the music of the Hebrews as uninteresting. We are reminded of the need for critical processes and flexible thinking. The *Avinu Malkeinu* may well be one of the oldest surviving examples of humanity, and its core message of compassion has been preserved and delivered through the language of song to a contemporary audience which will impact our future, if only to provide a moments reflection on the transcendental wonder of the universe and our song within it.

"In every land music has left some well known relic behind her to be handed down from one generation to another." (Isaac Nathan, *Musurgia Vocalis*, p34).

¹ Lior Attar and Nigel Westlake, *Compassion: for symphony orchestra and solo voice, a song cycle in seven movements based on a collection of ancient Hebrew and Arabic texts* (Rimshot Music, 2013). <https://www.australianmusiccentre.com.au/work/westlake-nigel-compassion>. Subsequent performances in: Sydney and Perth in 2013; Adelaide and Melbourne 2014, Melbourne 2017; Adelaide, Melbourne and Port Fairy 2018; Hobart 2019; and Adelaide, Barragga Bay, Toowoomba and Brisbane in 2021.

² Barbara Streisand. Barbara Streisand Avinu Malkeinu Live in Israel. YouTube 2014. <https://www.youtube.com/watch?v=vdxePZKCvvo>. Accessed 4 October, 2021.

³ Happy and Well (2015). The wisdom of compassion with Nigel Westlake & Lior at Happiness & Its Causes 2015, <https://www.youtube.com/watch?v=tiOsTuFiFTI>

⁴ Happy and Well (2015). The wisdom of compassion with Nigel Westlake & Lior at Happiness & Its Causes 2015, <https://www.youtube.com/watch?v=tiOsTuFiFTI>. (Accessed 10 October, 2021)

⁵ Happy and Well (2015). The wisdom of compassion with Nigel Westlake & Lior at Happiness & Its Causes 2015, <https://www.youtube.com/watch?v=tiOsTuFiFTI>. (Accessed 10 October, 2021)

⁶ Tamar Zigman, "The Incarnations of the "Avinu Malkeinu" Piyut: from the Talmud to Barbara Streisand," *Music Collection and Sound Archive of the National Library of Israel*, 24 April, 2018, <https://web.nli.org.il/sites/nli/english/music/music-stories/pages/avinu-malkeinu.aspx>.

⁷ Zigman The Incarnations of the "Avinu Malkeinu" Piyut: from the Talmud to Barbara Streisand. <https://web.nli.org.il/sites/nli/english/music/music-stories/pages/avinu-malkeinu.aspx>

⁸ Isaac Nathan, *An Essay on The History and Theory of Music; and on the Qualities, Capabilities, and Management of the Human Voice* (London: G. and B. Whittaker, 1823).P44

⁹ Isaac Nathan, *Musurgia Vocalis, An Essay on the History and Theory of Music, and on the Qualities, capabilities, and management of the Human Voice*. (London: Fentum, 1836). P. 103.

¹⁰ Joseph H. Hertz, *The Authorised Daily Prayer Book with commentary, introductions and notes* (New York: Bloch Publishing, 1948). P. 161.

¹¹ Sheila A Spector, "The liturgical context of the Byron-Nathan Hebrew Melodies," *Studies in Romanticism* 47.3 (2008), <http://go.galegroup.com/ps/i.do?id=GALE%7CA193886044&v=2.1&u=slq&it=r&p=LitRC&sw=w>. 394

¹² Nathan, *An Essay on The History and Theory of Music; and on the Qualities, Capabilities, and Management of the Human Voice*. P45, Nathan, *Musurgia Vocalis, An Essay on the History and Theory of Music, and on the Qualities, capabilities, and management of the Human Voice*. P. 102.

¹³ Hebrew Melodies P98.

<http://conquest.imslp.info/files/imglnks/usimg/0/08/IMSLP221262-PMLP365149-Nathan-HebrewMelodiesBW.pdf>

¹⁴ David Crowden, "ISAAC NATHAN BIOGRAPHICAL CONTEXT PART 2: AUSTRALIA 1841-1864," *Australian Jewish Historical Society Journal* 24, 2 (2019); David Crowden, "Isaac Nathan: The Biographical Puzzle: England 1791-1840," *Australian Jewish Historical Society Journal* 23, 4 (2018).

¹⁵ Spector, "The liturgical context of the Byron-Nathan Hebrew Melodies."

¹⁶ Edwin Seroussi, "In search of Jewish music antiquity in the 18th Century Venetian ghetto: Reconsidering the Hebrew melodies in Benedetto Marcello's *Estro Poetico-Armonico*," *The Jewish Quarterly Review* 93, 1/2 (2002). P. 164.

¹⁷ [https://imslp.org/wiki/Estro_poetico-armonico_\(Marcello%2C_Benedetto\)](https://imslp.org/wiki/Estro_poetico-armonico_(Marcello%2C_Benedetto))

¹⁸ Seroussi, "In search of Jewish music antiquity in the 18th Century Venetian ghetto: Reconsidering the Hebrew melodies in Benedetto Marcello's *Estro Poetico-Armonico*." P. 164.

- ¹⁹ Nathan, *Musurgia Vocalis, An Essay on the History and Theory of Music, and on the Qualities, capabilities, and management of the Human Voice*. P. 107.
- ²⁰ Nathan, *Musurgia Vocalis, An Essay on the History and Theory of Music, and on the Qualities, capabilities, and management of the Human Voice*. P. 107.
- ²¹ Nathan, *Musurgia Vocalis, An Essay on the History and Theory of Music, and on the Qualities, capabilities, and management of the Human Voice*. P. 107.
- ²² Nathan, *An Essay on The History and Theory of Music; and on the Qualities, Capabilities, and Management of the Human Voice*. P. 37.
- ²³ Nathan, *Musurgia Vocalis, An Essay on the History and Theory of Music, and on the Qualities, capabilities, and management of the Human Voice*. P. 107.
- ²⁴ Nathan, *An Essay on The History and Theory of Music; and on the Qualities, Capabilities, and Management of the Human Voice*. P. 227
- ²⁵ Nathan, *An Essay on The History and Theory of Music; and on the Qualities, Capabilities, and Management of the Human Voice*. P. 42-43.
- ²⁶ Jolles Michael Jolles, "Encyclopedia of British Jewish Cantors, Chazanim, Ministers and Synagogue Musicians: Their History and Culture," (London: Jolles Publications, 2021). Enclopaedia. P.671. Victor Tunkel, *The Music of the Hebrew Bible and the Western Ashkenazic Chant Tradition* (London: Tymsder Publishing, 2006). P. 20.
- ²⁷ Jacobson Joshua R. Jacobson, *Chanting the Hebrew Bible: The Art of Cantillation*, Second Edition, Revised, Expanded Edition ed. (Lincoln: University of Nebraska Press, 2017). <https://www.chantingthehebrewbible.com/>. P. 16.

(Abstract 596)

An Introductory Analysis of Pre-College Piano Teachers in China and the United States

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Abstract

In an increasingly interconnected world, it is crucial that music educators throughout the world understand pedagogical practices across national boundaries. It not only helps to investigate if one educational context might inform the other but it also improves the exchange between differing traditions on topics such as developing effective methods, training teachers effectively, and promoting music education as an international endeavor. While China and the United States are representatives of two opposing social orders with distinct cultures, they do share common ground in the field of piano education—the instrument, the repertoire, and performance practices tend to remain relatively consistent. A comparative examination of music education in both countries is important because of globalization.

The purpose of this study is twofold: 1) to promote a greater understanding of the current state of pre-college piano teaching practices in mainland China and the United States and 2) to identify the similarities and differences between pre-college piano teachers' profiles and professional developments in these two countries. The researchers examined several aspects related to the piano instructors in each country through a self-reporting survey. Data were collected in 2021 from piano teachers in China (n = 40) and the United States (n = 25). They completed a 26-item questionnaire. A summary of pre-college piano instructors' profiles, educational backgrounds, pedagogical trainings, and professional developments in mainland China and the United States was created and the comparison between the two countries was explored. Results indicated that compared to the piano teachers in the U.S., there were still a considerable number of teachers in China who were in the earlier stage of their teaching journeys. Overall, the piano teachers from the U.S. reported a higher level of attained music education than the teachers from China. There were significantly more piano teachers in the

U.S. who had taken piano pedagogy courses than the teachers in China. Although the data collection in this study took place in mid 2021 after the effects of the COVID-19 pandemic, the majority of piano teachers from both countries still maintained connections with others in their fields through social media and in-person gatherings. It is hoped that this small-scale paper will lead to more in-depth discussion about these countries' piano teaching practices and provide additional perspectives for pedagogues around the world.

Keyword

Pre-college piano education, piano teachers, China, the United States

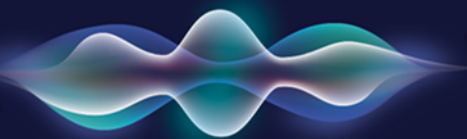
Introduction and literature review

The unique qualities of each country's culture and tradition affect their educational philosophies, policies, resources, and teachers' training (Spohn, 2008). This in turn shapes their approach to music education. An international comparative examination of music education is important because the world is interconnected. It not only helps to investigate if one educational context might inform the other (Gubbins, 2021); it also improves the exchange between differing traditions on topics such as developing effective methods, training teachers effectively, and promoting music education as an international endeavor (Kertz-Welzel, 2008).

The comparative study of Asian and North American music education has been of significant interest to researchers. There are several phenomena that have attracted these researchers' attention: 1) increasing numbers of Asian musicians who are successful on concert stages and in competitions; 2) the increasing trend of Asian musicians moving to North America to pursue their higher music education; 3) the situation that, while North America has experienced a decline in piano production and sales, China has experienced a "piano-mania," with an estimated 40 million children taking piano lessons and numerous accomplished Chinese pianists performing worldwide (Benson and Fung, 2004 & 2005; Comeau, Huta and Liu, 2015; Choi, 2009; Huang and Thibodeaux, 2017; Montefiore, 2014; Jiang, 2019; Johnson, 2015; Lin, 2016; Witzleben, 2011; Wong, 1980).

Brand (2001) conducted a cross-cultural study specifically comparing Chinese and American music majors' motivations and strategies for learning and studying in higher education. This study examined music students' learning approaches and motivations by assessing the styles and processes of learning in different cultures. However, the researcher did not consider the instructors' teaching approaches and the environments in which the students grew up. Huang and Thibodeaux (2017) observed the rise of the piano and the influence of Western music in China when they visited a Chinese college from 2013 to 2015 as guest piano faculty members. Compared to the piano students they taught in the U.S., they found that the piano students they taught in China were enthusiastic, receptive, hardworking, and technique-oriented. Their 2017 article was more like a personal reflection on piano teaching in a particular school in China. Further research is needed to gain a comprehensive understanding of piano education in both China and the U.S.

Through observing and analyzing videos of private piano instruction, Benson and Fung (2004) found that giving directives was the most frequently used teacher behavior and that using analogies was the least frequently used teacher behavior in both China and the U.S. While piano teachers in China used gestures, teachers in the U.S. used questions more frequently. Additionally, Benson and Fung (2005) found that teacher modeling seemed to be a more acceptable mode of teacher-student interaction in the Chinese sample, while students



in the U.S. sample tended to engage in the lessons with verbal dialogue. These behavior studies of piano education between two different cultural groups provided teachers with opportunities to expand their pedagogical techniques and to gain a greater understanding of their students. Both studies were conducted almost two decades ago. Much has changed in China in the last 20 years including the recent surge of Chinese pianists who completed their music education overseas and then returned to their homeland to start their teaching careers. The current trend of professional piano teaching practices in various parts of these two countries requires exploration. In addition, since the quality of piano education largely depends on learning environments, teachers' perceptions and their pedagogical abilities, a survey of teachers is an efficient way to gain an overall understanding of the current pre-college piano education status in both countries.

Since culture has a tremendous impact on patterns in music teaching and learning (Williams, 2002), Comeau, Huta and Liu (2015) investigated the work ethic, motivation, and parental influences of Chinese and North American pre-college piano students. Their research emphasized cultural influences related to the attitudes toward and involvement in children's education in the context of piano learning. This study neither uncovered the pre-college piano teaching practices from the teachers' perspective nor compared the infrastructure of pre-college piano education between these two countries.

Purposes

While China and the United States are representatives of two opposing social orders, they do share common ground in the field of piano education (Lin, 2016)—the instrument, the repertoire, and performance practices tend to remain relatively consistent between the two countries. In an increasingly interconnected world, it is important that music educators understand pedagogical practices across national boundaries. Therefore, the purpose of this study is twofold: 1) to promote a greater understanding of the current state of pre-college piano teaching practices in mainland China and the United States and 2) to identify the similarities and differences between pre-college piano teachers' profiles and professional developments in these two countries.

Research Questions

1. What are the profiles of pre-college piano teachers in mainland China and in the United States regarding their teaching experiences?
2. What similarities or differences exist between the piano teachers in these two countries regarding their highest level of education and pedagogical training?
3. What professional development activities do piano teachers from these two countries participate in to improve their teaching practice?

Methodology

Survey instrument

A researcher-devised survey tool was used to collect information from pre-college piano teachers in both mainland China and the United States. The survey was based on the self-reporting questionnaire developed and applied by Dumlavwalla (2019), who investigated the overview of the piano pedagogy scenes in the Philippines and India. The format and questions of Dumlavwalla's questionnaire was used as a guide for developing the questions for this study. The primary format of the questions included multiple choice and ranking questions. Open-ended options were also included to allow participants to express their opinions that were not anticipated by the researchers.

The questionnaire was written in English originally, then underwent translation and back-translation (Brislin, 1970) to the Chinese national dialect, Mandarin. One of the researchers in this study who is a native of China and proficient in English translated the questionnaire into Chinese first; then a Chinese-speaking piano professor reviewed the translation and made revisions; next a language professor in China who was teaching English performed the back-translation into English; finally, the back-translation was approved by the creators of the original questionnaire until it contained the same concepts. The participants in the U.S. used the original English version of the questionnaire. The Chinese participants used the translated Mandarin version of the questionnaire.

Procedure

The researchers obtained Institutional Review Board approval prior to the start of the study. Questionnaires were distributed and administered through Qualtrics, an online survey program (<https://www.qualtrics.com>). Besides the questions, the online questionnaire also included the introduction of the study, participant consent information, and the researcher's contact information. Participants did not provide any personal information, thereby, maintaining their anonymity. Prior to sending the online questionnaire to the target participants, the researchers ran a pilot test for both the English and Mandarin versions. The pilot tests were used to determine if there were unnecessary and confusing questions in the questionnaire.

The target population in this study consisted of piano teachers who were teaching pre-college piano students in China and the United States at the time of the survey. They were contacted through a project invitation email or message. To increase the completion rate in China, the researchers decided to distribute the survey QR Code through WeChat instead of email. Since WeChat, a free messaging and calling application, is the most popular social media app in China, the participants could easily access the survey through their cell phones.

Results

Length of teaching career

Data were collected in 2021 from pre-college piano teachers in China ($n = 40$) and the United States ($n = 25$), who completed a 26-item questionnaire. Invitations were sent out to 120 teachers in the U.S. and 80 teachers in China. This resulted in a 20.8% response rate in the U.S. and a 50% response rate in China. The majority of the participants in China (63.5%) have taught piano about 6 to 15 years while most of the participants in the U.S. (60%) taught piano more than 16 years (see Figure 1). In China, 20% of the pre-college piano instructors surveyed indicated they had less than 5 years of teaching experience. In the U.S., only 8% of the participants had taught for less than 5 years. A two independent sample χ^2 test was used to determine if there were differences between the Chinese and the U.S. piano teachers regarding their years of teaching experience. The result indicated there was a significant difference, $\chi^2(3, 65) = 12.54, p < .05, V = .44$

Music education and pedagogical training

The piano teacher participants in China reported a lower level of attained music education than the participants in the U.S. (see Figure 2). While the largest proportion of piano teachers in China had a bachelor's degree (45%) or master's degree (40%) in music, most of the teachers in the U.S. (44%) held a doctoral degree in music. It was noticed that a few participants in China ($n = 4, 10\%$) and one participant in the U.S. ($n = 1, 4\%$) did not hold any music degrees. A two independent sample χ^2 test was used to determine if there were differences between the Chinese and the U.S. piano teachers regarding their level of music

education. Results indicated there was a significant difference, $\chi^2(4, 65) = 20.88, p < .05, V = .57$. When considering their pedagogical training, a larger percentage of piano teachers in the U.S. (96%) than in China (67.5%) reported that they had taken courses specific to piano pedagogy (see Figure 2). A chi-square test was used to determine if there were differences regarding whether the participants in each country had taken piano pedagogy courses. Results indicated there was a significant difference, $\chi^2(1, 65) = .011, p < .05, \phi = .34$.

Professional development

In both countries, local music/piano teacher organizations play an important role for piano teachers' professional development. Therefore, the survey participants from each country were asked whether they were a member of their local music teachers' organizations. Of the Chinese piano teachers, 56.4% reported they had joined the organizations, whereas 87.5% of the teachers in the U.S. indicated they were the members of their local music teacher associations (see Figure 3). A chi-square test was used to determine if there were differences regarding whether the participants of each country had joined their local music teacher organizations. Results indicated there was a significant difference, $\chi^2(1, 63) = .012, p < .05, \phi = .32$. Additionally, the vast majority of piano teachers in both countries reported that they interact with other teachers through in-person gatherings and /or social media. While slightly more Chinese teachers (52.7%) chose to interact with other teachers in person, more teachers in the U.S. (51.2%) interacted with their peers through social media (see Figure 3). The difference between participants from the two countries in this comparison was not statistically significant.

Participants were asked to indicate what professional development activities they have been involved with. As seen in figure 4, piano teachers in China had higher rates of taking piano lessons with more senior teachers and taking online pedagogy courses. In contrast, piano teachers in the U.S. had higher rates of attending local professional conferences, symposiums, and master classes. A two independent sample χ^2 test was used to determine if there were differences between the Chinese and the U.S. piano teachers regarding their participation in professional development activities. Results indicated there was a significant difference, $\chi^2(4, 65) = 11.48, p < .05, V = .26$. To determine where significant differences occurred, a series of 2 x 2 contingency table χ^2 tests using a modified Bonferroni Correction were calculated. Results indicated there was a significant difference between piano teachers from the two countries regarding their involvement in the following activities: 1) attending master classes ($\chi^2 = 8.66, p < .01$); 2) taking online pedagogy courses ($\chi^2 = 8.66, p < .01$); and 3) attending conferences and symposiums within China/the U.S. ($\chi^2 = 8.66, p < .01$).

Conclusions and future research

From this small-scale study, several themes can be gleaned from the pre-college piano teachers' profiles in China and the U.S.

1. Compared to the piano teachers in the U.S., there were still a considerable number of teachers in China who were in the earlier stage of their teaching journeys. This might be attributed to the assumption that in China, more individuals from the younger generation were taking interest in the piano-teaching profession. In the U.S., instructors from the older generation who had more teaching experiences were still thriving in this profession. The way the questionnaires were distributed may also have had an impact on this result. WeChat may be used more frequently by the younger generation. Teachers from the older generation may not rely on social media and technology as much for their communication needs. Finally, the questionnaire was

distributed in the U.S. to the researchers' professional contacts. It is possible that this list of individuals could be populated with more experienced professionals.

2. Overall, the piano teachers from the U.S. reported a higher level of attained music education than the teachers from China. While most of the U.S. teachers hold a doctoral degree in music, most of the teachers in China hold a bachelor's degree. This corresponded to the fact that in China, only one university-level institution offered a doctoral program in piano performance and no institution offered a doctoral program in piano pedagogy at the time of the survey. However, piano programs were already well-developed from the bachelor to doctoral levels in the U.S. (Jiang, 2019). As a result, limited opportunities in higher music education in the field of piano pedagogy specifically may hinder the professional preparation of pre-college piano teachers in China.
3. There were significantly more piano teachers in the U.S. who had taken piano pedagogy courses than the teachers in China. Since piano pedagogy was a relatively new area/subject that attracted scholars' attention in China, many universities did not have qualified piano pedagogy professors and only offered the piano pedagogy courses in recent years. Therefore, the opportunities for the older generation to take piano pedagogy courses when they were in college were limited. Since most of the teachers from China only held a bachelor's degree in music and only a few universities in China offered the piano pedagogy program at the undergraduate level (Jiang, 2019), some piano teachers in China were not able to take piano pedagogy courses.
4. Although the data collection in this study took place in mid-2021 after the effects of the COVID-19 pandemic, the majority of piano teachers from both countries still maintained connections with others in their profession through social media and in-person gatherings. Social media and in-person gatherings were almost equally important for piano teachers to communicate with others in both countries.
5. In terms of the professional development activities, the number of teachers from China who took online pedagogy courses was significantly more than the teachers in the U.S. Teachers in the U.S. preferred to attend master classes and piano pedagogy conferences/symposiums. This may relate to the result that teachers in China who took pedagogy courses during their formal higher education were significantly fewer than the teachers in the U.S. Online pedagogy courses may be one of the few ways teachers in

China can access this type of education and professional development. Attending master classes and pedagogy conferences/symposiums were popular activities for the U.S. teachers to gain inspiration and acquire new pedagogical strategies. These types of gatherings and events are more easily accessible in the U.S.

This paper focused on a portion of the results acquired through the 26-item questionnaire. It provides an introductory profile of pre-college piano teachers in China and the U.S. and highlights the length of their teaching career, their education and their on-going professional development. This initial analysis will provide the researchers with a basis on which to pursue further analysis of the survey results as they explore the pre-college piano teaching scenes in both countries. Further investigation regarding teacher training practices for piano

instructors in different countries will shed light on how all educators can be equipped with the best pedagogical strategies for their students.

Figure 1. Comparison of length of teaching career in years

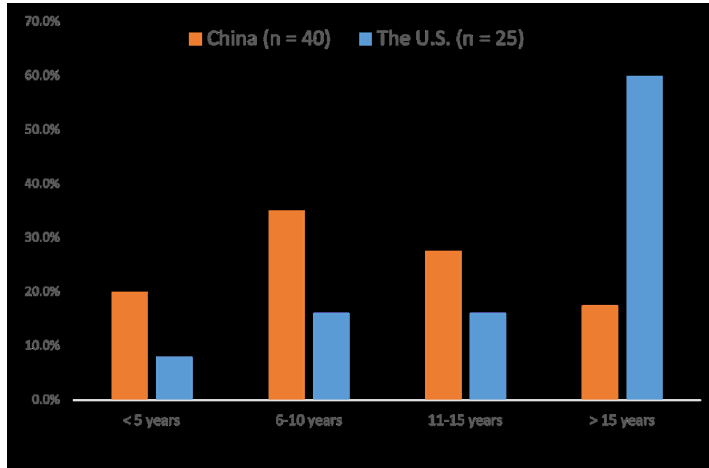


Figure 2. Comparison of the highest level of music education and pedagogical training among piano teachers.

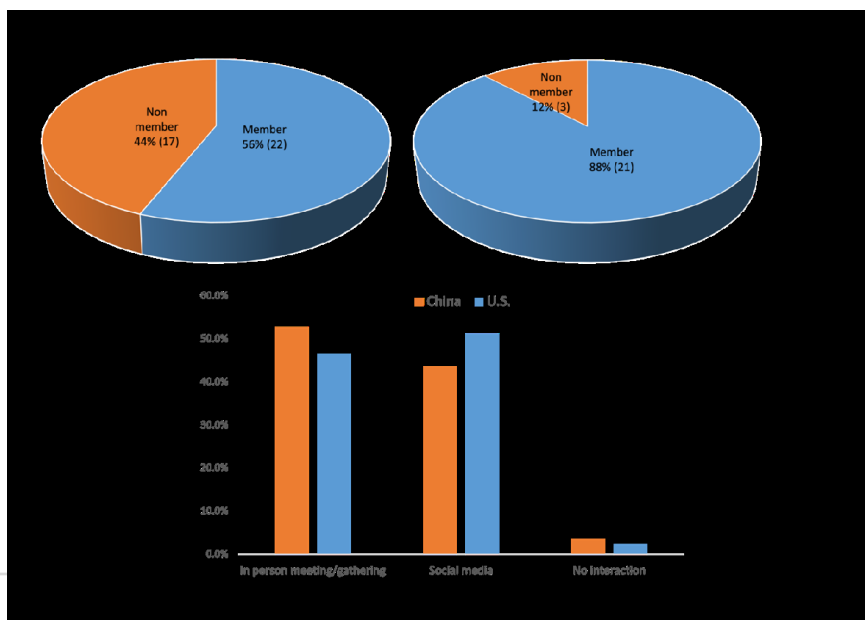
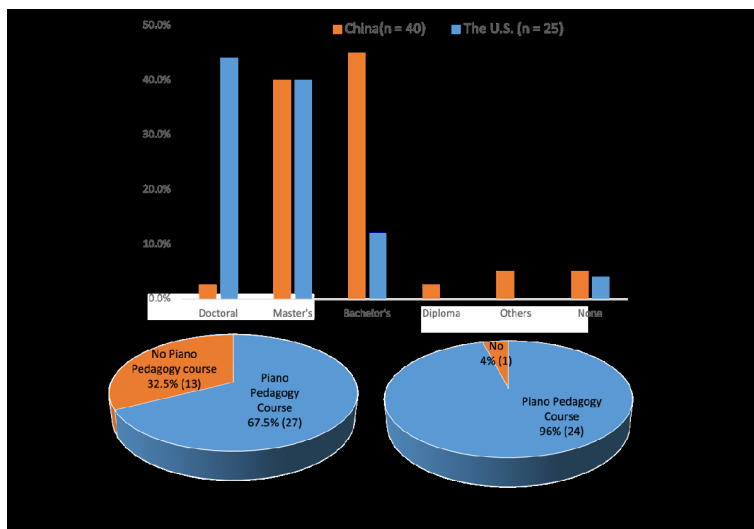


Figure 3. Comparison of membership in music teacher organizations and the interaction with other piano teachers.

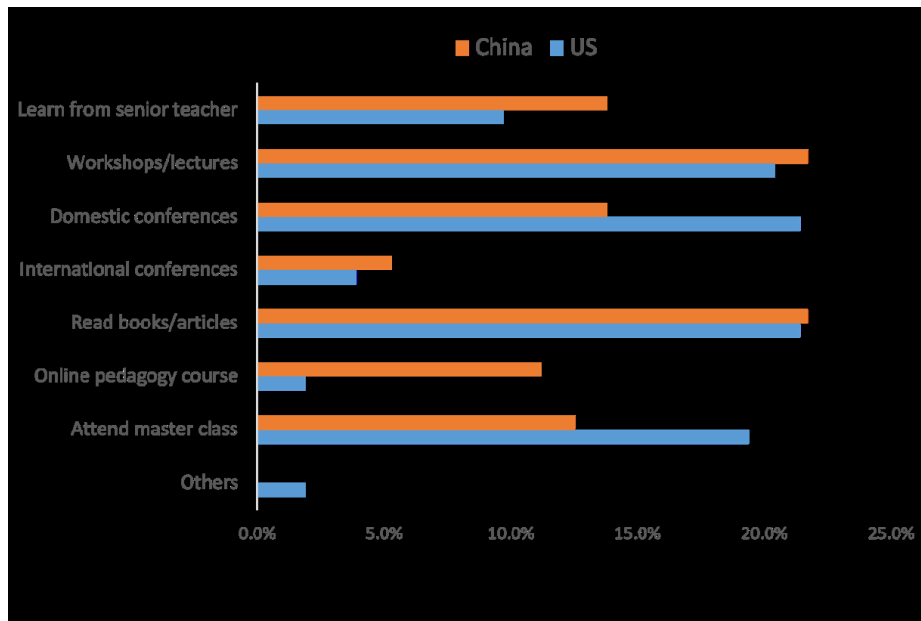


Figure 4 Comparison of professional development activities

(Abstract 597)

Religious Occupation: Jewish Israeli COVID Prayer Solutions and their Social and Musical Impact on Public Space

Amira Ehrlich

Levinsky College of Education

Social distancing, the limitations on gathering within closed buildings, and the complications of communal singing – all put together – have turned the corona-virus into a mega-challenge for maintaining Jewish ritual. The closure of synagogues during the corona-virus lockdown inspired a new creative surge of outdoor, playground, backyard, parking lot, and terrace prayer gatherings. This collapse between the urban and the sacred has complex sociological ramifications. When prayer hits the street, takes over the playground, the parking lot, and the neighborhood – in contemporary Israeli society, this is interpreted as an overt conquest of public space: including allocations of "religious coercion" and even "religious occupation".

The current study aimed to trace patterns of Jewish Israeli COVID prayer solutions throughout 2020-2021. Findings are considered through sociological frameworks of impacts and implications of music in public spaces (e.g. Doumpa 2012; Lavrinec 2011; Tonnelat 2010). The auditory aspect of music is noted in such frameworks as an inescapable intrusion

that penetrates beyond the limits of the physical space where performance (or prayer) takes place.

The first lockdown in March 2020 had people of all types of religious and secular Judaism enjoying mutual respect and unity. Fifty percent of study respondents reported a noticeable increase in Ashkenazi and Sefardi Jews praying together – searching for some commonality to their very different liturgical practices. While about 57% of prayer activity reported by participants reportedly took place in private spaces of synagogues and/or private homes, throughout 2021 complaints of religious occupation of urban spaces has been on the rise.

While religious participants note benefits of outdoor prayer – some of which they hope to maintain even if and when COVID disappears; secular populations and organizations have been lobbying for a complete return to indoor prayer. Musical and Sociological aspects of this conflict will be explored in this presentation.

(Abstract 622)

School the Children: Intergenerational Responsibility and Community Building among LGBT Underground House DJs in New York

Eva Egolf

City School District of New Rochelle

Held in New York, World Pride 2019 celebrated 50 years since the Stonewall Riots of 1969. Sparked by a police raid on a bar patronized by gay men,ⁱ these riots were monumental in the struggle for social justice. In World Pride's aftermath I interviewed LGBT house music club DJs as a component of a larger case study to better understand how veteran DJs learn, grow, and thrive as their careers advance. Participants articulated strategies to ensure the well-being of other individual musicians and they expressed concern for the well-being of a larger queer nightlife community. LGBT nightlife community development and intergenerational responsibilities emerged as themes. Findings illuminate how musicians thrive, support each other and their musical community.

As the popularity of Electronic Dance Music (EDM) has risen, so too have the nightlife industry events that cater to this music. Club DJs in New York that perform house music, a subgenre of EDM, report increased opportunities for performances prior to COVID 19. As EDM popularity and nightlife opportunities increased, so too did queer owned and operated local nightclubs and large international festivals organized with a LGBT focus. Echoing Stonewall's history, DJs describe participating in New York's Do-It-Yourself (DIY) local nightlife scene as a cornerstone of LGBT nightlife community development. As participant's careers expanded beyond their local house music scene to larger international events, opportunities for mentorship and friendship expanded as well. DJs regard new peer mentorship and friendship opportunities developed during later stages of their careers as vital sources of support. Through participating in informal instances of peer mentoring, DJs report seeking advice for securing work and career development, support for mental health concerns, especially alcohol and substance abuse.



In addition to engaging in peer mentoring, seasoned DJs report a willingness to assist aspiring DJs in situated learning ii arrangements. Participants echo an ethos of intergenerational responsibility, or a willingness to “school the children” of a new generation. They do to this by engaging in informal situated learning opportunities with aspiring DJs. In furthering the development of theory related to situated learning, findings add to an understanding of how mentorship practices develop the careers and wellbeing of seasoned DJs.

(Abstract 635)

Informal Music Learning in Real-time via Smartphone App: Enhancing Audience Engagement

Linda Dusman and Linda Baker

University of Maryland Baltimore County (UMBC)

Abstract

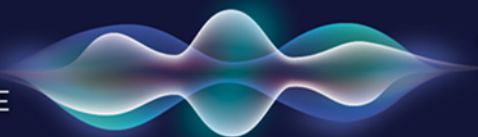
The Bearman Study of Audience Engagement examined the potential for real-time music education during symphony orchestra broadcasts, based on the initial assumption that learning about classical music enhances engagement and enjoyment of that music. It tested the effects of technology on informal music learning through the use of an app designed to provide real-time program notes via audience members’ smart phones. For the Bearman Study, a within-subjects design was used, with two replication phases, one at the National Orchestra Institute in 2020, and another with the Utah Symphony in 2021. In each phase, two audience groups each attended broadcasts of two previously video-recorded concerts and used a smartphone app called EnCue that presented brief notes in real time about the music being performed, providing textual information about the composers, history, cultural context, and theoretical information, along with illustrative photos and score fragments. One of the major goals of the study was to determine if, and to what extent, access to information in real time via a mobile app enhances the audience experience. To this end, questions were asked of participants after using the app about perceptions of the concert experience, the information presented on the app, and the technology itself. Study results showed that informal learning during concerts in real-time is possible and that technology can enhance an audience member’s enjoyment of and engagement with the music. Most participants were highly engaged during the concert when they used the real-time app, they believed the information presented in the app enriched their experience of the concert, and they were interested in attending future concerts, whether live or streamed, where they could use an app to access real-time program notes. Use of real-time technologies for instruction may provide potential positive outcomes in traditional classrooms and lessons as well, negating the need to interrupt engagement by stopping recordings or talking over them.

Keywords

music technology, real-time education, music app

Introduction

The present study, the Bearman Study of Audience Engagement, examined the potential for real-time music education during online symphony orchestra concerts, based on the initial assumption that learning about classical music enhances engagement and enjoyment of that music. It tested the effects of technology on informal music learning through the use of an app designed to provide real-time program notes via audience members’ smart phones. Much



has been written recently about using digital technology in music education, including its use for enhancing the audience experience (Baratè et al., 2019, Bauer, 2020, Greher et al., 2021). However, as Nicholls et al. (2018) wrote, “Despite the obvious importance of developing aware and educated listeners for the sustainability of the public concert tradition ... the academic literature has been slow to research the efficacy of listening pedagogies” (p. 515). The literature on informal learning with mobile devices is sparse, but research conducted in science museums has shown that mobile devices can be quite effective in delivering science content (Scanlon, Jones, & Waycott, 2005).

This study follows on promising results from an exploratory study funded by the National Science Foundation with the Baltimore Symphony Orchestra to examine STEAM (Science, Technology, Engineering, Arts, and Mathematics) education during live concerts (Baker, DeWyngaert, Abel et al., 2018; Baker, DeWyngaert, Dusman et al., 2018). In that study, adult participants were assigned to attend one of two concerts where the same music would be performed at each. At one of the concerts, real-time notes in an app included information about the science of symmetry in relation to the music as well as notes about the music. At the other concert, notes included only enhanced music-related content. Participants assigned to each date were then further assigned to use the app or not to use the app at all. Questionnaires completed at three time points assessed demographic background, expertise in music and science, engagement during the concert, learning of music and science concepts, and interest in future use of the app. Results showed that participants who received notes on the app with the science content correctly answered more questions about the science than those who did not, and that those who received notes with the music content correctly answered more questions about the music than those who did not. Survey responses indicated that most participants found using the app engaging and enriching, but the response was more positive about the music content than the science content. A major limitation of this study is that it was a between-subjects study, and the groups could not be matched in advance on demographic factors, proving to limit confidence in the conclusions.

For the Bearman Study, a within-subjects design was used, with two replication phases, focusing exclusively on music. Two audience groups each attended broadcasts of two previously video-recorded concerts and used a smartphone app called EnCue that presented real-time notes about the music being performed. Short notes along with visual information (photos and score fragments) were written to provide historical, cultural, biographical, and theoretical information at specific moments in the music where that information would be most pertinent, generally spaced 2-3 minutes apart to avoid distraction from the listening experience itself. During each phase of the study, one half of the participants used the app to view the program notes during the first broadcast, and one half used the app to view notes during the second broadcast presented two weeks later. Three questionnaires similar to those used in the BSO study were administered. It was expected that when participants used the app they would perform better on the content assessments than when they did not use the app, and that they would report more engagement with the music they were listening to. It was also expected that use of the app would generate interest in using similar technology as a learning and engagement tool at future concerts, whether live or streamed.

Method

Development of the app. The idea for the EnCue app began in 2011 as an interdisciplinary faculty research project at an Eastern university in the United States between the first author, a Professor of Music, and a collaborator, an Assistant Professor of Visual Arts, to determine whether audience engagement could be enhanced by use of iPads to deliver real-time

program notes during symphony orchestra concerts. Colleagues in Human Centered Computing assisted in testing the prototype app with undergraduates in a music fundamentals class, demonstrating that it proved worthy of continued exploration. After several re-builds and testing with professional orchestras, the EnCue system was commercially released. The system broadcasts notes in real-time through geolocation to the free app downloaded by audiences in concert halls, and simultaneously to audiences worldwide for online concerts.

Subsequent with the technology, the development of a specific visual design and writing style for the notes followed expressed concerns about distraction during a concert. Notes are concise or “glance optimized,” delivered during musical transitions or prior to climactic moments, and white text on dark backgrounds minimizes glare from phones during concerts when it is typical to have the house lights dimmed. Notes in general were delivered every 2 to 3 minutes, and a haptic “vibration” accompanies the delivery of new notes to repress the need for audience members to glance at their phones. Overall, the design of the app and the experience focused on creating a “quiet” technology to enhance interaction with the music (Figure 1).

Setting and Participants. The study took place in two phases, the first with the National Orchestra Institute (NOI) in 2020 and the second with the Utah Symphony in 2021. Due to the closing of concert halls during the COVID-19 pandemic, the setting had to be changed from live to virtual. In both phases, two concerts were broadcast at a specific time, spaced two weeks apart. The NOI concerts featured works by Dvorak and Mahler and the Utah Symphony performed works by Mendelssohn and Strauss, all standard repertoire.

Recruitment of participants took place with the assistance of symphony staff, who sent out an announcement to previous concert attendees. Those who expressed interest were sent a link to a consent form and the first of three questionnaires powered by Qualtrics. Those who completed these materials were randomly assigned to two groups, one that would use the app at the first concert and one that would use the app at the second concert. Both groups attended both concerts, and served as the “control” group if they were not using the app.

A total of 67 adult participants completed Phase 1 with the NOI and 68 completed Phase 2 with the Utah Symphony. Based on information from the initial demographic surveys, in general the participants were highly educated, with only 3% indicating high school as their highest level of education.

Materials. Three questionnaires were developed for data gathering. Questionnaire 1 (pre-concert) requested demographic information, as well as information about symphony attendance and engagement, expertise in music, and familiarity with the two pieces to be performed. Questionnaire 2 probed the concert experience in general and included multiple-choice questions about the music content presented via the app. Additional questions were asked only of those who used the app at that particular concert. Questionnaire 3 was similar but also included questions about interest in further experiences with an app. Multiple opportunity for elaborations were offered.

The assessment of knowledge acquired during each concert was based on the content presented on the app, using 10 factual multiple-choice questions. Questions dealt with the composers, features of the symphonies (e.g., instrumentation, structure, themes, harmony, etc.), and at NOI perspectives on the music offered by performers. All participants were

instructed to answer the questions as best they could, without referring to external sources, even if they had not used the app at that concert.

Procedure. The day before the first concert, participants were sent an email informing them of their group assignment, either using the app, or not. Those assigned to use the app were instructed to download it and use it to read the notes in real time during the concert. Similar instructions were given before the second concert to those who would be using the app then.

The day after the first concert all participants were sent a link to complete Questionnaire 2 and after the second concert they received the link for Questionnaire 3. Once participants submitted the last questionnaire, they were sent a monetary incentive payment for successful completion of the study.

Results

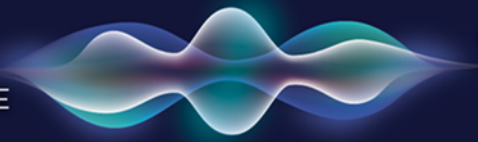
Results from both phases of the study confirmed that learning, engagement, and interest in attending future concerts, as summarized below, can be generated via an app that serves as a real-time informal learning tool. Data for the two phases were analyzed separately, with the June 2021 phase a replication of the June 2020. The study examined possible effects of age, gender, education level, and concert-going experience, as well as expertise in music, as indicated by performance training, academic degrees in music, and careers in music. Results were largely unaffected by these variables.

Learning. Multiple choice questions about the notes were scored for proportion correct. In both settings, when participants were assigned to read real-time notes during the broadcast, they answered correctly significantly more questions about the content presented in the app than they did when not using the app. (Repeated measures analysis of variance statistics for the interaction term were $F(1,64)=49.15$, $p<.001$ for Phase 1 and $F(1,66)=83.09$, $p<.001$ for Phase 2.) As Table 1 shows, patterns of performance were quite similar, despite differences in orchestras, geographic location, participants, musical compositions, content of real-time notes, and test questions.

Not surprisingly, those who reported reading more of the notes performed better than those who reported reading less. Also not surprisingly, background knowledge played a role. Participants who reported attending more symphony concerts each year performed better than participants who reported attending fewer. And those with music expertise performed better on the tests for which they did not have notes than those with less expertise.

Perceptions of Engagement and Enrichment. One of the major goals of the study was to determine if, and to what extent, access to information in real time via a mobile app enhances the audience experience. To this end, questions were asked of participants after using the app about perceptions of the concert experience, the information presented on the app, and the technology itself.

Engagement was assessed after each concert by asking participants to use a 5-point scale to report how engaged they were during the concerts. Overall engagement levels were high, with more than 90% of participants reporting they were very or moderately engaged. Of particular importance for study purposes is that engagement was greater when the participant used the app at the concerts in question than if they did not. This held true regardless of which music they heard. Participants were also asked to rate the degree to which the real-time notes enriched their experience of the work performed during the concert in which they used



the app. Almost all participants (85%) reported that the notes enriched their experience at least moderately. Participants were offered the opportunity to provide comments on their experience, and the following written responses corroborate the statistical analysis:

“I think this option gives a much more personal tone to the concert as if someone is whispering what is being played in a live concert” (NOI).

“It would keep me very engaged with the music and help me to understand more of it” (NOI).

“I really liked learning about the background behind the piece! It helped me feel much more engaged with the meaning of the music” (Utah).

It transformed my experience and appreciation for the piece because I knew what to look for appreciated the composition more and had an understanding about the circumstances that inspired the piece. It made all the difference to me. The second performance, without the notes, I didn't feel as connected to the experience or as engaged. I started to look up information so I could have the same experience as the first on but worried I wasn't supposed to do that so I didn't pursue it. I didn't feel as connected or invested without the knowledge that the... notes provided (Utah).

Music expertise played some role in perceptions of engagement and enrichment. For example, among the participants who used the app during the Mendelssohn concert, those with less expertise reported more engagement during the symphony than those with more expertise. And among participants who used the app during the Strauss concert, those with less expertise reported greater enrichment of their experience from using it than those with more expertise. In other words, those who knew less about the music benefitted more from the opportunity to use this learning tool.

Interest in Attending Future Concerts with Access to Real-time Notes. Participants were asked to report their level of interest in attending a live concert in the future where they could use an app to access real-time notes, and they were also asked if they would be interested in using such an app at a streamed concert. Respondents indicated enthusiasm for further opportunities to use real-time technology, with 79% reporting they were interested or extremely interested in using an app at a live concert and 80% at a streamed concert. This high degree of interest likely reflects the increased engagement participants felt when they used the app and the perception that the real-time notes enriched their experience. In addition, it likely also reflects perceptions (not reported above) that the technology was not difficult to use (86% agreement) and that it was not difficult to shift attention from the app to the concert itself (76% agreement):

“I loved this experience. I want notes like these at every concert! It really helps me to stay focused in the music” (Utah).

“Because I think is a good way to better experience a concert, I think it allows to be more focus[ed] and engaged, cellphone[s] can be distracting but using it for this purpose blocks other distractions” (Utah).

“Yes, because I liked it more than traditional program notes. I've always been fairly opposed to seeing audience members on their phones during a concert, so this is really saying something” (NOI)!

I found the program notes on the app to be very engaging in this online concert, which makes me think it would be even more engaging in a live concert. It also kept my attention better than just reading long paragraphs of program notes. I like that it was more concise chunks of information that came up live throughout the music (NOI).

Discussion

The Bearman Study of Audience Engagement showed that informal learning during concerts in real-time is possible and that technology can enhance an audience member's enjoyment of and engagement with the music. Most participants were highly engaged during the concert when they used the app, they believed the information presented in the app enriched their experience of the concert, and they were interested in attending future concerts, whether live or streamed, where they could use an app to access real time program notes.

These results have important implications for orchestras concerned with broadening their audience base. Offering patrons the opportunity to access real-time program notes has the potential to increase concert attendance among those who are less involved with symphonic music. Baratè et al. (2019) proposed using augmented reality to accomplish similar goals, concluding: "attending a concert would be far from a passive fruition, and technological augmentation could result in a more involving and effective didactic experience" (p. 40).

Although the Bearman Study was conducted in virtual concerts, prior to the pandemic both the EnCue app and the LiveNote app (developed concurrently by the Philadelphia Orchestra) were being used during live concerts. The continuing taboo against cellphones in the concert hall presents a primary impediment to more extensive implementation of this technology. This concern was also mentioned by participants when asked about their interest in using an app during live concerts.

Further study might involve focusing on issues of multi-tasking, as in a sense using an app during a concert could be understood in that way. One of the concerns expressed by orchestra management has been that once phones are accepted, there is nothing to prevent audience members from checking texts, social media, etc. and ultimately being distracted, and distracting those around them (and potentially the performing musicians) in the process. EnCue was designed intentionally to deflect focus from itself (proving quite a puzzle for the app developers as this goes against common app design practice). This design of "non-engagement" might lead to use of the smartphone for other purposes, though that issue was not part of this study.

The meaning of this study for the future of the symphony orchestra is unclear. The pilot study undertaken in collaboration with the Education Department of the Baltimore Symphony Orchestra occurred during a performance attended by members of the League of American Orchestras, and as a result some participants were orchestra administrators. Interestingly, being an orchestra administrator was the only demographic factor that correlated with a negative experience of using an app for real-time notes. Though it may provide a pathway to education and enhanced audience engagement, without the buy-in of orchestra leadership further development of informal real-time learning during concerts appears unlikely.

But for music educators, the potential for technology to focus attention through any real-time technology during music listening is worthy of further study. As music is a time-based art form, music educators are always in the position of either stopping the music or talking over

it during typical classes or lessons. Real-time learning through quiet real-time technologies may provide a potent vehicle for focusing the attention of the student listener, making it possible to learn while listening, when used carefully to avoid distraction.

Figure 1. Example of a screen shot from the EnCue app

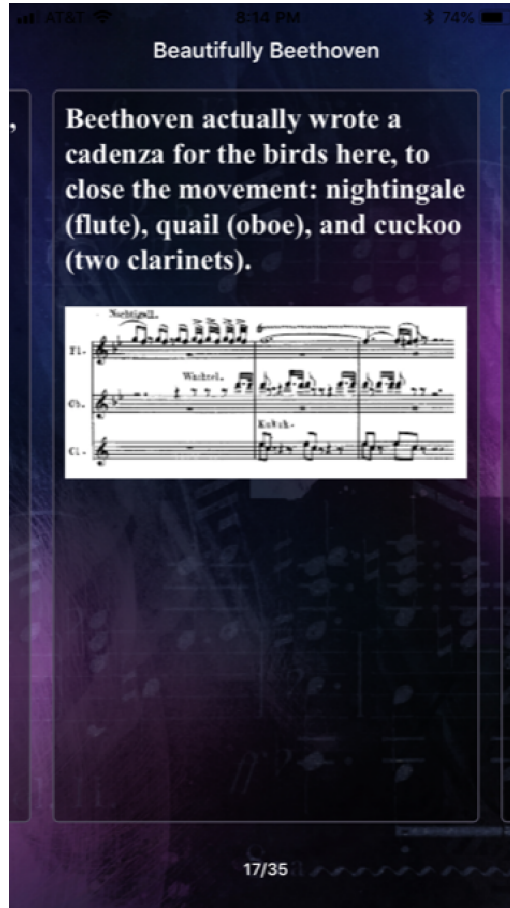


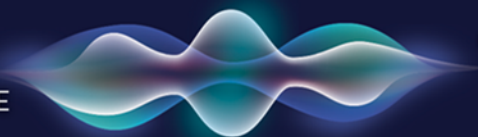
Table 1. Mean percent of questions answered correctly on the assessment of music content learning as a function of phase, music performed, and app notes read

Phase 1: National Orchestra Institute

Music	App Notes Read	Test Score	Music	App Notes Read	Test Score
Performed		Score	Performed		
Dvorak	Dvorak	75	Mahler	None	57
	None	55		Mahler	75

Phase 2: Utah Symphony

Music	App Notes Read	Test Score	Music	App Notes Read	Test Score
Performed		Score	Performed		
Mendelssohn	Mendelssohn	62	Strauss	None	36
	None	46		Strauss	64



(Abstract 645)

"Refinding my soul as a music teacher": the flipped classroom in face-to-face lessons after quarantine

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Abstract

Some years ago, nobody could have imagined that an unexpected circumstance, such as a pandemic, could influence the music teaching and the learning procedure to such a great extent. The COVID-19 pandemic has influenced education worldwide, forcing music teachers not only to follow certain necessary restrictions against the virus, but also to transform and reshape their lessons from online to in-person and vice versa. Under this unprecedented situation, how can a music teacher overcome the obstacles and meet both student and personal needs? How can they offer opportunities for creativity? Which teaching method is appropriate to adopt after a long quarantine? Trying to find answers to these questions, Y. -a junior high school music teacher- decided to implement the flipped classroom method after 6 months of distance teaching. The educator narrates the effort to meet personal needs as a teacher and the students' as well, to become creative again, and to re-establish effective communication during music lessons. According to the flipped classroom teaching approach, students ought to watch or interact using digital materials (e.g., videos, and digital resources such as book creator, padlet e.tc.) before entering the classroom. Coming back to the classroom after the quarantine there is plenty of time during the music lesson for cooperation, interaction, group- and other creative musical activities that arouse students' social skills again and help them overcome their anxieties. The content analysis of Y. 4 semi-structured interviews demonstrates the importance of flipped classroom implementation in music education, especially after a long quarantine, along with the benefits, and the challenges. This educational framework allows more time for collaboration and performance, group activities and a lesson focusing on music rather than a lesson about music. After the quarantine, the teacher and the students returned to face-to-face lessons, feeling creative again and with positive emotions. As nobody can foresee the impact of the pandemic on students and teachers, the emphasis in music practice and creativity within the flipped classroom framework emerges as a sufficient solution.

Keywords

pandemic influences, blended learning, flipped classroom, teacher's and student's emotions, music creative activities, innovative pedagogies

Background

In the light of technological development, a great need for education and school systems to reshape teaching strategies and adjust educational material to address pupil or student arises. Nowadays, P/Cs, tablets, laptops, and smartphones are often used as they are a preferred medium for communication and interaction among peers. Under these conditions, various questions have been raised: To what extent can all previously mentioned devices be used for learning as well? On the other hand, how can we preserve the benefits of face-to-face

collaboration and creativity? How can learning via technology come hand in hand with the experiential one? In what ways can Bloom's Taxonomy upper level (applying, analyzing, evaluating, and creating) be applied? Since 2000, the flipped teaching method has been a matter of much discussion (Baker, 2000). Worldwide, in different cognitive domains and levels (primary, secondary, and tertiary education), many teachers prioritize student preferences and needs, and implement this approach to find answers to all the above concerns.

In March 2020, most schools and universities around the world shut their doors, due to the Corona Virus pandemic. This new situation brought unprecedented challenges to teaching, learning, education management, and teaching effectiveness. As many schools were closed, teaching online was the inevitable step. All teachers at every educational level were made to adapt former educational methodologies of face-to-face learning to distance learning (Schleicher, 2020), and "shift gears immediately to respond to students' and families' needs" (Jones & Kessler, 2020). Depending on the severity of the virus, schools closed and opened, re-closed and re-opened. This uncertainty in the daily life of both the student and teacher increased their anxiety and fear. As Karakaya et al. (2021, p.25) research reports: "The COVID-19 pandemic process has social and psychological effects on students... [such as] boredom, decreased sense of belonging to the school, lack of interaction, loss of motivation and digital dependency. In addition, it was determined that the deficiencies that distance education will create in terms of affective are more than cognitive education. In the pandemic process... students cannot get together with their friends in terms of social development, they cannot play games, and they are deprived of activities that support their social development". During the 2020-2021 school year, online lessons lasted from November till April for secondary education in Greece. Communication and collaboration were minimized due to a long quarantine and anxiety and social isolation emerged. According to the reports of UNICEF, the repercussions of school closure on students' learning, health and well-being are devastating. In this framework, and like many other educators worldwide, Y., a junior high school music teacher, tried hard to implement new teaching approaches in order to find impressive ways to attract their students' interest in distant lessons, even if their cameras were often off. Music group activities, improvisation, singing, communication with others and performing were very difficult to integrate in the digital world, while trying to maintain a creative atmosphere in the classroom as well as social interaction. Realizing the students' need for collaboration and

interaction with one another, when they came back to in person lessons, Y. decided to apply the flipped classroom instead of direct instruction that had been implemented for many years prior to the virus. The following narrative inquiry demonstrates their effort to implement the flipped classroom teaching approach, to meet both their own needs as a teacher and the students' as well, to become a creative teacher again, and to indicate the importance of collaboration and effective communication among students and the instructor. Benefits and challenges are also discussed.

The flipped classroom as a teaching model

The flipped classroom model is a type of blended learning, as it combines face-to-face instruction with the asynchronous one (Hrastinski, 2019). Scholars define the flipped learning model as the model with which pupils/students study the theoretical content of the lesson at home (watching videos or other digital educational material) and then, when they are in the classroom, they collaborate with their peers and their teacher (Calamlam, 2016; Doi, 2016; Nagy, 2017; Akbel, 2018). According to Beason-Abmayr, Caprette and Gopalan (2021)

flipped teaching is a student-centered instruction that places lectures out of the classroom, allowing class time to be used for active learning with the instructor acting as the facilitator of the learning process (Doi, 2016).

Consequently, the learners watch the video lessons or other digital material created through various applications and resources (e.g., PowerPoint, Book Creator, Padlet e.tc.) before class time, whenever they consider convenient and at their own pace. In class, they can cooperate and interact with each other or/and with their teacher. Under these conditions, the pupils/students focus on the first two levels of Bloom's Taxonomy (remember and understand), and they delve into their knowledge, spending time in class applying, analyzing, evaluating, and creating (the upper levels of Taxonomy) (Anderson et al., 2001).

Although the flipped classroom model was first implemented in tertiary education (Baker, 2000), more and more educators all over the world are trying to integrate it in secondary and even in primary education. In 2009, Bergman and Sams were the first teachers who implemented it in secondary education aiming to provide absent students with an effective way to participate in the lesson (Doi, 2016). Since then, more and more research papers have focused on this type of teaching approach, its cognitive benefits, the collaboration involved and its advantages and limitations.

Some of the advantages of flipped classroom implementation are mentioned by Chilingaryan & Zvereva (in Goksu & Duran, 2020):

- a) it increases contact time between the teacher and the student
- b) it customizes learning
- c) it gives the teacher the opportunity to create authentic mini lectures
- d) it increases the responsibility and autonomy of the learner
- e) it gives absent students a chance to catch up
- f) students can work at their own pace
- g) it gives students the ability to concentrate more on the subject in a free environment
- h) it increases the motivation of the student
- i) it enhances the atmosphere in the classroom, making it more welcoming and comfortable
- j) it increases student creativity and critical thinking as continual archiving of the material enables the students to access online material continuously.

Due to all these aforementioned benefits, many music educators have implemented this approach to teach various topics such as music history, music instrument lessons and listening apprehension (Duker et al., 2015; Gilbert, 2016; Nagy, 2017; Bernhofer & Wieland, 2018; Jia, 2019).

Methodology

In November 2020, Greek junior high schools closed their doors and therefore lessons continued online for 6 months. When they re-opened, in May 2021, following severe hygiene precautions, music teachers and students had to learn how to communicate with one another again without touching and sharing instruments, but at the same time smiling behind the masks. Singing using the humming technique, students making their own music instruments, body percussion and music listening are some of the most common activities, which were selected by music teachers mostly this period of time (Kivi et al., 2020).

The narrative inquiry took place in May 2021, when teachers and students returned to the classroom after 6 months of distance teaching. This lasted for three weeks until the summer break. Y., a junior high school music teacher, narrates how they felt, how they confronted and overcame these conditions, and their efforts to meet 12-year-old students' emotional needs with the power of music. To fully exploit time in the classroom and offer opportunities for collaboration and interaction among students, they decided to implement the flipped teaching approach. Moreover, the advantages and drawbacks of the flipped classroom implementation in face-to-face music lessons after distance learning and teaching, and the teacher's and students' reactions and responses are also explored.

The content analysis of Y.'s 4 semi-structured interviews (3 after the lessons and a final one) is based on two categories: a) the teaching procedure applied in face-to-face lessons, mainly using the four pillars of the FLIP acronym: flexible environment, learning culture, intentional content and professional education (Yarbro et al., 2014) and b) self-reflection, about the pros and cons of their teaching and the approach used to handle students' cognitive and emotional issues.

Permission for interview recordings was granted by Y. For ethical reasons, Y. is a letter that represents the educator's name, and is not associated with any gender.

Y.'s profile

Y. is a well-experienced music teacher, who has taught Music in Junior High School for 19 years. They are interested in the implementation of innovative teaching approaches, such as the flipped classroom one. Singing, performing, body percussion, listening to music, composing, improvising and group activities are included in their lesson plans. Y. is digitally skilled and during online lessons they used videos, apps, and slide presentations along with a short lecture in the beginning and then audio material for music listening and rhythmic activities. Like many other teachers, Y. faced difficulties in adapting their teaching in order to cater to the needs of different students and to maintain student engagement in online classes (Jain, Lall & Singh, 2020). Feeling music as opposed to learning about it was the main objective. Y. has a positive relationship with students, which is important for students' personal and academic success (Edgar, 2014-2015). All students had access to an Internet connection, which made distance learning a feasible and equal opportunity for all.

From in-person to distant teaching and vice versa

The school year 2020-2021 started on September 14th, a week later than usual and with many hygienic restrictions, as stated in the message of the Greek National Public Health Organization "Keeping Safe". According to these precautions, all teachers and students had to wear face masks inside the classroom, and every instrument had to be cleaned after each use. Moreover, choir singing, and the teaching of wind instruments were not allowed. Under the prevailing conditions, the music teacher had to select some of the prepandemic music activities and then adapt them or just exclude them from in-person lessons.

Because of the rapid spread of the virus, schools closed after eight weeks. The online lessons began immediately and so did social isolation. As time went by, Y. tried hard to engage students in creative activities, but they gradually realized that:

“Teaching through WEBEX had greatly altered the experiential content of my music lesson and the students were strongly willing to look for it ... Distance learning made me very tired. No matter how well an online lesson went, I felt that something essential was missing. Everything was "a talk about music", but not about music itself. My teaching practice depended on the dynamic of the classroom atmosphere, on the activities that students expected, on collaboration and communication with them, on the "freely" structured sequence of activities and on the sense that everyone had its own space and time ... As time passed, my students started to lose their interest more and more every lesson. How can the power of transported music via the screen touch students' heart? So, I promised my students that on returning to our classroom, we would not deal with "theories" at all and that we would go straight to musical activities. My only solution was to implement a teaching approach, which focused on practice.” Meantime, Y. started to learn more about the flipped classroom, as they had to keep their promise and not disappoint their students. They agreed with Dabrowski (2021) who states that teachers who experience amotivation and anxiety are less effective in supporting student well-being and student performance in school. They planned face-to-face instructions, whenever possible, according to flipped classroom principles:

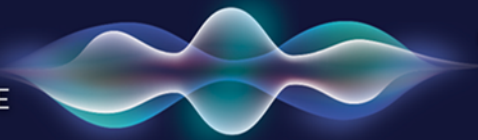
“It was not that easy to plan my lessons differently. In the previous lessons, there was not sufficient time for many creative activities. I used to explain the appropriate terminology of the lesson first and the time left was used for music practice. I must change that.”

In May 2021, all schools opened again following the initial restrictions and precautions. Y. used the existing digital course material in face-to-face instruction, as time to create new material was limited. Adapting the existing course material to new in-person circumstances is a common strategy in the flipped classroom (Heiss & Oxley, 2021). However, they could delve into already known content, and place emphasis on collaborative musical activities. Y. described their experience during the flipped classroom implementation, as follows:

“Three lessons remained up until the end of the school year, to keep my promise and influence my students' emotions!... I was hesitant about the teaching procedure during the first lesson. It was not that easy for me to implement the flipped classroom! But my students were enthusiastic! They actively participated in the lesson. They had a lot of fun, and expressed it in various ways (smiling, commenting, laughing, improvising), which made me happy but anxious, as well. I thought I had lost classroom management. On the contrary, that was effective. I noticed that students who had less interest during online lessons, or others that I considered had no interest, took part in all activities with passion and joy. Focusing on experiential activities motivated them to spend the required few minutes in the Learning Management System (e-class), studying the digital material beforehand. During the second and the third lesson, I felt less anxious. The lessons proved successful, as I focused on musical activities, and I achieved all my objectives. I felt more like a child than an adult”.

Discussion

Although COVID-19 has created unprecedented challenges for schools, staff and students, creativity, innovation, and opportunity have developed (Dabrowski, 2021). Y.'s narration underlines that transforming a music lesson to online instruction without losing its experiential feature is challenging. Students and teachers consider the active and creative



learning atmosphere that a music lesson which is combined not only with the cognitive but also the affective domain, beneficial. Students need to participate in musical group activities more than ever, especially during a pandemic and social isolation, to express themselves and to cooperate and communicate with their classmates. Kim's statement (2004, p.30) stresses the fundamental features of cooperative learning which we should always keep in mind especially from now on: "Cooperative learning can promote better student understanding, participation and enjoyment of music. It gives teachers the opportunity to stimulate students to think, resolve conflicts and improve their interpersonal relationships while nurturing their behavior. It takes advantage of the students' natural tendency to play and work together. It adds excitement to their learning". Additionally, the implementation of the flipped classroom encouraged students with low self-confidence to actively participate in the lessons, which made them feel a fundamental part of the music class. This model can provide students with some control over their learning in a world that feels quite out of control (Smith, 2020). Although the flipped classroom can also be applied in virtual lessons (Collado-Valero et al., 2021) and the conventional flipped classes can be transformed into online ones (Hew, et al., 2020), the face-to-face musical and group activities motivate student and teacher collaboration and encourage the expression of feelings. Simultaneously, teachers share the same emotions with students. Dabrowski (2021) underlines that the stress and burnout will likely increase now and beyond the current pandemic, as they face enormous challenges in their roles. The aforementioned educational framework urged Y. to become creative again:

"The flipped classroom method allowed me to rediscover my lost music teacher soul. I had been searching for months to find alternative ways of teaching. It helped me to re-establish my relationship with some students who were distant in synchronous instruction, even though they were physically present in front of their screens".

The preventive measures due to COVID-19 influenced teachers' and students' emotions. Finding new teaching methods, such as the flipped classroom, which address our needs, and by listening to our inner voices can make us stronger and more powerful than ever before.

(Abstract 653)

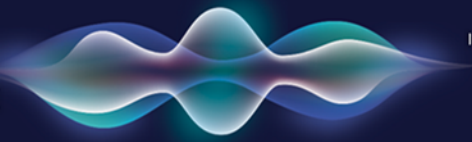
Learning Differentiation Music Education Curriculum Theory

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Abstract

In 2019, I employed a Dual-Phased Integrated Summative and Directed Qualitative Content Analysis in order to integrate key foundational tenets, concepts, and strategies of differentiation instruction and curriculum theory with praxial curriculum theory design. Following an in-depth analysis and working interpretation, an emergent curriculum design theory was constructed from the expansion: Learning Differentiation Music Education Theory (Raponi 2019). This new curriculum theory, constructed from the key concepts of differentiation theory (Bender 2012; Gregory and Chapman 2002; Sousa and Tomlinson 2011; Standerfer 2011) and praxial curriculum theory (Elliott and Silverman 2015), was created to inform pre-service and in-service music educators for the purpose of addressing varied learner needs in mixed ability inclusion contexts.



LDMET Theoretical Interpretation and Expansion

Learning differentiation music education curriculum theory begins with the individual. It is a learner-centered approach that recognizes that each student is unique, that their contribution to the whole is an essential component of a thriving, musically healthy, cooperative ensemble experience. By elaborating upon the curricular principles of Elliott's musical praxial curriculum theory with differentiation concepts, the teaching and learning context has the potential to become a new artistic creation, a work-in-progress of individuals engaging with one another in the process of music making. Praxial curriculum theory begins with MUSICS. It is a praxial content-based approach. By extending the diverse human practice of the "doing" of MUSICS, LDMET may have potential as a new differentiation-based music education learning theory.

Music education naturally aligns with differentiation theory because it embeds curriculum development within the social context, culture, brain development, interests, and learning process of the individual. Differentiating curriculum for the music education classroom becomes fundamental to understanding not just the strengths of individual musicians, but how each musician can contribute to the ensemble by building cooperatively

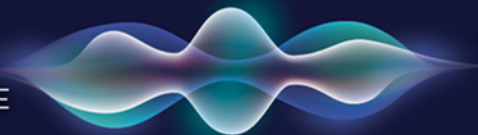
on their own musical/learning strengths. The key to meaningful music making is that it is authentic and inherently valued because of the importance placed on the artistic value of the individual's contribution to the whole. This intrinsic value is connected to all strands of the developing child in their cultural, social, and individual lived experience, both past and present, and whom the student expresses their identity in the ever-evolving, socio-cultural context of the music classroom. The praxial, mentor-apprentice relationship has the potential to develop as a platform for differentiated teaching and learning as an evolving, dynamic growth process; the "doing" of music making, in collaboration towards a fully inclusive educative paradigm. It has unlimited potential for evocative and provocative sound making in both its individual and cooperative complex expressions—seeing people moved by music, feeling enriched because of personal effort and intuitive expression, and experiencing the thrill of the mystery of musical creating as one, and as one part of the whole. This creates potential for an extraordinary life changing experience that is transformative through individuated music education.

Foundations of Learning Differentiation Music Education Curriculum Theory

The key theories that lay the groundwork for the extension of praxial curriculum theory are borrowed from both Tomlinson's and Elliott's work.

Praxis

Pedagogy of the Oppressed (Freire 2005) is a foundational work that radically shifted fundamental educational institutionalism, teacher education, student learning, and institutional philosophies towards anti-racism, inclusion, and transformation. Freire asserts that the key to liberation is similar to an awakening of critical self, and social awareness and this has the potential to transform the thinking process in the individual. This can emerge through a new paradigm of education with the purpose of creating a partnership between the teacher and the student. Such a partnership empowers the student to enter into a dialogue and to begin the process of humanization through thought and action to counteract the traditional oppressive dynamic of the teacher and student paradigm. The teacher and learner share in



order for both to independently learn, create, think, expand, critically reflect, and innovate from each other.

Music for All

Markku Kaikkonen's (2016) philosophical music education manifesto calls on music educators to make an ethical promise and commitment to teach music for all; he believes that making music is a right of all people and that physical and intellectual barriers and social and cultural restraints must be eliminated in the act of music making and experiencing. Kaikkonen has been influenced by Gardner's multiple intelligence theory (1993). His philosophy emphasizes that special music education is the key to inclusive music education. Differentiation as a pedagogical philosophy is central to his argument that individual learning is diverse, unique, and a key factor to sparking intrinsic motivation.

Social Constructivism

Social constructivism in education emphasizes the intersectional learning process of the individual to the social whole. The learner creates meaning through active participation, reflection, problem solving, creative, and critical thinking with others. The learner uses inner knowledge to transform understanding through past, present, and ongoing cooperative learning experiences (Ornstein and Hunkins 1993). Experiential-based teaching, an extension of constructivism, is a widely established educational philosophy that emphasizes that students learn and retain knowledge by playing an active role in collaborative curriculum development.

Multiple Intelligences Theory

As a way to differentiate instruction, was Howard Gardner developed his theory of multiple intelligences in the early 1980s, arguing that each person has several distinct intelligences correlating with a specific part of the brain. Gardner (2011) has identified eight categories of intelligences: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, intrapersonal, interpersonal and naturalistic. Teachers can differentiate learning activities to accommodate each of the intelligences in the classroom, to provide students with individualized and selective learning experiences, resulting in higher levels of achievement. Gardner believes that once individuals identify their intelligence strengths, they can draw upon this knowledge to enhance learning (Gangi 2011, 31).

Social Development and Cultural Theory

Differentiation instruction has borrowed from Lev Vygotsky's Social Constructivist theory (1997), in which one of the fundamental aspects of learning is the social and inter-relational interactions between teacher and student (Ornstein and Hunkins 1993). Differentiation theory acknowledges Vygotsky's assertion that social and cultural contexts play a significant role in how students derive meaning and that in order for students to deepen their understanding of new ideas and develop higher order thinking, they must collaborate and participate with others.

Brain-based learning

Brain-based learning theory is a relatively new curriculum theory that uses discoveries in brain research to inform pedagogical practice and curriculum development. Brain-based learning theory has several key concepts: each brain and how it learns is unique; the brain learns through pattern making; emotions play a pivotal role in retaining and processing information; learning is a social process; neurons fire when an individual engages with others, especially when that learning experience is emotionally positive; and the brain retains

information of stimulating learning experiences that are meaningful for future learning and intellectual growth and development (Smilkstein 2011). Brain-based learning unifies the learning process by acknowledging the experiential aspects of building knowledge, including the learning styles of special needs or learning-disabled students (Sousa and Tomlinson 2011). The theory addresses special needs and autistic children by emphasizing their unique abilities to function and learn despite the enormous obstacles in local versus global processing (Bender 2012).

The Five Pillars of the Educative Domains of LDMET

Learning differentiation music education theory is structured according to five core pillars; Environment, Content, Process, Assessment, and Praxis, conceived from a foundational philosophy of teaching and learning that integrates:

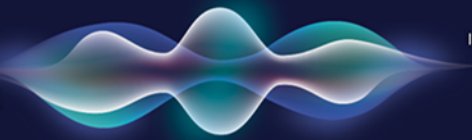
- Music education as change agency with the potential towards individual and community transformation;
- a philosophy of music education that recognizes all LEARNERS, each a member of the diverse human practice of musicing, meaningfully and inclusively interwoven, towards equity and collaborative learning (Kaikkonen 2014);
- the individual at the heart of a musically healthy environment where focused student learning is a realistic, flexible expectation based on ongoing knowledge of each student in the classroom (Bender 2008);
- all individual musical expression, inclusive of all aspects of personhood and learning diversity in musical action and creation is the foundation from which all teaching and learning domains are embedded.

Pillar 1. Learning Environment

The LDMET classroom environment is a social-emotional learning haven comprising student, teacher, and student collective in each unique classroom community in full inclusion contexts. Each student has the potential to maximize their learning when they are in an environment that supports positive learning. The environment is emotionally safe; the teacher has established clear guidelines for respectful participation between students and student-teacher. There is an understanding of the structural framework shaped by the classroom environment—a dynamic, sharing, safe space where clear expectations are set out to create music that can flourish in the shared space.

Removing the stigma of “other” that is already attached to identified and unidentified special needs learners is essential in a mainstream classroom. The musical development of each individual student is recognized by the whole to be a personal learning process but also an integral contribution to the ensemble.

Utilizing first person language that supports this process represents an important component for building trust and support in the classroom. Language should be appropriate and constructed collaboratively by the students, the teacher, and the learning community at large. Understanding that varied learners have multiple pathways along the musical journey, have different ways of engaging and processing musical learning, and acknowledging that it is the ensemble’s responsibility to help each other along that journey become key components of a productive learning differentiated music class.



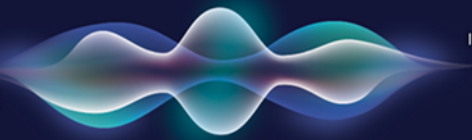
Musical artistry is not hierarchically labelled or structured. The contribution of each individual student is valued as an artistic contribution to the critical musical whole. If the individual musicians cannot play with accuracy, then musicality of the whole ensemble breaks down. Each musician develops self-awareness, self-identity, and a musical voice as a valued contribution to the creation of shared musical sound. Young student musicians must learn that they play two critical roles in music education: to learn, and to help others learn (Baloche and DeLorenzo 1994).

Pillar 2. Content

Curriculum is mindfully developed, based on the individuated knowing (of one's students) as an intuitive, flexible path towards individual musicianship, thus providing a means to contribute in a valuable way to build the ensemble cooperatively. Through curricular development, teachers may recognize as foundational the individual differences in learning styles and may utilize those differences to enhance and engage the overall learning of the group (Sousa and Tomlinson, 2011). Curriculum is designed to increase and develop understanding in foundational stages that can support each stage of musical development, so that students on a large scale of differentiation can move forward at their own developmental pace (Jagow 2007). Curriculum is grounded in the critical ideas of the subject matter. Expectations, goals, and outcomes are clarified throughout the learning period (Sousa and Tomlinson 2011). Curriculum is designed to provide experiences that are emotionally healthy, that motivate students towards personal excellence, and that emphasize the importance of the contribution of each musician towards the whole ensemble.

Pillar 3. Process

The individual, communal, and collaborative learning process is acknowledged as valid and unique to each individual as a musical creator. LDMET curriculum is inclusive of students with mixed abilities; the goal is to motivate both individual success and group success as the group creates a shared goal (Gillies 2007, Johnson and Johnson 1984). Music as performance-based curriculum is unique in that the shared goal of the whole class is often performance centered. The criteria is very clear, and individual contribution is imperative to music making by the whole. A successful outcome may be affected by just one member of the ensemble; working together as a whole in a positive and cooperative way assures a successful performance (Kaplan and Stauffer 1994). A Learning Differentiation rehearsal structure incorporates opportunities for students to work together cooperatively toward shared goals by exchanging ideas, information, and resources (Johnson and Johnson 1987). It is a mutually supportive process in which students work collaboratively, sharing responsibilities in music-making decisions (Gillies 2007). Learning expectations, essential knowledge, and learning outcomes within the subject matter and curriculum are clearly delineated (Sousa and Tomlinson 2011). Learning Differentiation shifts the educational focus from the competitive focus of the individual to the cooperative focus of the group (Kaplan and Stauffer 1994). When students work with peers who act as behavioral and musical models for other students, they imitate each other's behavior and identify with friends who possess musical skills; they may be motivated to strive for increased musical expressiveness (Cornacchio 2007). Each ensemble artist member must play their part in order to fulfill the goal of the composer in the context of the musical art form. Flexible grouping allows teachers to focus on individual learner needs, observe, and assess using a variety of strategic learning structures in order to provide the best outcome for curriculum goals. Partnerships, peer tutoring, sectionals, individual practice, and intersectional learning become an integral part of building successful whole class instruction (Sousa and Tomlinson 2011).



Music lends itself naturally to curriculum that differentiates. Each child plays a part that includes active listening, doing, individual ownership, and group work. The possibilities in music are seemingly endless in terms of engaging students with different instruments, styles, rhythms, genres, cultural traditions, socio-cultural musical contexts, and individual, intuitive, artistic improvisation and composition. All music students ought to be taught as reflective musical practitioners (Elliott and Silverman 2015). Put another way, effective curriculum that encourages students to achieve “high excellence” in music making must be accessible and equitable for all music students—a music curriculum with multiple pathways and many forms of expressive music and listening-as-knowing.

Pillar 4. Assessment

Understanding the readiness of each student to achieve and work towards the expectations and goals of the curriculum is critical to LDMET pedagogy (Bender 2008; Sousa and Tomlinson 2011). Progressive assessment is an ongoing, strategic tool based on the musical progress of each student; vital to progressive assessment is an understanding of the physical, emotional, and learning challenges of varied learner needs. At the heart of progressive assessment is an educator’s open mind towards possibilities for, surprises within, and barriers to each students’ musical journey, including, but not limited to, English Language Learners, exceptionalities, gender, trans-gender, sexual orientation, ethnicity, race, trauma, historic-imprinting, socio-economic status, physical disabilities and learning disabilities. Formative assessment is re-defined as progressive assessment and acknowledges individual effort and reflective ongoing progress towards musical excellence. Students are made aware that home practice and extra-curricular one-on-one time contributes to communal progress as individuals learn how to make choices that will enhance their learning, even if they are not making music at the same level as others. Tomlinson describes this as a continual and unfolding sense of each student’s relationship to critical outcomes (2014). The goal for assessment is to contribute to each student’s learning growth and potential for meaningful music appreciation through meaningful music participation. Ongoing progressive assessment also focuses on the growth and progress of the individual student towards mastering essential knowledge. Observation of student learning within the group setting, whether the student is falling behind or moving beyond the expected outcomes, informs future instruction and flexibility in learning outcomes. It informs the curriculum process to plan for future instruction and determines in which key areas to focus for maximum growth (Sousa and Tomlinson 2011).

Conceived as constructive feedback, assessments of musical achievement may be communicated via coaching, queuing, correcting, advising, discussing, modeling, approving, and encouraging (Elliott and Silverman 2015). Assessing is a natural aspect of progressive musical problem-solving; it occurs continuously during the transactions of teaching and learning and musical understanding. Musical progression cannot be assessed adequately by focusing on the results of one individual’s musicing and listening at one moment in time. The quality and development of a learner’s music and listening is something that emerges gradually. It reveals itself in the intersection of three conditions: 1) the opportunity to make music in the context of the community; 2) a musical situation that, by definition, surrounds a student with active learning experiences; 3) musical peers, goals, and standards that serve to guide and support a student’s musical thinking and knowing. When learners receive regular feedback, then assessment and evaluation become comfortable aspects of enjoyable learning experiences (Elliott and Silverman 2015, 418).

Pillar 5. Praxis: Transforming Community

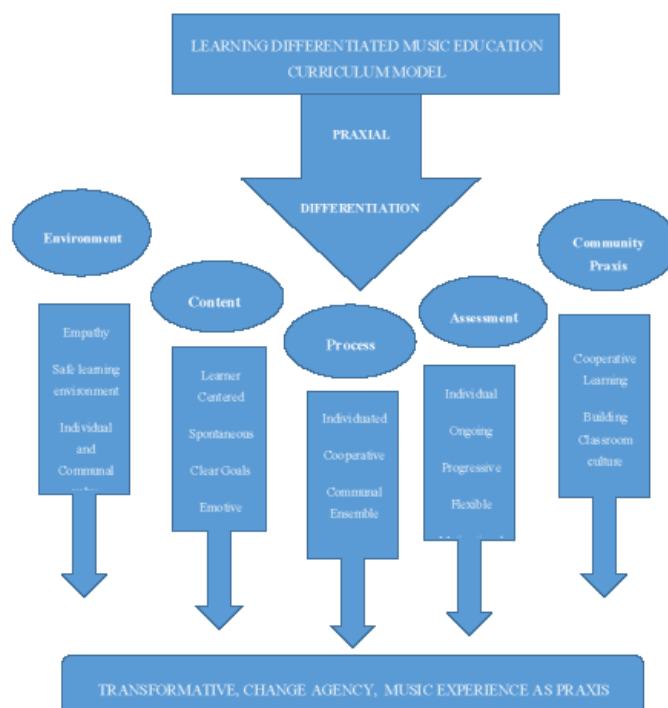
Transforming community in the LDMET classroom begins with individual learning styles and utilizes those differences in learning to enhance and engage the overall learning of the group. It opens doors to a larger world of shared musical experience for young people with each other. It may help to develop pride in the unique individio-socio-cultural identity of the classroom community and the global community (Cahill 1998). Community as praxis implies individual freedom, knowledge, communication, and unity; individuals given the opportunity to share the same goals in community may transform the community towards societal change agency (Cahill 1998). LDMET unifies the learning process by acknowledging the experiential aspects of building community musical knowledge towards social change, including the voices and contributions of community members and organizations. When a community embraces the praxial philosophy that every individual learns at their own pace and can contribute in a meaningful way, then both individual and mutual learning can progress. Learning differentiation music education follows the natural collaborative structure of communal music making and places the responsibility on both the individual and the group, easing the burden of the role of traditional teacher/conductor and promoting positive interdependence, self-learning, and a potential for meaningful community musicing.

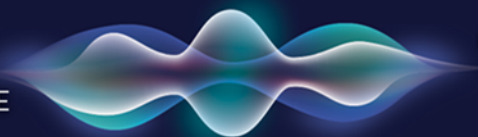
Learning Differentiation Music Education Curriculum theory: a working definition.

I offer the following working definition for Learning Differentiation in Music Education Curriculum Theory:

Learning differentiation music education curriculum theory is spontaneously and intuitively adaptive to the individio-socio-collective in music-making in the moment— foundationally grounded in the valued recognition of the individual musical learning process, to support the self-growth, musical creative action, and positive social-emotional-individio-collective actualization; transforming the musical learning experience and development of the individual student, the teacher, in full inclusion contexts as Praxis music education (Raponi 2019).

Figure 7 represents the five core curricular pillars of LDMET, embedded and extended by praxial and differentiation theories: Environment, Content, Process, Assessment.





(Abstract 687)

Religious racism in Brazilian music education: an analysis of a decolonial online course

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Abstract: This research aimed to discuss how religious racism occurs in Brazil and how it influences on music education. As well, it analyzed an online course planned to present Candomblé – an Afro-rooted Brazilian religion – to music teachers in preparation. In order to plan the course, four interviews were administered with Candomblé believers musicians and/or teachers. Then, an online course was ministered by the author of this paper and by an alagbé – it means, a Candomblé clergyman that plays the sacred drums in Candomblé ceremonies. After that, as a way to evaluate the course, the students wrote some paragraphs describing the impressions and learnings they had. These texts were analyzed by content analysis (Badin 1969). As results, it was possible to conclude that music education is able to contribute on the mission of fighting against religious racism, because it was clear that the students developed cultural sensibility and cultural awareness after the course.

Key-words: Candomblé. Religious Racism. Music Education. Decolonial Pedagogy.

Religious racism can be defined as the structural prejudice towards African-rooted religions believers (Miranda 2020). In order to explain better this is issue, it is necessary to go back to 1500, when Brazil started to be colonized by Portugal. The colonizers brought with themselves their religion, the Christianity. It is important to say that there is nothing wrong in being a Christian. I myself am a Christian. But, here in Brazil, in colonial era, the Christianity was imposed to Indigenous people and to enslaved people, it means, black African people that were forced to work in an extremis inhuman way.

These African people, when coming to Brazil, did not bring only their bodies and workforce, but also brought their culture, knowledge and religion. They needed to face the imposition of the Christianity, but they were strong enough to resist and, nowadays, Afro-brazilian religions are presents in all Brazilian regions.

But, due to the colonial thinking, religious racism still common in Brazil. According to Walsh (2012), the colonial era is gone, but it left marks in social thinking. These marks could be called coloniality and it has some axes that keeps the coloniality strong and acting in countries that were colonized. The axes of coloniality are, namely:

- a) Coloniality of the power: the power, in general, is concetred in the hands of white christian men, that is, the race, religion and gender of the colonizers.

- b) Coloniality of the knowledge: In general, only the western knowledge, brought by colonizers, is esteemed by society. The others types of knowledge, like the Indigenous and the African knowledge, are undervalued.
- c) Coloniality of the being; The race and the ethnicity of the colonizers are seen as the best way to describe the whole human kind. Therefore, other races or ethnicities are seen as less capable of representing the humanity or, in worst cases, as inferior or non-human.
- d) Cosmogonic coloniality: The cosmogonic coloniality is a set of ideas and actions that reinforce the idea that the religion brought by the colonizers is the right one, while Indigenous, African and Afro-brazilian religions are designated just as myths, legends, fantasies and witchcraft. Thus, Afro-brazilians religious practices are seen, by the major part of society, as demonic, and, for that, their believers are brutally stigmatized.

Once religious racism was defined and its origin was contextualized, the next subtopic will explain how religious racism occurs in Brazilian schools and in music education.

Candomblé: a plurality of Afro-Brazilians cults

Candomblé is collective noun that includes a variety of Afro-brazilian cults, like Candomblé Jeje, Angola, Ketu-Nagô, Jurema, Quimbanda, Xangô do Recife, Batuque, Tambor de Mina etc. Even though these cults are different from each other, they have similarities that make possible to classify them inside the same category, namely: 1) They all are Afro-brazilian cults; 2) They worship divinized ancestries (called Orixás, Nkises or Voduns), including some that lived in Africa or that were enslaved people in colonial Brazil; 3) Their ceremonies are centred in music. Through the beat of the atabaques – a set of three sacred drums -, occurs a kind of “mediunic transe”, it is, they believe that the divinized ancestries that they worship comes to Earth and incarnate in some of them. After that, these ancestral dances and lead the celebration party (Fonseca 2002). In other words, without music, it is not possible to have a Candomblé ceremony.

The atabaque beat is very complex, characterized by its syncopations and polyrhythms, and only some clergyman (called alagbé) are allowed to play they. It is very important to quote that Candomblé music had influenced Brazilian popular genres, like Samba, Pagode, Choro, Maculelê and Bossa-nova.

Even though this importance to Brazilian music, the Candomblé culture and the Candomblé believers themselves are few esteemed in schools and universities. Caputo (2012) shows up that candomblecist kids are usually mocked in schools, called “macumbeiros” – a perjorative term – and, as a strategy to avoid the religious racism, they frequently do not say that are candomblecist, and many of them, in order to align themselves with the religious normativity of the society, say they are Catholics.

The cosmogonic coloniality also influence on music education. Though Candomblé music has influenced on Brazilian popular music, these topic is not present in music education as it should be. I myself, the author of this paper, one day, was rebuked by my former manager because I tried to teach a Candomblé music in Elementary School. She said to me: “Why are you teaching macumba here?”. Macumba is also a perjorative and racist term direct toward Candomblé.

In other opportunity, I was invited to the principal's room, in order to speak with her, because a mother of a student said I was teaching about "macumba instruments". In fact, I was not. I taught about a percussion instrument called djembe, that is not used in Candomblé, but it is from Africa. Unfortunately, many Brazilians correlate all that comes from Africa with Candomblé, and they also correlate Candomblé with the evil.

Why? We need to go back: As it was said, in colonial era, the enslaved people were prohibited to practice candomblé. As a way to keep their religion, they started to pretending they were worshiping the Catholic Saints, but, in fact, they were worshiping their ancestors that were related with those Saints. This religious phenomenon is called religious syncretism (Caputo 2012).

But, one Orixá, called Exu, was syncretized with the Christian devil. This is the origin of the called "demonization of the Orixás" (Almeida 2020), it is, a misunderstanding that make people believe that Orixás are the demons of the Christian tradition. In that way, some people avoid to study or even to listen to Candomblé music, because they believe it is something evil, even satanic.

An interesting case occurred in a music faculty in Rio de Janeiro, few years ago. In a choir class, the professor bought a song called "Xangô¹", by Heitor Villa-Lobos². Xangô is an Orixá. The Christians present there refused to sing the song, afraid of "become incorporated" by Xangô. It points out the ignorance of many Brazilian, including music teachers in formation, about Candomblé culture. Not everyone that sing a Candomblé song will incorporate an Orixá, but only who really believes in it and was prepared for it (Caputo 2012). Summarizing, the religious racism of the society also influenced on music education. Problem identified. How to change this reality?

Objectives and Methods

In order to contribute to change this reality in Brazilian music education, this research aimed to plan and analyze a two lessons online course about Candomblé music in music education, finished in the first trimester of 2021. The course was offered to music teachers in training (n=31) of three Rio de Janeiro universities. The first online lesson was ministered by me, the author of this paper. This lesson was about theoretical issues concerning repertoire, music instruments and Candomblé believes, as well decolonial thinking (Walsh 2012) and decolonial music education (Hess 2015; Kallio 2019; Santiago & Ivenicki 2020).

In order to teach about these topics of Candomblé culture, I have administered informal interviews (Boni & Quaresma 2005) with four candomblé believers – two alagbés, a professional musicians and music teacher, and a scholar. In the interviews, the interviewees could give some clues about how teach Candomblé music in music classes. These clues were also presented in the course.

The second and last lesson was an online didactic concert ministered by a renowned alagbé and professional musician. In this concert, the alagbé presented some musics from his religion, explained its meaning and its use in Candomblé, and also answered questions done by the students.

After the lessons, as a way to evaluate the course, the music teachers in training wrote some paragraphs about the experience of watching the didactic concert and about what they had learnt about candomblecist music in these two lessons. These writings were analyzed thought

content analysis (Badin 1977), in order to understand how much the course have affected student attitudes to teaching candomblecist music in educational settings. The next section will discuss the outcomes taken from the interviews.

1 Available from: https://www.youtube.com/watch?v=u_hvQJB2FFA&ab_channel=Villa-LobosChannel

2 News available from: <https://www.paulopes.com.br/2019/09/evangelicos-villa-lobos.html#.YViAGprMKUk>

The interviews

The interviews were administered in 2020. They were semistructured interviews, it means that there was questions previamente elaborated, but the interviewer could make news questions if necessary. The questions done were:

2) How do you think your religion is seen by the society?; (b) Does Music education can contribute to reduce religious racism? (c) May you give us some clues in order to help music teachers in valuing Candomblé music in music classes?

All interviewees confirmed that they are proud in being Candomblé believers. But, unfortunately, all of them are target of religious racism and receive different treatment in society, in schools and in universities.

For instance, the music teacher that was interviewed said that she cannot use Candomblé music in her music classes, because the students refuse to sing these musics, claiming that they cannot sing that kind of musics because they are Christians, or because singing Candomblé music is a sin, or because Candomblé music are of the devil.

The same interviewee make a grave denounce: her niece, when she was 8, was facing a candomblé ritual where she needed to wear an all-white outfit and many necklaces for several days, so, she needed to wear these kind of clothes on school. One day, she was stoned by her colleagues, for using that outfit. It is interesting to note that stoning was a punishment to sinners in Old Testament. Cosmogonic coloniality can be very hurtful and dangerous.

Finally, the interviewees could also point out some clues that could help music teachers to include Candomblé culture and music in music classes: First of all, the recognition that music education is not racially neutral, therefore, music education practices must struggle with structural, epistemic and religious racismo was highlighted. The compromise that the awareness about racism in schools must be done constantly, and not only in “black holidays”, like Black History Month or Black Awareness Day³ also emerged in the interviews.

The interviewees also contributed saying that, in lessons about Candomblé music, outside and natural spaces must be valued, because Candomblé is a religion that worships the forces of the nature. Similarly, they also said that Candomblé must be presented as a complex cosmovision and philosophy of life.

It was also quoted that is important to let students know relevant Candomblecist musicians in Brazilian music scenario; as well show respect to the Candomblé sacred procedures, specially, when they become related to the repertoire and/or music instruments being taught –

for instance, it was said that the Atabaques must be covered with a white blanket after the lessons.

Finally, it was said by the interviewees that the music teacher should teach about how Candomblé influenced on several Brazilian music genres, like Samba, Choro, Pagode, Baião, Capoeira among others.

It is not being argued that these “clues” must be taken as rules, but, they can be initial theoretical frameworks that could guide music classes that value the cosmovision, the culture and the Candomblé music.

3 In Brazil, the Black Awareness Day (Dia da Consciência Negra) is on 20 November.

How it was the course

These clues given by the interviewees were used in order to plan and to implement the lessons of the course. The first lesson⁴ of it was a theoretical discussion ministered by me, embased on the interviews I had administered. First, I taught that religion is also a cultural product and for that, it produces identities that can be hierarchized (Eagleton 2011, Woodward 1997). I also said that, for the impositions done on Colonial Era, the Christianity is, nowadays, the normative religion in Brazil and the others religions can be undervalued. At this point, we talked about the decolonial thinking, highlighting the cosmogonic coloniality, that is related with the religious racism (Walsh 2012)

After that, I showed some videos news that show up Candomblé believers suffering religious racism in society, for instance, a Candomblé clergy being obliged to demolish your own temple, a student being not allowed to enter in a public schools using ceremonial Candomblé clothes; and a Christian pastor that suffered virtual attacks for helping a Candomblé temple to be rebuild after it be gravely vandalized. Finally, we could discuss the outcomes of the interviews I had administered with Candomblé musicians.

All in all, it was a lesson that could bring the students into the theme, but, it was necessary an authentic explanation coming from the very glance of a Candomblé clergy. For that, we had a second lesson that first lesson⁵ was a didactic concert ministered by a professional percussionist and alagbé. This lesson was well-received by the students and they could make questions directly for the alagbé, who sent to them, by email, several audios of Candomblé music and a book that explain the Candomblé culture.

In this lesson, I could confirm how important is to bring musicians from oppressed identities to our classroom. In a given moment, the alagbé said to us that, in candomblé, women do not play the atabaques. Suddenly, his internet connexion failed and I stood alone with the class. So, I said what I have read about Candomblé: that women do not play the atabaques because the Orixás determinate the role of men and women in Candomblé, and men are in charge of playing and janitoring, while women are in charge of cooking and dancing (Caputo 2012).

After that, the alagbé has come back to the online meeting and I had said to him what I said to the students. Then, he said that things are not as I had said: “What’s happen is that women menstruate, this is the strongest power that women have, when something bad is happening , the women cut if off. So, how can women play the instruments if they will cut that energy off?”. Remembering, in Candomblé, is the beat of the atabaques that makes the Orixás incorporate in some believers. In others words, my knowledge about the topic was wrong,

and if there would not an alagbé there to correct me, these inaccurate knowledge would be spread amidst the students.

4 Available from https://youtu.be/8p_p9xG15hI
5 Available from: <https://youtu.be/rcsJLiUbqk>

Another important point is that there was a candomblecist student with us. He said that the lesson was very useful for him, because he could identify different aspects of the beat of the atabaques, something that is hard to notice in the Candomblé ceremonies because they are very effusive. It means, even a candomblecist musician could learn with this lesson. The next subtopic will analyze the texts written by the students about their impressions about the course.

What the students wrote

Henceforth, the results of the analysis of the texts produced by the students will be highlighted. Through content analysis (Bardin 1967), it was possible to produce some categories that summarize the students' course overview, namely: recognition of the religious racism, broadening of cultural horizons, lived prejudices, learning of concepts, and criticisms.

First of all, some students said that, though the course, they could realize that the religious racism is very real, in society. Some of them, wrote texts demonstrating surprise, because they could not believe this kind of thing exist nowadays.

Similarly, many students wrote that they could learn more about a different culture, therefore, in this perspective, the course was very positive for their preparation as music teachers. In other words, their cultural horizon was broadened.

It was interesting to note that many students, when realizing the prejudice that Candomblé believers suffer in society, could relate this kind of prejudice with situations they lived. For example, a student said that understand the suffering of candomblecist because he also is discriminated for being a Messianic Jew. Similarly, another student said she is discriminated for being a rosicrucian. It takes one to conclude that these students created ties of solidarity with candomblecist, because all of them are discriminated for religious reasons.

In many texts, the students could show that they had learned about complex academic concepts, like the definition of culture, identity and decolonial pedagogy. Therefore, the course was important for them, not only because they could be more aware about how religious racism is present in Brazilian society but also because they learn about concepts that can help them to understand others social phenomena.

Finally, this paper is not an advertisement of the course, therefore, the criticism presents in the students' writings will also be discussed. For instance, a student recognizes that candomblecist are target of prejudice in Brazil, but Jews and Muslims also are, and the course

did not analyze these religious identities. Moreover, another student said that it was too many content for a short-length lessons.

In fact, Jews and Muslims are target of prejudice, but in Brazil, studies shows up that Candomblé is the religion that more suffer with religious racism (Caputo 2012), but, it does not means that other oppressed religious identities should be neglected by academic research. Finally, it is true that the course was offered in few hours, it means, just five. It was the available time, but, it is true that the racial issue is complex and important, so, it deserves more time for studying and discussing.

Concluding remarks

All in all, the research points out that the decolonial thinking can also contribute to identify and avoid religious racism in music education. In a general way, the course was very successful, creating cultural awareness and cultural knowledge amidst the music teachers in preparation. But, it is true that more must be done in order to religious racism be expired from music education.

So that, starting from the limitations observed in this research, it is being suggested new researches done in others contexts, that could analyse how racism religious occurs in others religions and also analyzing the perception of others subjects, like schools' teachers, schools' teachers and managers, and children parents.

(Abstract 696)

Motivation in Music Education-Measurement based on "The Music Model of Academic Motivation"

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This study explores the academic motivation of Greek students at the Music School of Chania for individual instrument lessons. The specialised questionnaire of the MUSIC model developed by Jones (2009) was used for this purpose. Lower and higher secondary school students (N=162) participated in the research. All five factors influencing academic motivation indicated high motivation. The findings highlight the usefulness of the research tool for the overall assessment of student motivation. The implications of the findings were examined, and future research directions are discussed.

Keywords: academic motivation, empowerment, usefulness, success, interest, care

Introduction

Academic motivation in music education has been broadly discussed. It is a fact that there is no single view and only one theory for music motivation (Evans, 2015; Oliveira et al., 2021). Researchers approach it through different theories and learning strategies or a combination of them. For example, researchers investigated motivation through the Expectancy-value theory (Juvonen, 2011; Leung & McPherson, 2011; McPherson & O'Neill, 2011; McPherson et al., 2015), Self-determination theory (Evans et al., 2012; Evans & Bonneville-Roussy, 2015);

Troum, 2010), Attribution theory (Schatt, 2011) and several perspectives (Hadjikou, 2021a; MacIntyre & Potter, 2013).

The existing literature presented some interesting findings in the music classroom context (Anttila, 2010; Economidou-Stauvrou, 2020; Hadjikou, 2021a; Juvonen, 2011; McPherson & O'Neill, 2010; McPherson et al., 2015; Oie, 2019; Sanz & Orbea, 2013; Xie & Leung, 2011). A few recent studies carried out in the Cypriot and Greek context, looked at the motivation of students in the music classroom. Economidou- Staurou and Papageorgi (2020) and Hadjikou (2021b) found that it is important for secondary student's motivation to embark on a variety of activities in music lessons and apply more freedom in choosing the repertoire. Koutsoupidou (2019) also found that the freedom of choice is necessary in the preschool music activities. In the context of instrument lessons, Mastrokosta et al. (2019) found that students need both music teacher's personal and educational interest in one to one traditional instrument lessons.

Theoretical Framework

The present study examines students' music motivation using "The Music Model of Academic Motivation" designed by Jones (2009, 2018), based on 28 theories and many studies that explain learning motivation. The model consists of five factors affecting motivation (Empowerment, Usefulness, Success, Interest and Care) and the MUSIC Inventory (questionnaire). The usefulness of the MUSIC Inventory lies in the fact that it can assist teachers to structure their teaching drawing conclusions from all motivation factors (Jones, 2009, 2018).

Empowerment is associated with the Self-determination theory (Deci & Ryan, 1985) and refers to the autonomy and expression of the individual's will. Therefore, students should feel that they have a portion of control over the learning process and make some decisions about it (Jones, 2009, 2018). One aspect of autonomy in music education, for instance, is the student's ability to have more freedom in choosing the repertoire (Creech & Hallam, 2011; Mastrokosta et al., 2019). In general, the researchers found that autonomy in instrument teaching is very important. The presence of autonomy favorably affects students' progress (Creech, 2012), willingness to play (MacIntyre & Potter, 2013), persistence in music studies, (Bonneville-Roussy et al., 2013), quality of study, frequency of study and facing challenges (Evans & Bonneville-Roussy, 2015). The lack of autonomy can lead to the permanent interruption of lessons (Evans et al., 2012).

Usefulness is explored through the perspective of Expectancy-value theory, developed by Wigfield & Eccles (2000). Usefulness focuses on whether students find the knowledge they acquire useful in some way at the present, but also in the future (Jones, 2009, 2018). Among other things, the value of instrument lessons depends on the wider student's social environment (Leung & McPherson, 2011; McEwen, 2013), the dominant school culture (Leung McPherson, 2011; McEwen, 2013) and the perception that the instrument learning in school does not correspond to real learning but is more related to the studies in the conservatory and in private lessons (Juvonen, 2011). In the research of Hallam (2013), in which usefulness was found to be a predictor of the continuous involvement with music, students stated that it is valuable to play a musical instrument. Similar findings were presented in Leung and McPherson's (2011) research, in which most of the participants believe that learning music is useful.

Success is associated with the self-perception of competence, which refers to many theories of motivation and is key aspect in the learning process. It refers to students' perceptions of their abilities and the belief that if they work hard they will achieve the desired learning outcomes (Jones, 2009, 2018). In music education research, success can predict the long-term commitment with music among other factors (Hallam, 2013). Other studies, such as Creech and Hallam (2011), Martin (2012) and Hallam (2013) showed high levels of competence. In the research of Elgimez and Engur (2017), in which high school piano students participated, the scores of competence was found to be lower after the 10th grade.

Interest refers to whether students show interest in anything involved in the learning process (Jones, 2009, 2018). Intrinsic motivation is related to interest. When individuals are motivated intrinsically, they engage in an activity because of the pleasure or challenges it provides and not because of external rewards or pressures (Ryan & Deci, 2000). According to Eccles et al. (1993), high intrinsic motivation is related to commitment and continuous involvement. Hallam (2013) had found that intrinsic motivation (enjoyment of performing) has a significant effect on students' long term interest in music. In several studies, students have shown great interest in instrument lessons (Burak, 2014; Creech & Hallam, 2011; Hallam, 2013; Leung & McPherson, 2011), however, sometimes this interest was shown to decrease during the high school years (Elgimez & Engur, 2017).

Care can be divided into academic care (care for success) and personal care (care for well-being). In the MUSIC model, Care is related to whether the students believe that the teacher is actually interested in the student himself as a person as much as for his academic progress (Jones, 2009, 2018). Students' positive perceptions of their music teachers according to McEwen (2013) act as reinforcement alongside with other motivating factors. Furthermore, the results of previous research showed that psychological remoteness (Creech & Hallam, 2011) and austerity (Elgimez & Engur, 2017) have a negative effect on student music motivation and progress. Music teacher's care is associated with the student's commitment with music (Hallam, 2013). It seems that students need music teachers to put effort, have expectations from them (Leung & McPherson, 2011) and really care for them (Leung & McPherson, 2011; Mastrokosta et al., 2019; Sindberg, 2016). The research of Creech and Hallam (2011) showed that teachers really care about students. These results were echoed in the statements of students in which teachers had high standards, were willing to explain things again and were very warm and friendly. In Elgimez and Engur's (2017) research, the majority of students stated that the music teacher had a solid attitude.

Research questions

This research aimed to answer the following question:

- a) To what extent are students motivated to participate in the instrument lessons?

Method

A total of N=162 (83 girls and 79 boys), lower (Year 7-9) and higher (Year 10-12) secondary school students attending individual instrument lessons, took part in this research. The sample comprised of 53 Year 7, 45 Year 8 students, 23 Year 9 students, 17 Year 10 students, 13 Year 11 students, 11 Year 12 students from the participating school.

All the participants completed the questionnaire of the middle/high school version of the MUSIC Inventory (Jones, 2009, 2018), which consists of 18 items (see Appendix 1). The empowerment component has four items, the usefulness three, the success four, the interest three and the care four components. These items are graded with scores from 1 to 6 on a type

of the Likert scale (6=strongly agree, 5=agree, 4=somewhat agree, 3=somewhat disagree, 2=disagree, 1=strongly disagree).

The statistical analysis was performed using the statistical program IBM SPSS Statistics 25.0. In addition, $p < 0.05$ was used as the level of statistical significance (Muijs, 2010).

Limitations

This research has certain limitations including the sample size which could have been bigger. Furthermore, data could have been collected at different times throughout the year.

Results

Reliability and Validity

Alpha coefficients (Cronbach, 1951) determined the internal consistency of each component of the MUSIC Inventory. For each component the Cronbach's alpha coefficient exceeded .7, thus reliability was high (Tavakol & Dennick, 2011). The scores for the five components were: Empowerment ($\alpha=.866$), Usefulness ($\alpha=.866$), Success ($\alpha=.795$), Interest ($\alpha=.865$), Care ($\alpha=.905$).

Descriptive Statistics

Table 1 presents the means and standard deviations for the five components. The scores for the components were: Empowerment ($M=4.77$, $SD=1.08$), Usefulness ($M=4.70$, $SD=1.10$), Success ($M=5.08$, $SD=.74$), Interest ($M=5.17$, $SD=1.03$), Care ($M=5.48$, $SD=.93$). The Care component had the highest mean score, followed by Interest and Success. The components of Empowerment and Usefulness had slightly lower scores.

Table 2 shows all the descriptive data for the five components. The item of the Empowerment "I have choices in what I am allowed to do in instrument class" had the highest mean score ($M=4.86$, $SD=1.278$). The item "I have options in how to achieve the goals in instrument class" followed ($M=4.81$, $SD=1.143$). There were lower mean scores in the items of Empowerment "I have the freedom to complete my instrument class work in my own way" ($M=4.70$, $SD=1.409$) and "I have control over how I learn the content in instrument class" ($M=4.69$, $SD=1.258$).

The item of Usefulness "In general, instrument class work is useful to me" had the highest mean score ($M=5.07$, $SD=1.159$). In the same item, 48.1% stated that they strongly agreed. The item "The knowledge I gain in instrument class is important for my future" ($M=4.73$, $SD=1.058$) followed. The lowest mean score ($M=4.29$, $SD=1.452$) appeared in the item of Usefulness "I find instrument class work to be relevant to my future", in which 14.2% stated that they somewhat disagreed, 9.9% that they disagreed and 4.3% that they strongly disagreed.

The descriptive data for Success shows that the highest mean score appeared in the item "I am capable of getting a high grade in instrument class" ($M=5.3$, $SD=.765$), in which 46.3% stated that they strongly agreed and 40.1% that they agreed. The item "During instrument class, I feel that I can be successful on the instrument work" followed ($M=5.12$, $SD=1.012$). There were slightly lower mean scores in the two other items of Success "I feel that I can be successful in meeting the academic challenges in instrument class" ($M=4.95$, $SD=1.026$) and "I am confident that I can succeed in instrument class work" ($M=4.94$, $SD=.937$).

The item of Interest “The instrument class work is interesting to me” had the highest mean score ($M=5.44$, $SD=1.063$), in which 67.3% stated that they strongly agreed. The item “The instrument class work holds my attention” followed ($M=5.16$, $SD=1.158$). In this item, 50.6% stated that they strongly agreed. Lower mean score appeared in the item of Interest “I enjoy completing instrument class work” ($M=4.91$, $SD=1.243$), in which 12.3% stated that they somewhat agreed and 7.4% that they somewhat disagreed.

The descriptive data for Care shows that the item “My instrument teacher is respectful of me” had the highest mean score ($M=5.59$, $SD=.956$), in which 75.9% stated that they strongly agreed. With slight differentiation the item “My instrument teacher is friendly” followed ($M=5.51$, $SD=1.099$). In this item 75.3% stated that they strongly agreed. The two other items had slightly lower mean scores. In the item “My instrument teacher is willing to assist me if I need help in instrument class” ($M=5.48$, $SD=1.065$) 70.4% stated that they strongly agreed and, in the item, “My instrument teacher cares about how well I do in instrument class” ($M=5.35$, $SD=1.1$) 63% stated that they strongly agreed.

Discussion

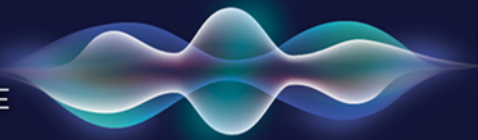
The findings of this study showed that in general the students of the Music School were highly motivated to participate in music instrument lessons. The components of Empowerment and Usefulness have been found to be slightly lower than the components of Care, Interest and Success. This suggests that the teachers of the Music School need to focus on these two components and use strategies to reinforce students whenever it is necessary.

The scores of Empowerment showed that teachers motivate students to actively participate in instrument lessons by giving them the autonomy they need. In literature it is also stated that autonomy affects student progress (Creech, 2012), willingness to play (MacIntyre & Potter, 2013), persistence in music studies (Bonneville-Roussy et al., 2013), quality of the study, frequency of study, facing the challenges (Evans & Bonneville-Roussy, 2015) and whether students will continue their instrument lessons (Evans et al., 2012).

According to the results of Usefulness, students believe that the instrument lessons are useful for them at present, but also for the future. According to previous research Usefulness is a predictor of continuous involvement with music (Hallam, 2013), and in this case, predictor of continuous involvement with instrument lessons. In addition, the literature had shown that student beliefs about the value of music lessons are often influenced by the wider social environment (Leung & McPherson, 2011; McEwen, 2013), the dominant school culture (Leung & McPherson, 2011; McEwen, 2013) and ideas such as, the perception that lessons at school are not real lessons (Juvonen, 2011). Considering the above research data, the findings of this study about the Usefulness component are very positive.

Also, students in this study stated that they are interested in instrument lessons and they can be successful. These findings lead to the conclusion that students of Music School possibly will continue going to music school and attend the instrument lessons. This conclusion emerged from research data showing that both components of Interest and Success can predict the long-term commitment to music (Hallam, 2013), and therefore the continuous participation in individual instrument lessons.

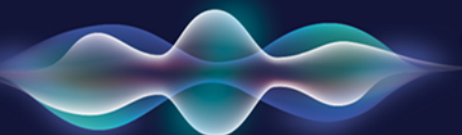
Furthermore, students in this study agreed that teachers care about them. This finding about Care is encouraging, as earlier literature shows that students need music teachers to put effort, have expectations from them (Leung & McPherson, 2011) and really take care of them



(Leung McPherson, 2011; Mastrokosta et al., 2019; Sindberg, 2016). Also, according to Hallam's (2013) findings the teacher's care can predict student's willingness to continue the instrument lessons.

While some of the findings of this study align with previous research, certain findings do not. More specifically, the high levels of Interest are similar to those of the research of Burak (2014), Creech and Hallam (2011), Hallam (2013) and Leung and McPherson (2011). They differ from Elgimez and Engur's (2017), in which students show a significant reduction in the Interest component. High levels of Success are also found in the research of Creech and Hallam (2011), Martin (2012) and Hallam (2013). However, the findings of Success contradict the results of Elgimez and Engur's (2017) research. High levels for the Usefulness component appeared also, in the research of Hallam (2013) and Leung & McPherson (2011). The findings of this study about Care are similar to the results of Creech and Hallam's (2011) research and differ from those of Elgimez and Engur's (2017) research.

This study attempted to investigate students' motivation in their music instrument lessons with the MUSIC Inventory developed by Jones (2009, 2018). This measurement could be used to measure the motivation of students in other subjects of the Music School, in order to find out which are the areas that teachers need more professional development. Also, the motivation of students in their instrument lessons could be further investigated with a mixed method study, which can provide teachers' and students' experiences in more depth.



Tables

Table 1: Descriptive Measures for the Five Components

Component	N	M	SD
Empowerment	162	4.77	1.08
Usefulness	162	4.70	1.10
Success	162	5.08	.74
Interest	162	5.17	1.03
Care	162	5.48	.93

*SD: Standard deviation

Table 2: Descriptive data for the five components

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	M	SD
Empowerment								
I have the freedom to complete my instrument class work in my own way	7 4.3%	7 4.3%	18 11.1%	25 15.4%	43 26.5%	62 38.3%	4.70	1.409
I have choices in what I am allowed to do in instrument class	5 3.1%	6 3.7%	13 8%	19 11.7%	58 35.8%	61 37.7%	4.86	1.278
I have control over how I learn the content in instrument class	8 4.9%	3 1.9%	11 6.8%	30 18.5%	68 42%	42 25.9%	4.69	1.258

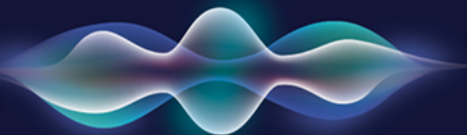
I have options in how to achieve the goals in instrument class	4 2.5%	2 1.2%	12 7.4%	35 21.6%	58 35.8%	51 31.5%	4.81	1.143
<hr/>								
Usefulness								
<hr/>								
The knowledge I gain in instrument class is important for my future	1 .6%	3 1.9%	17 10.5%	39 24.1%	60 37%	42 25.9%	4.73	1.058
In general, instrument class work is useful to me	3 1.9%	2 1.2%	12 7.4%	25 15.4%	42 25.9%	78 48.1%	5.07	1.159
I find instrument class work to be relevant to my future	7 4.3%	16 9.9%	23 14.2%	33 20.4%	43 26.5%	40 24.7%	4.29	1.452
<hr/>								
Success								
<hr/>								
I am confident that I can succeed in instrument class work		3 1.9%	11 6.8%	25 15.4%	77 47.5%	46 28.4%	4.94	.937
I am capable of getting a high grade in instrument class			4 2.5%	18 11.1%	65 40.1%	75 46.3%	5.3	.765
I feel that I can be successful in meeting the academic challenges in instrument class	2 1.2%	2 1.2%	11 6.8%	24 14.8%	71 43.8%	52 32.1%	4.95	1.026
During instrument class, I feel that I can be successful on the instrument work	2 1.2%	3 1.9%	4 2.5%	24 14.8%	61 37.7%	68 42%	5.12	1.012
<hr/>								
Interest								
<hr/>								

The instrument class work is interesting to me	4 2.5%	2 1.2%	4 2.5%	7 4.3%	36 22.2%	109 67.3%	5.44	1.063
I enjoy completing instrument class work	4 2.5%	6 3.7%	12 7.4%	20 12.3%	56 34.6%	64 39.5%	4.91	1.243
The instrument class work holds my attention	4 2.5%	3 1.9%	8 4.9%	15 9.3%	50 30.9%	82 50.6%	5.16	1.158
Care								
My instrument teacher cares about how well I do in instrument class.	4 2.5%	2 1.2%	4 2.5%	15 9.3%	35 21.6%	102 63%	5.35	1.1
My instrument teacher is friendly	3 1.9%	6 3.7%	1 .6%	8 4.9%	22 13.6%	122 75.3%	5.51	1.099
My instrument teacher is willing to assist me if I need help in instrument class	5 3.1%	1 .6%	2 1.2%	9 5.6%	31 19.1%	114 70.4%	5.48	1.065
My instrument teacher is respectful of me	4 2.5%		3 1.9%	5 3.1%	27 16.7%	123 75.9%	5.59	.956

Appendix 1.

The MUSIC Inventory

1. The knowledge I gain in instrument class is important for my future.
2. I am confident that I can succeed in instrument class work.
3. My instrument teacher cares about how well I do in instrument class.
4. I am capable of getting a high grade in instrument class.
5. I have the freedom to complete my instrument class work in my own way.
6. The instrument class work is interesting to me.
7. I feel that I can be successful in meeting the academic challenges in instrument class.
8. I enjoy completing instrument class work.
9. In general, instrument class work is useful to me.
10. During instrument class, I feel that I can be successful on the instrument work.
11. My instrument teacher is friendly.
12. I have choices in what I am allowed to do in instrument class.
13. I find instrument class work to be relevant to my future.
14. My instrument teacher is willing to assist me if I need help in instrument class.
15. My instrument teacher is respectful of me.
16. I have control over how I learn the content in instrument class
17. The instrument class work holds my attention
18. I have options in how to achieve the goals in instrument class



(Abstract 701)

From Musician to Music Teacher: Embracing Music Education through Re-identification and Mentorship

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Abstract

Musicians who have spent much of their lives focused upon careers in performance can be unsure of their reasons for entering the music education profession. This is not always easy as students who have long identified themselves as performance musicians need to embrace a new role and identity in a field of challenging and different pedagogies and requirements. Literature has demonstrated that a majority of music education students choose their profession while still in secondary school, however they cannot escape the pressures to perform that they encounter while in post-secondary programmes. Through the lens of role-identity theory and utilising autobiographical research methodology, this study examines the life choices and careers of three music educators (two retired and one current), looking at when and how they made the decision to focus upon music education over performance. Though similarities exist, each has their own narrative of timeframe, and reasoning. However, the influence of mentorship factors into each story, and experiences recounted demonstrate that though commonalities may exist, changing roles and identities occurs uniquely for each individual.

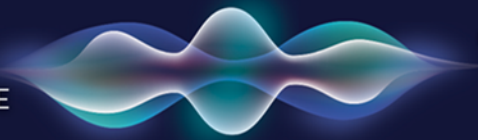
Key Terms:

Autobiography, role, identity, hierarchy, musician, educator, decision, mentors

Introduction

As a music teacher educator, I often encounter students uncertain why they are entering education. Often, they have realised within the performance field are many fine, established musicians more adept at their craft. Coupled with student loans and limited income, they enter education and discover changing roles is challenging, particularly in accepting and adjusting to a new identity. The experiences of how past students made their decisions to enter the teaching profession are varied, and their stories could play an important role in helping music education instructors and future students better understand the challenges that lie within making the decision to move away from a solely performance focused career. Stories about ourselves, families, and cultures help society understand the past, present, and influence our futures. Travel writer Tahir Shah (2008) described stories as “a communal currency of humanity” (p. 138), a form of capital describing topics in different locations, times, and cultures. Pasupathi, Mansour, and Brubaker (2007) claimed though difficult to grasp when they occur, memories enable us to better re-evaluate our past, linking them to our current sense of self-identity.

Research into life stories examines participants' lives and situational contexts, and music teachers, for example, have many stories to share including their journey to becoming educators. This paper will focus upon such experiences through the stories of two retired music teachers and myself. The combination of perspectives from a current music educator with those able to reflect on long careers provided data from nearly five decades of educational instruction and change. Through the theoretical framework of role identity, this



study explores how people trained as performance musicians changed roles and embraced the teaching profession.

Literature Review

Role-identity theory is defined as “the character and the role that an individual devises for himself [sic] as an occupant of a particular social position” (McCall & Simmons, 1978, p. 65). Roles exist in every social structure, each containing a set of expectations by which to act and for which we craft an identity and self-meaning (Stets & Burke, 2000). Bouij (2004) claimed identities reflect past social experiences and, through anticipatory socialisation, we revise our futures according to how we think others will identify us. Within education, Abrahão (2012) described a multi-staged process of initial choice, teacher education, and an educational career.

The change from musician to teacher may cause struggles of self-perception for primarily performance focused students. Research has indicated that many music students view education as the second-best option (Bouij, 2004; Isbell, 2008; Roberts, 1991). Countless hours and years practising their instruments often becomes synonymous with self-identification through “primary socialisation” (Isbell, 2008, p. 163), identity development experienced prior to preservice teacher education beginning with parental influences and continuing through educational influences. Another reason concerns the hierarchical structure found within post-secondary music programmes that place performance above music education, establishing boundaries students must negotiate (Trent, 2013). Whether imposed instructionally or via self-perception, this becomes particularly complex because students are no longer focusing solely upon music, but also broader, more demanding pedagogical skills and requirements instrument study doesn't require (Mark, 1998; Bouij, 2004). Programme structures also perpetuate the hierarchy by blurring the dividing lines between “the conservatory, the liberal arts college, and the teachers college” (Roberts, 1991, p. 32, quoting Leonhard, 1982, p. 245). Making “musicians first, teachers second” (Roberts, 1991, p. 30) is also driven by the potential prestige performance careers carry for individuals and institutions alike.

The powerful influence of institutionalised musical training plays a large role in students' acceptance of the stigmatised notion of becoming just a music teacher. It is therefore not surprising that students find it challenging to alter their anticipated role and identity. This study aims to provide answers to the following question: how do students who have been primarily focused upon performance alter their initial goals and self-identity and focus instead upon becoming music educators?

Methodology and Methods

This study utilised autobiographical research methodology where life stories and memories were employed to construct a narrative of self. Autobiography has long been a source for human understanding dating back to Plato (Freeman, 2007). Essential to the data collection are specific memories of past events recounted through the present self (Nelson & Fivush, 2004). Rooted within the confines of family life, society, and culture, experiences framed in time and space deepen our memories and create meaning (Turunen, Dockett, & Perry, 2015), potentially enriching understandings of the past and impacting future decisions.

Autobiography, however, can be complicated, beginning with the conditions under which narratives occur. Establishing trusting relationships is essential to positively influencing participants' experiences and openness (Riemann, 2006), and empathy directed from

researcher toward participant results in higher narrative quality (Elmi, Bartoli, & Smorti, 2019). Sequencing simple or complex memories recounted out of chronological order is also challenging (Abrahão, 2012; Turunen, et al., 2015) as narratives are never exact representations but rather built upon fragments of episodic information (Elmi, et al., 2019). As life stories are not produced in specific time and location, they are complex to assess as each narrator's story is particular and culturally grounded (Pasupathi, et al., 2007). Consequently, comparing multiple narratives can be a messy endeavour (Elmi et al., 2019). To counter this, multiple empirical methods including oral stories, diaries, videos, and photos, should be employed (Abrahão, 2012; Coffey, 2004). Triangulating the results of multiple methods will result in broad memories and deep insights once analysed (Abrahão, 2012; Riemann, 2006). Due to such concerns, this study employed more than one type of data collection.

Interviews lasting one to one-and-a-half hours were conducted online via Zoom (due to the Covid-19 pandemic) using a mixture of both open and closed questions that were planned and designed in advance through the role-identity framework (Stets & Burke, 2000; Trent, J., 2013). Included in the analysis were answers to sub-questions that extended the responses of the participants. As a full participant, the author recorded answers to the same questions, therefore limiting the possibility for sub-questions.

Each participant also wrote letters to two people of their choosing, one a musical influence and the other educational. One participant requested one letter he write be to an influential body of persons and it was agreed this was acceptable. Addressees were not required to be positive influences, allowing for the possibility participants may have re-framed negative experiences since they occurred. Data analysis was conducted using Clandinin and Connelly's (2000) three-dimensional space approach.

Musicians to Music Educators

Data analysis

Though not intentionally chronological in nature, the questions were designed to follow life developments through time and space. Clandinin and Connelly's (2000) three-dimensional space approach takes such factors into account and proved to be a highly effective analysis technique.

Three-Dimensional Space Approach

Interview transcripts were analysed using two different data tables. The first focused upon interaction, continuity, and situation/place (Ollerenshaw & Creswell, 2002) with each participant assigned a separate table. Once this was completed, a second table was designed to break down letter data by participant and recipient. Data was then compiled within a chart under similar and individual experiences. Upon completion, it was found all three participants had similar experiences but often in pairs with one outlier. Though twelve intersections and divergences resulted from the analysis, three areas were focused upon for this article: entering education unintentionally, the importance of mentors and struggle.

The Participants

This study involved three participants: two retired music educators and me, an active music educator. Participant one (P1), born in the 1950s in a western Canadian city, spent nearly forty years teaching music in several public and Catholic high schools within two provinces. Participant two (P2), also city raised, taught music for three decades in public secondary schools. Participant three (P3 – the study's author) grew up in small, northern town and has

taught twenty-one years; fifteen in secondary music settings and six years in post-secondary. Though primarily music educators, all participants also taught non-musical subjects.

Participants were male with ages in consecutive decades (forties, fifties, and sixties) and began teaching in different decades. This was purposely chosen to examine their experiences in regarding time of entrance into the profession, musical opportunity, their professional and personal lives, and to account for developments in the field (performance and education) that have changed considerably since P1 began teaching. It is worth noting that until the 1980s, professional instrumental musicians were predominately male.

Findings from the Narratives

The decision to teach is often made while musicians are in high school. Isbell (2008) found that was when 64% of music educators chose their professions while 23% made the decision in college, while Mark (1998) determined a higher number (75%) did so in high school. Isbell (2008) also concluded that 63% described school music teachers as the major influence upon their career choices. For this study's three participants, however, their journeys were more diverse as evidenced through the narratives shared in the interviews.

Choosing an Education Career

Both P1 and P2 indicated their initial career choices had not been in music performance or education and that that both academic requirements and musical abilities caused their choices to evolve:

P1: I sort of thought... become an architect. But I wasn't really strong in math. ...I started looking through syllabus and I kept coming back that music education looked like a good spot for me.

P2: To get into architecture...all you needed was any degree with a 3.5 [GPA]. And so, I figured okay, I'm doing better in music than anything else so why don't I stick with that and keep that GPA up there. So, the whole four years of the BMus was aimed at getting that GPA

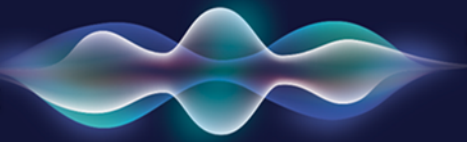
Though their reasoning differed, academic requirements clearly factored into their career decisions. However, timing differed as P1 made his decision near the end of high school whereas P2 did so later in his university degree.

P3, however, wasn't at all contemplating music education and admittedly disliked school. Becoming a professional musician had been his focus since ninth grade and found his high school music programme lacking:

P3: My school bands weren't very good. In fact, after grade ten I quit and just kept practising on my own each day for a few hours. Our house was small, so I'd drive myself down to our church [where] I'd also sit behind the piano and practise ear-training.

Though all three participants shared different reasons for studying music, the focus on performance, rather than education, was a commonality during their undergraduate degrees, with P1 focused on a mixed career in education and performance:

P1: I always thought well, what I really like to do is be able to play...five or six nights a week because at that time a lot of hotels and lounges had live music. I liked to do that because I liked playing that kind of music. The idea of being an orchestral



trumpet player never entered my mind. The idea of being able to play with a big band very much entered my mind.

However, P2 and P3 were only focused on performance rather than education when they entered university:

P2: Oh, professional musician going to university, yeah, not education at all. I fell into that. I actually completed my BMus. And...the director of the symphony...was very involved in the National Youth Orchestra...getting me to audition for that and I got alternate a couple times.

P3: By grade ten I'd been to one provincial solo festival and won all but one category in four years' worth of regional festivals. I had begun to realise that I could play almost anything I set my mind to and perhaps a career in music, symphonies, etc. was possible.

The experiences of the participants are not that different from many young musicians. As mentioned previously, immersion in a musical culture combined with countless hours practising forms a musical identity early (Bouij, 2004). As teacher education programmes require auditions, private lessons, and large ensemble participation, the focus on performance is ever-present, even for students who choose education early. However, regardless of when this choice occurred, transitioning from performer to educator was not accomplished by the participants alone but required the guidance of others.

Centrality of Mentors

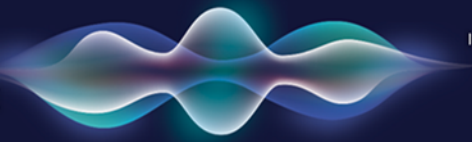
Just as most musicians' decisions are influenced by many different people during their formative and university years (Mark, 1998; Isbell, 2008), the participants had similar experiences but were often grouped in pairs under different aspects. For example, P2 and P3 had families that loved music with siblings also learning instruments. Parents carried influence through their own musical abilities or simply enjoying listening to music. Though P1's sister studied piano, family wasn't central in his decision like the others. However, all three participants identified mentors who had tremendous impacts upon them.

Both P1 and P3 were highly influenced by performance mentors during their teens and beyond in their musical pursuits. Writing to a musical influence, P1 listed many things his mentor did for him such as providing opportunities to explore, be creative, and conducting. He also indicated how traveling with him was beneficial beyond music experiences:

P1: Perhaps the greatest value was the time we had driving to and from these rehearsals. The trips took about ninety minutes each way, so we talked about a lot of things.

Music and life lessons were also common themes for P2 and P3. In P2's letter to a musical influence, he noted he had taken much that his mentor taught him into his teaching career regarding rehearsing, ensemble social dynamics, and teacher agency, but life lessons as well:

P2: your mentorship went well beyond music education and professionalism. During my university years I learned to be healthily sceptical about career and life advice from some of my professors. While I respected their musical accomplishments...I did not want "the whole package" that may come along with those accomplishments. ...you had a life/career/family balance that I admired.



P3 experienced this with his musical mentor beginning at age sixteen and lasting into university. He wrote that being from a small northern town, he knew little of the world beyond playing the trumpet when he arrived in the city. His mentor provided him with cultural and social opportunities and life lessons that were at times musical but also practical:

P3: You knew exactly how to teach me to get the best out of me musically, but you also taught me about life. You helped me question the world in which I grew up, and not to view it in terms of black and white. ... You gave me a roof over my head and food in my stomach. ... Your home always felt like my home while I was in high school, university, and beyond.

Mentors clearly played a large part in the life experiences and career decisions the participants made, aligning with Isbell's (2008) claim regarding music educator (school or private) influence. However, the findings diverged from Isbell (2008) and Mark (1998) regarding when mentors began to play a role as P1 encountered his in early secondary, P2 in university, and P3 in high school extending into university. For the latter, the mentoring lasted longer perhaps because P3 lived tremendously farther from the centre of musical opportunity and education. However, regardless of when each participants' career decisions changed, mentors had a significant role in our development.

Conclusion

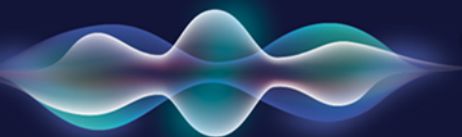
This study lays a foundation for increasing the understanding of the career choices of musicians entering music teacher education and will aid those in this field to better serve their students. Having students reflect upon their career choices in terms of when and how they were made, as well as outside influences upon these decisions, creates a starting point for stronger understanding of the purpose for becoming music educators. As this study found, the importance of mentorship upon students' career and life choices was vital in guiding them towards acceptance of a new and equally important musical identity

Due to the small participant group, it is inconclusive if their experiences extend to a larger and more diverse demographic. As the three participants in this study had experiences that are opposite the findings of Isbell (2008) and Mark (1998), with P1 making the decision near the end of high school, but P2 later into university and P3 long after completing a degree in performance. Increasing the demographic would therefore be needed to identify if experiences align more with their findings versus found in this small study. Future research is also needed to determine if the timeframe of decision-making, and the influence of mentors, would be similar if participants of diverse genders, ages, and ethnicities were included. Also, as the analysis led to an additional ten key areas of intersection and diversion not addressed here, reporting on these in future research will create a broader understanding of how musicians, students and otherwise, navigate when and how they change roles. Nevertheless, the results of this study, and the narratives of its participants provide music teacher educators with information they can apply to help students better understand that the choice to alter their career path from performance to education is not always easy, but rather a journey of decision-making aided by those who have experienced it before.

Data Analysis Table Templates

TABLE 1: Personal Experiences in Becoming a Musician and Educator

Participant:



<i>Interaction</i>		<i>Continuity</i>			<i>Situation/ Place</i>
Personal	Social	Past	Present	Future	
Inward goals, identity, acceptance of these	Family, peers, teachers, colleagues	Memories: how music became a fixture, instrument choice, how thinking and identity evolved	Current musical and educational experiences	Envisioning future musical and educational endeavours	Demographic: family, class, education (of all types), locations of interaction and career

Source: Adapted from Ollerenshaw and Creswell (2002).

TABLE 2: Analysis of Letters to Musical and Educational Influences

Musical Influence		
P1 – Childhood Mentor	P2 – Music Education Professor	P3 – Youth/University Mentor
P1 – SSSA Faculty	P2 – Summer Band Camp Mentor	P3 – Elementary School Principal

Designed by the Author

(Abstract 747)

Self-Singing Solfege and (auto) evaluation – music literacy for all?

Morel Korenand Loredana Muntean

Communicator Ltd. / ISME

ISME

Abstract

The hypothesis from which this paper starts is that music literacy may become a visible voice in music education if it will be incorporated as an organic element in the curriculum, being supported by emerging technological tools integrated with the traditional methods and contents. The article will refer to such a modern, digital, and interactive tool that may be the artificial intelligence-based Program, described in the following pages, together with some pilot results obtained using his first working versions. The article analyzes two groups of registered users: pupils and students, assessing their activities based on the data collected and continuously stored in the Program. The premise was that the users' knowledge of singing from the score was minimal (excepting users receiving private music lessons), so all the users began using the software with the first exercises especially created for beginners. The initial profile of the user's singing and subsequent continuous assessments collected, evaluated, and stored in the Program's database confirms that the progress was influenced by the time invested in practicing. There is also some evidence that, despite the difficulties, the interactive Program can help promote singing and music literacy in schools, integrating it with the existing, traditional methods and contents (as Orff, Dalcroze, Gordon, or Kodaly).

Keywords: solfege, music literacy, curriculum, integrative audiovisual technology, artificial

intelligence

Theoretical/pedagogical background of the paper

Singing can be a primary source of one's awareness of one's humanness. It can produce feelings of pleasure in the performer and the listener. Singing can unite people, and it can relieve one's loneliness. It can be an end in itself, or a means to many ends, or it can just be an unimportant thing in one's life. Singing is a learned behavior, a skill governed using a psychomotor process. The more opportunities children have to sing, the better they will sing and the more enjoyment they will gain from singing (Pihkanen, 2010).

Therefore, it is perhaps not surprising that music is figuring more significantly in the current educational policies of several of the world's governments. For example, Brazil has signed a compulsory music education provision in schools (2008). Italy's Emilia Romagna promoted vocal and choral education in primary schools (2005-2008). UK Government announced a formal Music Manifesto (2006), defined as a campaign for improving music education (Welch, 2012) and launching the National Project SingUp. Despite those positive movements, approximatively in the same period, Aróstegui (2011) presents several problems common to many countries worldwide: the lack of clarity on the role of music in compulsory education, the different meanings and uses of the term music education, the diversity and lack of focus in music teacher education programs, and the demise of music as part of compulsory education (p.12). Those are the main issues in his book [Educating Music Teachers for the 21st Century], reviewed by S. Chrysostomou (2011). However, in 2012, in Switzerland, the population voted for introducing a new article into the Constitution, ensuring access to music education in music schools for all children. In 2015, the USA signed the Every Student Succeeds Act (ESSA).

Specifically, the law provides that music and arts education be included as part of a well-rounded education.

Well-rounded music education in the 21st Century will integrate modern technology, which "can benefit both teachers and their students and allow more individuals to experience the joy and benefits of active musical participation through performance" (Bauer, 2014). Nowadays, information is everywhere, and general music education can benefit from this fact to entertain, educate, and raise generations of skilled and literate students - using all the valuable resources for these challenges. However, the New Media Consortium's Horizon Report suggests that even in 2014, digital media literacy in educators is still not common (Brown, 2014). "As music educators, we need to understand better the media they [the students] use and incorporate this technology in our daily teaching to enhance music literacy in our classrooms" (Abrahams, 2015, p. 97).

However, using a non-technological instrument, singing is part of music curricula (almost) worldwide, and in general education, it is practiced mainly by ear, for several objective reasons, including:

1. An insufficient number of hours for music literacy in primary school.
2. The impossibility to practice individual and personalized music literacy outside school.
3. Music literacy is not a primary requirement in the curricula, even though no curriculum prohibits music literacy.

Moreover, some curricula specifically mention that teachers have the right and freedom to decide and take the initiatives that may empower music education processes, as in the Romanian curriculum for grades 1 to 4: "This school program proposes a flexible offer, which allows the teacher to modify, supplement or replace learning activities." Some researchers referring to this subject affirms: "An essential element of the changes in the teacher. Independent, capable of tackling the curriculum with flexibility and liberty, the teacher has the power of continuously shaping the music teaching process, adapting it to the reality of his pupils" (Muntean, 2017-2). Or "the ones teaching musical education must have a close perception of the assets and ways through which the new technology can facilitate access to knowledge" (Pop-Sârb, 2017-2). A similar statement appears in the Finish music curricula: "Teachers have many free choices when choosing the contents and methods to be used in their teaching." (Heidi Partti, 2010). As mentioned, music literacy is not an express requirement in the general education curriculum. It is left for vocational schools and learners who receive private music lessons, benefiting from dedicated time for solfege, while most public elementary students don't. Singing solfege was, and still is considered, a tedious task, a complex and challenging activity that reclaims willingness, tenacity, and a long time for practicing, usually with a musical instrument. Nowadays, it is almost impossible to reach music literacy in public schools. In those existing conditions, after six years of music tuition in the general education system, only a few pupils may reach a minimal level of music literacy.

The AI-based Program proposes to bridge this gap by offering a system and method for helping teachers teaching and assessing and pupils practicing and self-evaluating solfege. The 4-month initial pilot in Romania, and the subsequent ones, were run to verify the Program's technology and pedagogy, and additional other pilots are proposed and planned to occur (also) in other countries.

The Program's functionalities

The Program function (a tab in the menu) briefly describes what the user will learn in each level and lesson and permits listening to all the solfeges with or without accompaniments.

The In-Class function, recommended for teaching in the classroom or online, allows listening to the Reference Solfege and Record individuals, groups, or the whole class, to playback the Recorded Solfege for critical constructive analysis or just for fun, without offering Feedback. In the classroom, only the teacher uses the Program to exemplify the solfeges, explain and teach, sing with the whole class or in groups for ~10 minutes, assigning homework. A teacher can monitor and coordinate students' activities remotely asynchronously. Students will use the Program at home several times a week, each time ~10 minutes, for individual and personalized practice. Using it for personal training outside the school, several times per week, each time ~10 minutes, the Program will help to add countless hours of guided music practice to the formal education system.

The Practice function requires registration by filling a standard form with minimum information about the user and agreeing that the recorded solfeges will be used to improve the Program's analysis. It allows users to record their performance and receive Feedback on the accuracy after each recording. First, the user chooses a solfege and displays it on the screen in standard music notation. Next, by pressing the Play button, the Program begins singing the solfege while a dynamic cursor synchronously follows the digital score's notes.

Then, equipped with an audio headset (headphone with microphone), the user activates the Record button and sings the solfege, receiving Feedback: the recorded solfege performance as a visible voice in the musical score.

After an unsuccessful recording, the musical Feedback score appears, marking the wrong solfege syllables, pitch, duration, or intensity. However, after successfully recorded solfege, the musical Feedback score seems similar to the Reference. Then, the Program automatically prizes the user sounding his recording with a pleasant accompaniment, rewarding him with Orchestra option. Finally, the Program added it to the Record submenu, effectively motivating the user to continue practicing.

The Review your work function allows users to check the results of the previously recorded solfege stored in the statistical module, both in a table format and a traditional score. The statistical table shows the name of the exercise, the type of audio guide used, the tempo, the number of successful performances, the pitch, duration, syllable, and the dynamics errors. Clicking in a row of the table will open the score, allowing a revision of the previous recordings, self-evaluation, facilitating the comparison between the Reference and Feedback.

The Adapt to your Voice function enables advanced users to take a short test designed to help the Program build an acoustic profile of the user's voice, needed to assess its performance.

My students function is for registered teachers who have received the teacher status; it allows them to create groups and monitor their students' activities remotely, asynchronously. From a pedagogical and technological perspective, the Program is an online didactic solution, interactive, audiovisual integrative program AI-based, for promoting singing and music literacy.

AI returns in 2021 as a key technology. In 2017, an EDUCAUSE 7 Things publication (2021 Educase Horizon Report) defined artificial intelligence as "computer systems that undertake tasks usually thought to require human cognitive processes and decision-making capabilities," and that definition still seems apt. While the pandemic has brought entire industries to a near halt, artificial intelligence appears to have been able to sustain its progress at a near breakneck pace. "Technology-based assessment can be extended to musical abilities and provides new possibilities for diagnostic measurement. Computer-based data collection can enhance the objectivity and validity of the measurement." (Csapó, Ainley, Bennett, Latour, & Law, 2012).

Assuming that the Program can be effectively integrated with traditional teaching-learning-assessment strategies and content specific to music education, the article analyzes its effect on developing singing from the score skills. After each recorded exercise, the Program extracts and preserves data about the acoustical components of the respective solfeges: pitch, duration, note-name, and intensity. Thus, the article presents some progress evaluation of two groups of users from the first pilot period/s, based on statistical data that has been collected in the Program continuously, following the acoustic analyzes of the exercises.

The focus of the reported research

In addition to the presented statistical data concerning the progress in singing and learning the written music language, the pilot evaluation tries to answer several central questions that

were and still are - in the developer's attention and includes: what are the benefits of implementing the Program in schools? For example, a teacher benefits from progressively organized lessons; ready to use and accessible from any place and time teaching and practicing materials in class and outside the class; enjoyable musical accompaniments; the possibility to follow (visually) the dynamic cursor on the screen synchronized with the heard or sung sound; option to assign individual and personalized solfege practice for students; the opportunity to monitor and coordinate remotely, asynchronously the students' activities; new possibilities to extend the basis for promoting music creativity and for improving the class management. In addition, students benefit from easily accessible solfege practice at home, guided by the Program's AI; options to review and enhance previous works; auto evaluation; musical prizes in the form of enjoyable accompaniments. Using the Program at home for individual practice several times a week, each, approximately 10 minutes, can benefit the educational institution/s with countless hours of guided music practice.

Method

Participants

The research includes two different groups of users from two Romanian cities, Iași and Oradea. The group from Iași has 76 pupils aged 11-12, from the 5th-grade with atherogenic academic results. The Oradea group includes 130 University students from the Pedagogy of Primary and Preschool Education path, future teachers. With an atherogenic musical background, they study music in an optional one-hour course of study and one seminar per week for 14 weeks. This optional discipline prepares them for teaching also music. Most of them are under the age of 25 and are familiar with the current technologies.

The process of data gathering

This study extracted information from the Program's statistical module as described early in Review your work function, focusing on the correctness of solfeges' acoustical parameters: name of the notes, pitch, durations, and intensities. In addition to the rich data stored in the statistical module, the students answered a semi-structured interview containing questions including How long time did you use the Program? What were the benefits of solfege practice? What needs to be improved at the Program? As future teachers, will you use it in your classes? What was the most important source of satisfaction in working with the Program?

Procedures

The Iași group of the 5th-grade have had regular in-class lessons with the teacher for ~ 10 minutes until the pandemic lockdown (March – June 2020), and only a limited number of distance lessons during the first Corona wave. However, only ~15 pupils continued the auto practice and auto evaluation activities during the pandemic period. During the lockdown, the students began working with the Program from March 2020 online, self-taught, exploring the program's functionalities, and practicing solfege. The semi-structured interviews with students are presented in a SWOT form analysis to highlight the strengths, weaknesses, opportunities, and (technical) risks they identified in this kind of educational activities.

Summary of the solfege singing evaluation

The article presents the data concerning solfege singing development in two graphs, attached at the end of the paper. The first period of using the Program was the most intense for both groups. The pupils studied less after starting online school and were no longer closely coordinated by the teacher. Twenty-two students used the program throughout the semester. For both groups, the duration and solfege syllable errors represent the minor numbers, 0 to 2,

per the total number of exercises per user. All users have mostly pitch errors, an average of 5 to 10 per total number of practices per user. The average number of errors is not increasing or decreasing at the more advanced exercises. Even though the patterns became more complex, the students learned how to cope with the increasing difficulty. Regarding the discipline of the study, we note that the average number of recordings until passing to the next exercise is around 5 per exercise, and it does not increase at the more advanced lessons - except toward the end.

About the strengths of the Program experience, 70% of the students consider that, following the study with the Program, they sing better, cleaner, 40% of them state that they have improved their musical rhythm, 20% claim that they have learned the musical notes. In addition, 30% changed their opinion on their singing skills positively. All respondents appreciate the accessibility and functionality of the program and consider it suitable for both teaching-learning and assessment.

Identifying weaknesses starts from the finding that only 17% of students persevered in the study throughout the semester. 30% of the respondents considered that the biggest obstacle in continuing the practice was technical when changing the exercise or level. 10% of the students thought that the tempo of 120 bpm in which they had to play the exercises with eights notes was too fast (toward the end of the first level).

All respondents believe that the Program can be used successfully in school, and 30% of future teachers appreciate that learning to sing solfege at an early age is beneficial for pupils.

Among other threats identified by students, which could hinder or slow down the successful implementation of the program in schools, they mentioned the lack of music literacy concept in the primary cycle's curriculum (20% of respondents), the expected resistance of the traditionalist and conservative teachers to new training methods and technologies (25%) and the fact that the program is not yet finished and officially recommended as a tool for working in schools (55%).

Conclusions and implications

Organizing an effective pilot program with the Program is not such a highly complex mission. It requests only willingness, passion, and curiosity of energetic music and general teachers. But, first, they must register for the Program, test the functionalities, and practice the solfeges for two to three weeks, become familiar with the method and content, and creating their students' groups. Then, in the first meeting in class, explaining and exemplify how to register for the Program. In the classroom, only the teacher uses the Program with a laptop and projector for around ten minutes: five minutes singing together with the Program's enjoyable accompaniments the previous lesson's exercises prepared already by pupils outside the classroom. Then, for the next five minutes, the teacher sings/presents the new solfeges and explains what to practice individually at home. During the pilot, the Program may gently introduce the study of solfege in the classroom integrating it with the existing traditional methods and contents.

Encouraging and recommending to his members to initiate similar pilots with this Program in their countries, the most visible leader in promoting music education and music making for all, ISME, can hope and expect that in Helsinki 2024, a noteworthy number of articles and research papers will report about the progress made in promoting singing and music literacy worldwide.

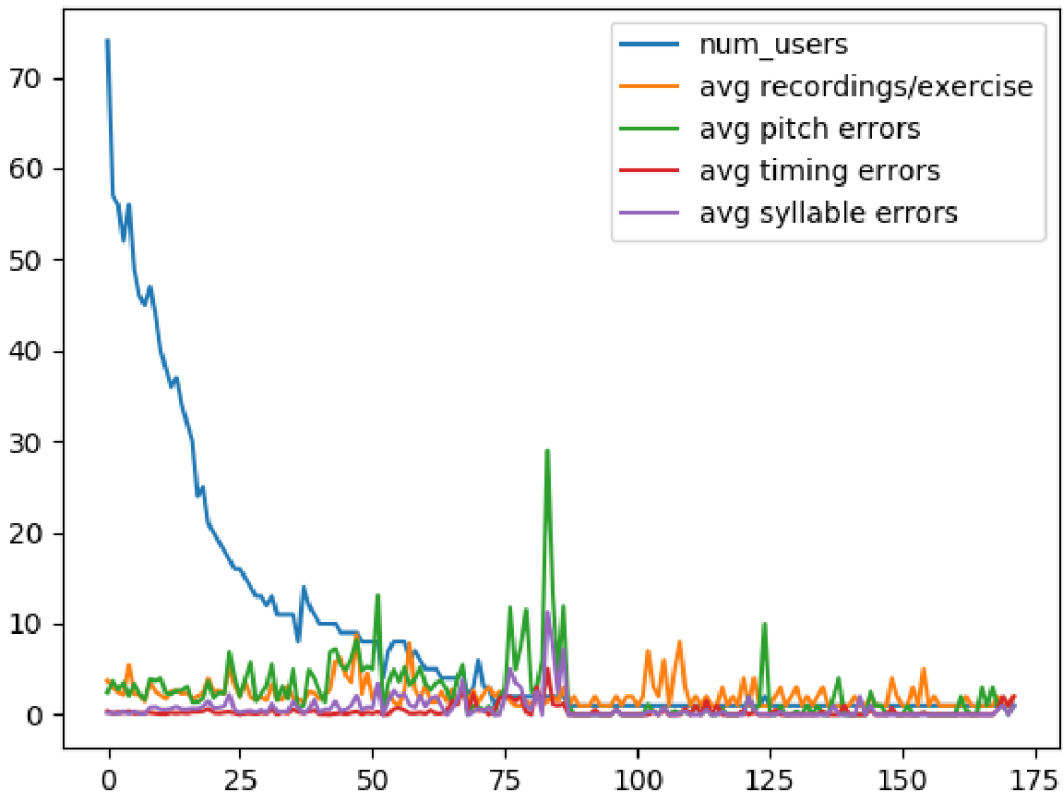


Figure 1. Pupils' evolution in practicing solfège

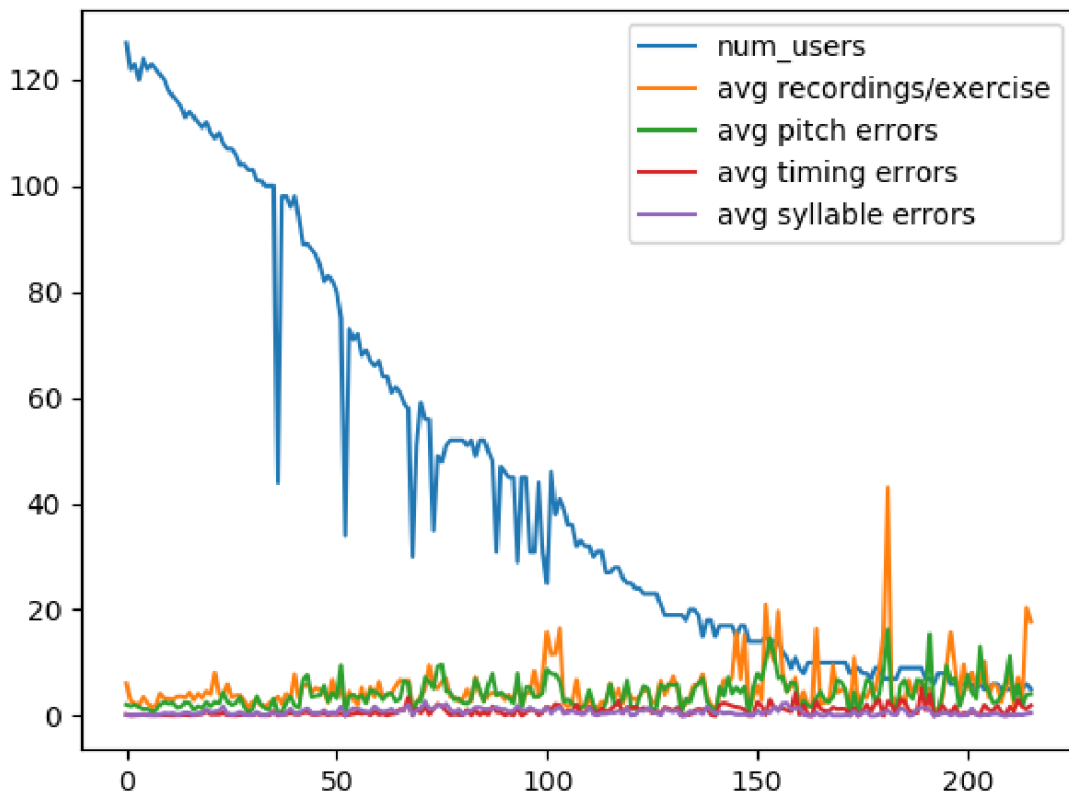
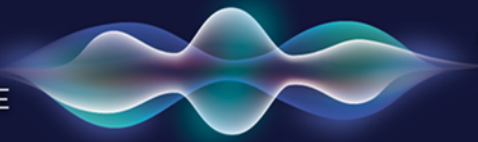


Figure 2. Students' evolution in practicing solfège



(Abstract 753)

Effects of Mindfulness-Based Intervention on Flow State and Self-Compassion During Music Practice

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Joseph Lane Middle School

Abstract

The purpose of this study is to determine the effect of a mindfulness-based intervention (MBI) on flow state and self-compassion in musicians while practicing. Specifically, the following research questions were addressed: (1) What effects, if any, will the MBI have on musicians' flow state and self-compassion during individual practice? and (2) What is the relationship between the constructs of flow and self-compassion?

A two-group pre-test/post-test experimental design was used to address these research questions. Participants (N =63) included students enrolled in an ensemble at a large comprehensive university in the Pacific Northwest. Results from a repeated measure ANOVA found non-significant changes in flow and self-compassion. Additionally, analysis from a Pearson's Correlation found non-significant correlations between flow and self-compassion. Further implications from this study have the potential to aid music teachers with a better understanding of some methods and techniques to help students improve their focus and attention while playing music.

Keywords Mindfulness-Based Intervention, Flow State, Self-Compassion, Music Practice, Music Education

INTRODUCTION

Music is a discipline that requires strong devotion to individual practice in order to acquire and develop appropriate musical skills. The acquisition of musical skills, or lack thereof, during individual practice has been observed as a predictor of performance quality in music (Duke, Simmons, & Cash, 2009). Researchers have found that musicians who demonstrate self-regulated techniques in practice exhibit the ability to practice more efficiently (Mieder & Bugos, 2017). Exploring self-regulation can help music educators provide more ways to help students focus while playing their instrument.

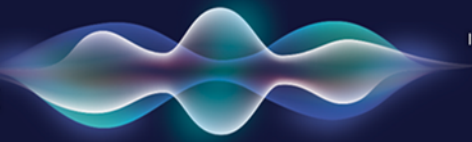
There has been an increased interest in the field of psychology involving non-Western practices that fall within the domain of self-regulation (Walsh & Shapiro, 2006). One such example can be found in the practice of mindfulness meditation. Dahl, Lutz, & Davidson (2015) describe meditation as a family of practices and created a typology that include the attentional family, the constructive family, and the deconstructive family. Kabat-Zinn (2003) defined mindfulness as, "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (p. 145). Within the framework mapped out by Dahl, Lutz, Davidson (2015) it is possible to study mindfulness meditation as part of the attentional family which can draw on a range of psychological processes including attention and meta-awareness.

The use of Mindfulness-Based Interventions (MBIs) has emerged as a holistic way to treat a variety of mental and physical health conditions (Cullen, 2011). Specifically, Mindfulness Based Stress Reduction (MBSR) programs first appeared in the United States in 1979 and were designed to study the effects of mindfulness on various aspects of human health (Kabat-Zinn, 2011). Cullen (2011) notes that MBSR courses include an 8-week treatment period that provides systematic instruction and application of mindful movement, body scan, and sitting meditation. The use of MBSR programs has been shown to increase overall positive states of mind and decrease stress (Chang et al, 2004), anxiety (Goldin & Gross, 2010) and depression (Teasdale, Segal, & Williams, 1994), while increasing attention (Jha, Krompinger, & Baime, 2007). Results from a 2015 meta-analysis showed that MBSR had large effects on stress, and moderate effects on anxiety, depression, distress, and quality of life (Khoury, Sharma, Rush, & Fournier, 2015). MBSR programs has provided promising results supporting the use MBIs for increasing attention and focus.

The use of MBSR programs provide a way to examine the effects of MBIs over 8-week treatment periods, but this model doesn't provide a clear way to study the effects of shorter MBIs. Studies examining brief MBIs provide results finding that treatment periods as short as 8-minutes can reduce mind-wandering (Mzarek et al., 2012) and a study examining a 20-minute MBI over a five-day period found increased attention and improved self-regulation in those who meditated (Tang et al., 2007). In fields such as music education where a teacher and students might not have the time or resources to support a more structured MBSR program, the effectiveness of brief MBIs is an area for further study.

Another construct falling within the domain of self-regulation is Flow Theory or flow. Flow is defined as, “the subjective state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great costs, for the sheer sake of doing it” (Csikszentmihalyi, 1990 p. 4). Csikszentmihalyi investigated the activities that elicited happiness and enjoyment in people using Abraham H. Maslow's (1943) hierarchy of needs as a foundational element for flow (Csikszentmihalyi, 1990). Mindfulness treatments have been used to examine flow in a variety of activities including sports (Bernier, Thienot, Codron, & Fournier, 2009; Kaufman, Glass, & Arnkoff, 2009; Scott-Hamilton, Schutte, & Brown, 2016), occupational work situations (Reid, 2011), and music (Diaz, 2011).

Flow has been studied in music and results are mixed. Sinnamon, Moran, and O'Connell (2012) showed that flow was very common for both elite and amateur musicians while Wrigley and Emmerson (2011) found that the majority of students did not report being in flow during their performance examination. Diaz and Silveira (2013) found that high school musicians at a summer band camp experienced flow more during large ensemble rehearsals, electives, and theory class. However, private lessons, individual practice, and sectionals were activities in which students found fewer opportunities to engage in flow. While Diaz and Silveira (2013) noted that individual practice was considered optional at camp – and low reports of flow may be reflective of that – the finding that students reported fewer instances of flow during individual practice warrants discussion. Along with differences in flow between specific music performance and music performances in general (Sinnamon, Moran, & O'Connell, 2012; Wrigley & Emmerson, 2011) Diaz and Silveira (2013) provided further evidence supporting the idea that engagement in flow depends on the person and the activity. The topic of individual practice is particularly important because deliberate practice has been associated with improvement in performance (Ericsson, Kramp, & Tesch-Römer, 1993).



Based on the association between practice and performance, addressing questions regarding flow and individual practice can provide positive implications for musicians and music educators.

In recent years, self-compassion has surfaced within Western psychology that uses mindfulness-based practices and promotes well-being. Neff (2003b) defined the components of self-compassion thusly: (a) self-kindness (b) common humanity and (c) mindfulness. While evidence supports the use of MBSR to enhance levels of self-compassion (Birnie, Speca, & Carlson, 2010), there is a lack of research investigating MBIs and self-compassion in musicians. Little research has been done studying the relationship between flow and self-compassion which warrants a need to address this gap in the literature.

While research has been conducted on MBIs, flow state, and self-compassion in isolation, there is a lack of research examining the relationship among them. Therefore, the purpose of this study was to determine the effect of a 20-minute MBI on flow state and self-compassion in musicians during a practice session. Specifically, the following research questions will be addressed:

1. What effect, if any, will the MBI have on musicians' flow state during individual practice?
2. What effect, if any, will the MBI have on musicians' self-compassion during individual practice?
3. What is the relationship between the constructs of flow and self-compassion?

Method

Design

To facilitate measuring the effects of the MBI on flow state and self-compassion, a pre- and post-test with a two-group (experimental and control) design was used. The pre- and post-test consisted of two separate 20-minute individual practice session that occurred over two days, which could be consecutive or non-consecutive. Each session was immediately followed by the completion of the two dependent measures. The use of a control group, pre-test, and post-test to measure changes in the two dependent variables, flow and self-compassion, provided a more thorough way of examining the effect of the MBI.

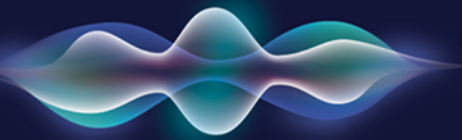
Participants

Prior to the start of the study, the researcher gained approval from the university's Institutional Review Board. Given the decision to use a repeated measures ANOVA test, an a priori alpha level of .05, a chosen power level of .80, and a medium effect size of .25 (Cohen, 1988), the researcher conducted a power analysis using the statistical software G*Power (Faul, Erdfelder, Lang, & Buchner, 2007). This program computed a minimum necessary sample size of 54 participants. Participants (N = 63) for the present study included a convenience sample of university music students enrolled in instrumental and vocal ensembles at a large comprehensive university in the Pacific Northwest of the United States (see Table 1). Participants were each assigned a number to identify participants on all questionnaires, during data collection, and during analysis. The list of participants was randomly assigned to either the experimental (n = 31) or control (n = 32) group.

Table 1

Participant Demographics

Males	Females	Other



30 28 2

Year in School						
Fresh.	Soph.	Junior	Senior	Masters	Doctoral	Other
11	15	8	11	7	6	2
Instrument						
Woodwind	Brass	Percussion	String	Vocal	Piano	
21	17	2	9	3	8	
Major						
Music			Non-music			
43			17			
Prior Meditation Experience						
Self-reported score	1 (never)	2	3	4	5 (3 times per week or more)	
Frequency of response	42	8	4	4	5	

Measures

Flow State Scale-2 (FSS-2)

To measure flow, the Flow State Scale-2 (FSS-2) was administered to the participants during the pre- and post-test phases. The FSS-2 is a 36-item questionnaire that provides a quantitative evaluation of the nine dimensions for flow: (1) challenge-skill balance, (2) action-awareness, (3) clear goals, (4) unambiguous feedback, (5) concentration, (6) sense of control, (7) loss of self-consciousness, (8) transformation of time, and (9) autotelic experience (Jackson, 1996; Jackson & Eklund, 2002). Jackson and Marsh (1996) designed this questionnaire to measure self-reports of flow using a 5-point Likert scale. The FSS-2 has been demonstrated to be a valid assessment for flow in physical activities (Jackson & Eklund, 2002), sports (Russell, 2001), relationships between flow and performance (Jackson, Thomas, Marsh & Smethurst, 2001), motivation in sports (Kowal & Fortier, 1999), and music performance (Wrigley & Emmerson, 2011).

Self-Compassion Scale (SCS)

The second dependent variable, self-compassion, was measured using the Self-Compassion Scale (SCS) which has been shown to be a valid and reliable measure of that construct (MacBeth & Gumley, Neff, 2003a, Zessin, Dickhäuser, & Garbade, 2015). Using the three components of self-compassion (self-kindness, common humanity, and mindfulness), Neff (2003a) designed a 26-item questionnaire to measure self-reports of self-compassion using a 5-point Likert scale.

Procedure

Participants were recruited by reading a standard recruitment script to intact music classes and ensemble rehearsals at the sample university. Once at the pre-test meeting location, the informed consent form was read to the participants by the researcher prior to beginning the pre-test. Following the completion of the consent process, the researcher provided a hard copy of the instructions that were also read aloud for participants.

Pretest procedures for all participants included a 20-minute practice session followed by the completion of the FSS-2, the SCS, and the demographic information. This process was identical for both experimental and control groups. One goal behind this study was to examine flow and self-compassion in a setting that replicated a regular practice session and it was decided that participants could choose to practice whatever they wanted to as long as it simulated a “typical” practice session.

Post-test procedures for the experimental group included participation in a 20-minute guided MBI session individually or in small groups prior to the post-test practice session. All MBIs were completed in the same room with the researcher present. The meditation treatment consisted of a 20-minute listening guide to raise awareness of mindfulness by having participants focus on their breath and body. The audio guide was taken from the University of California, San Diego Health Department’s Center for Mindfulness website (<https://health.ucsd.edu/specialties/mindfulness/programs/mbsr/Documents/MP3/Allan-Goldstein-Short-Seated-Meditation-01-27-15.mp3>). This guide played through laptop speakers. At the end of the listening guide, the researcher instructed participants that they would repeat the procedures from the pre-test: practice for 20-minutes and then complete two questionnaires. Post-test procedures for the control group were identical to the pre-test. To control for threats to internal validity (e.g., compensatory rivalry and resentful demoralization), the control group was emailed a link to the meditation following completion of the post-test questionnaires.

RESULTS

The purpose of this study was to determine the effect of mindfulness-based intervention (MBI) treatment on flow state and self-compassion in musicians during a practice session along with examining the relationship between flow and self-compassion. Specifically, the following research questions were addressed: (1) What effect, if any, will the MBI have on musicians’ flow state during individual practice? (2) What effect, if any, will the MBI have on musicians’ self-compassion during individual practice? (3) What is the relationship between the constructs of flow and self-compassion?

FSS-2 responses were analyzed using an independent t-test which indicated that there were no significant differences between the experimental and control groups on this measure at pre-test $t(58) = -.704, p > .05$. An independent t-test was also conducted to detect between group differences for the SCS at pre-test and indicated that there were no significant differences between groups on this measure $t(58) = .164, p > .05$. There was also no significant difference between experimental and control groups on self-reported measures of prior meditation experience $t(57) = -1.14, p > .05$.

A repeated-measures ANOVA with one between-group factor (experimental vs. control group) and one within group factor (pre- versus posttest) was conducted to analyze differences in FSS-2 and SCS scores by group from pretest to posttest. Data were examined to ensure that the assumptions of a repeated measures ANOVA were met for outliers,

normality, and homogeneity of variance (Field, 2018). Assumptions for normality and homogeneity of variance were both met; however, an analysis of box plots revealed that outliers were present. Three participants were removed since they represented outliers in the data. This included removing two participants from the FSS-2 experimental group at pre-test and one participant from the FSS-2 control group at post-test. All other groups had no outliers present. Additionally, one participant in the experimental group completed the pre-test, but not the post-test which reduced the final number of participants in the analysis to 59. Included in subsequent analyses are participants from the experimental group (n = 29) and control group (n = 30).

The repeated-measures ANOVA revealed a significant difference in FSS-2 scores from pre-test to post-test $F(1,57) = 66.63, p < .001, \eta^2 = .54$. While there was an overall significant change in reports of flow, there was no significant change in FSS-2 scores from pre-test to post-test on the basis of group assignment $F(1, 57) = .012, p = .914, \eta^2 < .001$ (see Figure 1). Results for the second research questions also indicated a significant change in SCS scores from pre-test to post-test $F(1, 57) = 11.22, p < .01, \eta^2 = .16$. Similar to results from the first research question, there was no significant change in SCS scores from pre-test to post-test on the basis of group assignment $F(1, 57) = 3.22, p = .078, \eta^2 = .05$ (see Figure 2). To address the third research question examining the relationship between flow and self-compassion, Pearson's correlation coefficient was calculated. Results from the Pearson's correlation coefficient analysis showed a non-significant relationship between flow and self-compassion at both pre-test ($r = .08, p > .01$) and post-test ($r = .09, p > .01$).

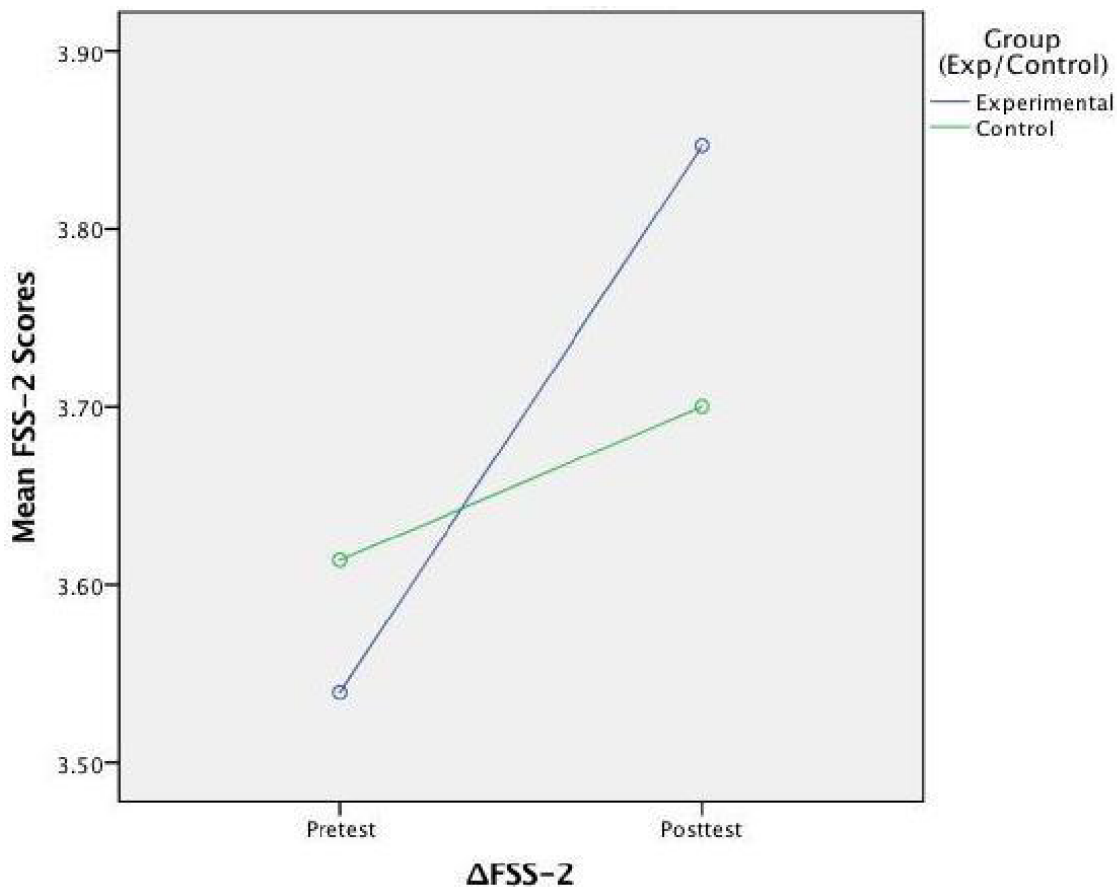


Figure 1

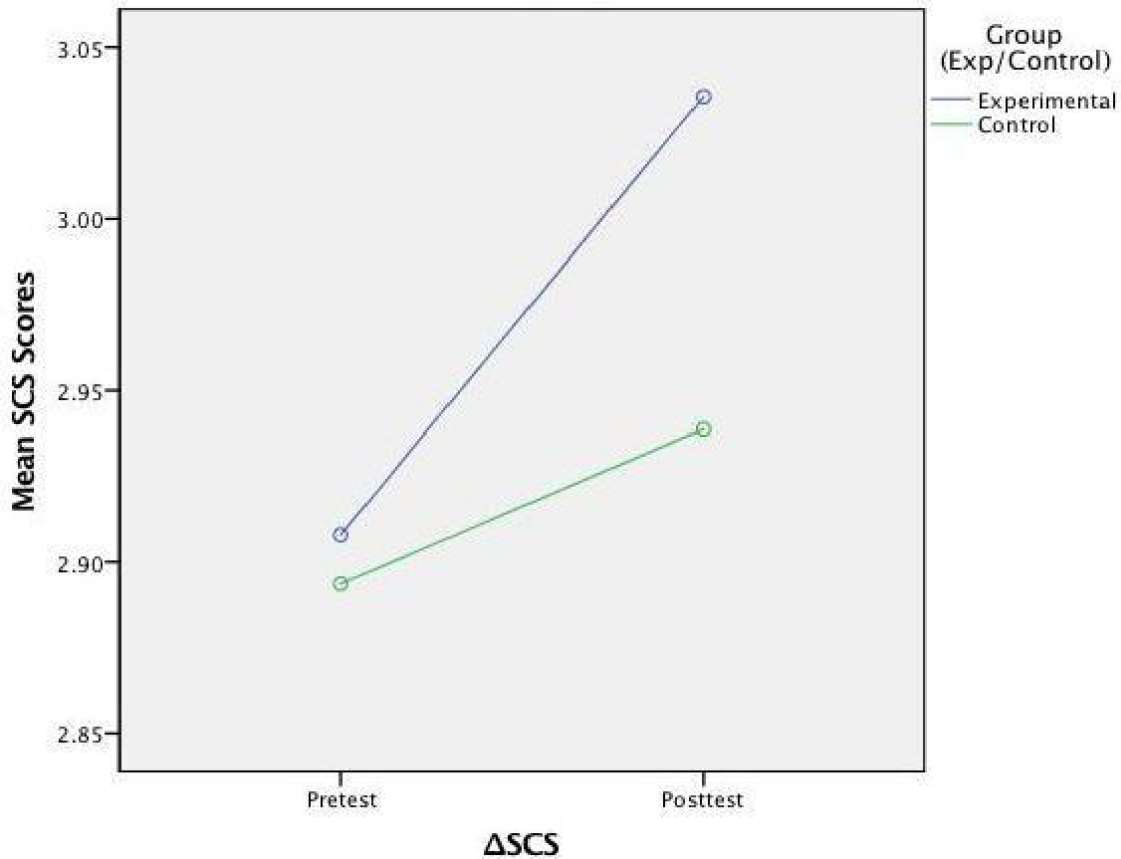
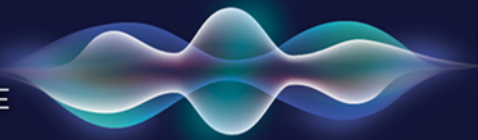


Figure 2

DISCUSSION

When looking at changes in overall reports of flow from pre-test to post-test addressing question one, it was found that there was a significant increase in FSS-2 scores. Similar to research question one, the second research question also saw significant increases in SCS from pre-test to post-test; however, there was no significant interaction by group. Significant increases in FSS-2 and SCS regardless of group indicates that other variables besides the MBI treatment may have increased perception of flow and self-compassion in the control group. Threats to internal validity such as repeated testing may have been a confound within the design of this study (Campbell & Stanley, 1963). Despite the possibility of repeated testing, the lack of significant findings may also provide evidence to suggest that the MBI does not impact measures of flow or self-compassion. While Carmody and Baer (2009) provided evidence that supported claims that brief MBI treatments may still be effective in eliciting change and Birnie, Speca, and Carlson (2010) found MBSR to significantly effect levels of self-compassion, results from the current study do not support positive increases in flow or self-compassion. Future research may benefit from a research design controlling for the time interval between dependent measures and/or explore a variety of durations and frequency of MBI treatments.

Results from research question three provided some valuable information into this underexplored relationship. Pearson's correlation coefficient determined no significant correlation between flow and self-compassion. Future studies may consider using a Solomon



Four Group Design or a double-blind research design. The lack of significance found in this relationship could mean that these constructs bear no relation to one another; however, more research is needed to support this claim.

While between group differences showed no significant results for increases in self-compassion or flow, the significant increase in these constructs for both groups suggest that more research is needed. Based on the overall increase in self-compassion and flow during individual practice, practical applications from this study suggest that it's beneficial to expose students to the ideas of these constructs to increase perception. Research investigating correlations between flow and self-compassion in music may benefit from research designs studying these constructs in relation to different contexts such as rehearsals, performances, and educational settings.

Results from this study add to the body of research involving MBIs and provides further questions regarding the duration of treatment. Classroom music teachers are constantly looking for effective ways to help students with

focus and attention in rehearsals, performance, and private practice. Further investigation into the efficacy of brief MBIs and flow has the potential to equip music teachers with more tools to develop the self-regulation process in students while also promoting well-being. Examining effects of brief durations of MBI over multiple days would provide practical information that could be applied to the music classroom. Using mindfulness meditation tools for increasing flow is an area of study that should be explored further. Studying practical ways to apply MBIs in a music classroom will provide the most fruitful and useful research for educators.

(Abstract 780)

Student Motivations and Expectations of Undergraduate PME in Scotland

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This research investigates the motivations of students, and their expectations of the aims and content of undergraduate popular music courses in Scotland. This study was undertaken to investigate any potential disconnect between students' motivations for studying PME courses with how educators feel courses should be best delivered, with particular interest in pedagogical issues around the familiar ideological debate in PME of 'training versus education'.

Data was gathered by means of a qualitative study, consisting of 17 semi-structured interviews with both current undergraduate student and graduates, with experience of studying at a variety of institutions across Scotland. Preliminary findings highlight the diversity of expectations and motivations for studying popular music courses in Scotland. This ranged from students with a largely academic, exploratory approach to their studies, to those expecting a strong industry/employability focus: with some participants highlighting the idea that they are using university study as a means to "buy time", to build careers within the music industries. A variety of socio-economic factors seem to be at play in the

development of student expectations - largely linked to participants' formative music education and experience.

Findings further indicate a notable trend in which the students with specific, industry-focussed career aspirations prior to starting university study were those who reported the most dissatisfaction with their undergraduate university experience, regardless of institution or course content – which raises further questions of if and how student attitudes should influence curricular design and implementation, going forward.

(Abstract 804)

The subject of music in early childhood education in Portugal: analysis of Practicum Reports

Ana Paula Malotti and Maria Helena Vieira

University of Minho

Abstract:

This article is part of a PhD research project¹ focusing on the presence and action of specialized music teachers in early childhood education in Portugal and Brazil. Here we present a summary of the Portuguese study. In this country, early childhood education encompasses the nursery context (for 0 to 3 year old children) and the Kindergarten context (for 3 to 5 year old children). Although Portuguese legislation allows for the presence of specialized music teachers in early childhood education, it does not make it compulsory and, therefore, the historical tradition of the generalist kindergarten teacher as the sole educator of children at this age still predominates. This teacher or educator is responsible by law for the education of nursery and kindergarten children in all areas of knowledge (including music) and the development of all competences involved. There is no official data on the presence and action of the specialized music teachers in Portuguese preschools and the literature reviewed shows a small number of sources offering information on music practice at this level of study. Music teacher education in Portugal does not prepare or professionalize for the early childhood level, so there are very few research projects or Practicum Reports directed to music education at this age level. Therefore, the most relevant information on the theme was found in Practicum Reports of early childhood education degrees. This article describes the results of the analysis of 301 Master and PhD theses focusing on the topic of music in early childhood education. They are today the main source of information about the music activities being developed in nurseries and kindergartens in Portugal. The study showed that the main activities involving music in Portuguese nurseries and kindergartens are developed as pedagogical support for other fields of knowledge and competences: music for sleeping or relaxation; music for accompaniment or motivation for another activity (such as painting, learning how to count, learning how to brush the teeth); music as reinforcement of pedagogical routines (such as good morning songs); some reports describe “musical instrument” making activities with recycled materials and singing and playing activities using those artifacts. It is evident in these Practicum Reports that music is a central area of children's interest, but it is also evident that the pedagogical activities developed by the early childhood educators are mostly subsidiary to other activities and pedagogical goals and are not strictly music activities.

Keywords: nursery, kindergarten, early childhood education, music.

1

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Introduction: educational system and early childhood legislation in Portugal

Early childhood education in Portugal is ruled by two ministries and encompasses the education of 0 to 5 year olds. The university degrees that professionalize educators for nurseries and kindergartens offer Practicum periods in those two contexts and the name of the degrees always includes the expression “preschool” (Portuguese: “pré-escolar”): “Mestrado em Educação Pré-Escolar” and “Mestrado em Educação Pré-Escolar e Ensino do 1º Ciclo do Ensino Básico”.

The education of 0 to 3 year old children is ruled by the Ministry of Labor, Solidarity and Social Security (Portuguese: Ministério do Trabalho, da Solidariedade e da Segurança Social). It is not compulsory, and it is offered in nurseries, which are defined since 2011 as “[s]ocial and educational institutions for the support of children and their families, receiving children up to 3 years old during their parents or their legal educators impediment” (MTSS2, 2011, Art. Nr. 3, Paragraph 1).

Early childhood education for children from 3 to 5 years old is also not compulsory, but the country has been making efforts to make it a universal offer: the official data for the 2019-2020 school year shows attendance rates of 83,2% of 3-year-olds, 95,8% of 4-year-olds and 99,9% of 5-year-olds (DGEEC, 2021, p. 28). This attendance is distributed between public kindergartens (133 007 children) and private kindergartens (118 101 children) – (DGEEC, 2021, p.14). This a period of education that precedes compulsory public education (1st Cycle of Basic Education – 6 to 9-year-olds, 2nd Cycle of Basic Education – 10 to 12-year-olds, 3rd Cycle of Basic Education – 13 to 15-year-olds and Secondary School – 16 to 18-year-olds).

The public system of preschool education is ruled by Law nr. 5/97 of February 10th (Assembleia da República, 1997), which is the Framework Law of Preschool Education in Portugal. It is also ruled by Law-Decree nr. 542/79 of December 31st (ME, 1979) which regulates the statutory rules of kindergarten schools.

The term “childhood education” is used in this article in a broad perspective, in coincidence with the Portuguese teacher training perspective, meaning, encompassing children’s ages from 0 to 5 (nursery and kindergarten). The fact that nurseries are ruled by the Ministry of Labor, Solidarity, and Social Security from a financial perspective, does not exclude these institutions from the supervision of the Ministry of Education, which is responsible for the training of educators and for the curricular orientations for that age level. This is common procedure in the relevant literature (CNE, 2011; DGE, n.d.; Pinho, Cró, & Dias, 2013; Serrano & Pinto, 2015; Vasconcelos, 2000).

4 In August 2011 the ministry responsible for nurseries and kindergartens was called Ministry of Labor and of Social Security (Ministério do Trabalho e da Segurança Social – MTSS). On the 29th of December of 2011 the name of the Ministry changed to Ministry of Solidarity and of Social Security (Ministério da Solidariedade e da Segurança Social – MSSS). Considering that the purpose of this article is not the accompaniment of the full history of this ministry we simply note, however, that today this ministry includes the area of Labor again: Ministry of Labor, Solidarity and Social Security (Ministério do Trabalho, da Solidariedade e da Segurança Social – MTSSS).

Music in curriculum orientations for kindergarten

Portugal follows an educational policy for arts education that is rooted in a division between specialized and generalist branches, each with their own characteristics (Vieira, 2009). The Government assigns preschool music education to a so-called “general artistic education”, described as the one “destinated to all citizens [...] and] considered an integral part of general education” (ME, 1990, Art. nr. 3). In nurseries and preschools (0 to 5 year olds) and in the 1st Cycle of Basic Education (6 to 9 year olds) a “general artistic education” is ministered by the generalist educators and teachers, respectively, and in the 2nd Cycle of Basic Education (10 to 12 year olds) children receive still, according to law, a “general music education” but this time their teacher is a specialized music teacher (Vieira, 2009, p. 531).

The OCEPE - Curricular Orientations for Kindergarten Education – of 2016

The Curricular Orientations for Kindergarten Education (OCEPE – Orientações Curriculares para a Educação Pré-Escolar) of 2016 is the main legislative document that directs curriculum planning and educational practice in early childhood education. The responsibility of its implementation belongs to the early childhood educators. The OCEPE are organized into three main curriculum content areas and Music belongs to the section of “Expression and Communication” within the content area of Arts Education (which comprises visual arts education, drama play/theater, music, and dance).

Some of the concepts underlined in the OCEPE document (such as “expressive and musical intentionality”, appropriation of “musical knowledge”, and “children’s musical competences”) value music as an important content and competence area and defend children’s use of the elements of “musical language”. Ferreira and Vieira (2019a, p. 9; 2021, pp. 56-58) have called the attention to this conceptual shift from “musical expression” in the 1997 OCEPE (ME, 1997) to “Music” in the 2016 OCEPE (ME, 2016), and to the value attributed recently to music as content, knowledge, and competence as stronger bases than restrictive child-centered “expression” for quality social interaction and development.

The development of music knowledge competences by children requires the mastering of the music language and techniques by the educator himself/herself. In 1990 the Ministry of Education was apparently aware of this need when legislating that

1 – In preschool arts education children should be made aware of the existence of the arts educational systems by the generalist kindergarten educator, but with the help of specialized teachers whenever possible, in cooperation with parents and educational tutors (ME, 1990, Law-Decree nr. 344/90, Art. Nr. 10, Paragr. 1)

The concept of “specialized teacher” expressed above refers to the teacher who has education and training in a specific artistic area, such as music. Law-Decree nr. 344/90 postpones information about the more specific qualifications required to teach each art at different age levels and in different branches of education (specialized and generalist) (ME, 1990, Law-Decree nr. 344/90, Art. nr. 33, Paragr. 1) – and that information will only be published (partially) years later. However, the legislative document does clarify that teacher training degrees should take into consideration the specific curricular aspects of preschool education, basic education, and secondary education (ME, 1990, Law-Decree nr. 344/90, Art. nr. 33, Paragr. 2). Article 34 reinforces that idea by announcing that “a specialized art teacher of preschool and of the 1st and 2nd cycles of Basic Education may teach in one or more schools [...]”. The problem is that in 1990 (and still today) there are no teacher training degrees professionalizing arts teachers for preschool levels. This means that a specialized music

teacher who might be working in a kindergarten may be specialized in music but is certainly not specialized in kindergarten education and preschool ages and pedagogy.

Specialized arts teachers are not officially expected to work in all nurseries and kindergartens today. However, legislation allows it and common knowledge and experience show that many kindergartens and parents are requiring (and even paying for) them. Many questions emerged about how to find out how many specialized music teachers are in fact working in preschool contexts, what kind of labor contract have they signed, what type of music activities are they developing, and whether they are working alone or in cooperation with the generalist kindergarten educator. Considering the limited official data available, the answers to these questions generated different types of research approaches. One of these approaches focuses on obtaining information from generalist kindergarten educators. This article describes the information obtained mostly from their Practicum Reports at the end of their master's degrees in Preschool Education.

Mapping the Master Practicum Reports and Theses and the PhD research projects

The following data resulted from an organized prospection developed between May and July of 2020 on the Portuguese Open Access Scientific Repositories (RCAAP - Repositórios Científicos de Acesso Aberto de Portugal) platform aggregator search engine. The first search words used were “música pré-escolar” and the filter by “type of document” was “Dissertação de mestrado” and “Tese de doutoramento”. Around 850 documents were generated, but these included documents that did not focus on music or in preschool (which raises questions about the search engine efficiency) or documents that had been written in other Portuguese-speaking countries.

The 850 documents were verified manually and all documents that did not focus on music and preschool (or that were about music in preschool in other Portuguese-speaking countries) were excluded. 720 documents (Masters Practicum Reports, PhD theses, and some Master theses) were selected. The 720 documents were then organized in a table indicating the institution, title, author, keywords, name, type of degree, year of graduation, and notes.

The initial search generated reports and theses from several higher education courses that were organized through the analysis of titles, keywords, and abstracts. The documents were classified into categories according: subject area (music education, generalist education, music performance, other); theme (music as the main topic, music as subsidiary to other subject areas, other); context (nursery/kindergarten, preschool age children in other contexts, 1st Cycle [6 to 9 year olds], other); author/teacher (written by kindergarten educator/generalist teacher, mentioning the presence of specialized music teachers, written by specialized music teacher, other/non-applicable).

One of the main difficulties during this process of categorization resulted from the use of broad or unspecified titles, standardized titles, vague or haphazard keywords, and uninformative abstracts that rendered the identification of the theme and of the research methodology in some of the Masters in Preschool Education Practicum Reports very complex. These reports had to be examined one by one to verify if the theme of music education in preschool contexts was in any way present. The internet browser keyboard shortcut Ctrl+F was used, therefore, to find a word or phrase in a page or document that could not be otherwise categorized.

While organizing the table structure with all the information collected, and after verifying the institutional origins of the selected documents (according to a list of higher education institutions offering kindergarten education degrees that was produced by Ferreira & Vieira, 2019b) one higher education institution was noticeably missing. Despite a note on this institution's website indicating that the Practicum Reports of the kindergarten education degrees were cataloged in the institutional repository and in connection with the RCAAP aggregator, several manual attempts were needed for the keyword or phrase searches to be successful, and for this institution's Practicum Reports to be found. These specific results were obtained by selecting "Nome da instituição" and then applying the filter "Recurso" (which allows for the selection of the desired repository of the institution) and the filter "Tipo de documento", which enables the selection of "Dissertação de Mestrado". Afterwards, it was possible to choose the field "pré-escolar" in the "Texto pesquisado" button. Through this complex procedure it was possible to identify around 350 Practicum Reports (of the "Mestrado em Educação Pré-escolar" and the "Mestrado em Educação Pré-escolar e Ensino do 1º Ciclo" degrees) of that higher education institution.

The Practicum Reports produced at this institution are in fact similar in structure to all the other Practicum Reports studied. The main difference is that the use of unspecified titles or standardized titles, vague keywords, and uninformative abstracts made it very difficult to access the documents (and this demanded extra time to manually browse through them to complete the categorization process). The same keyboard shortcut Ctrl+F was used for the search of the word "music" in those documents.

Results analysis and conclusions

The systematic review of the final selected literature focused on 301 documents. 285 are "Mestrado em Educação Pré-escolar" and "Mestrado em Educação Pré-escolar e Ensino do 1º Ciclo" Practicum Reports. These two types of degrees are the only ones that professionalize future nursery and kindergarten educators. The remaining documents are Master of Music Education Practicum Reports and theses, and a few PhD theses (Table 1).

Through the categorization process described in Table 2, it was possible to study how music is developed in nursery and kindergarten contexts in Portugal. It was also possible to collect information about the presence of specialized music teachers in those contexts, and about their interest in preschool music education.

The descriptions offered in the documents studied repeatedly underline that preschool children have an enormous interest in music. Sometimes that interest jump-starts the development of projects and activities. However, most of the Practicum Reports did not have music as the main topic. In some reports, the word "music" can be found in the list of keywords, but in fact, music is not at all the focus. Nevertheless, those reports are relevant, mainly because they offer information about the ways in which music is or is not developed in those contexts by kindergarten educators.

The results of the analysis show that in 241 Practicum Reports the music has been serving the main purpose of supporting other content areas and competences (in the fields of mathematics and language, for instance), inducing relaxation or socialization, reinforcing good behaviors or desired routines (such as daily good-morning songs, cleaning activities, or activity changes), and promoting motivation and enthusiasm for other tasks.

In 44 Practicum Reports, however, music was the central theme of the pedagogical practice project. The most significant numbers by institution are found at the University of Minho (20 reports). The Practicum Reports analyzed are very relevant today, because they are one of the main sources of information about the presence of the specialized music teacher in preschool contexts. The description of those contexts where the Pedagogical Practice of the master's degree takes place offers information about the number and types of teachers in the team of educators working in a particular nursery, kindergarten, or School Group. At least 210 reports mention the presence of a specialized music teacher in the preschool context (although it must be underlined that some Practicum Projects took place in the same institutions).

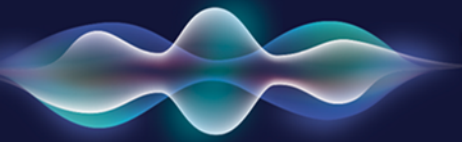
The breadth and accuracy of this data about the presence of specialized music teachers and their action in Portuguese nurseries and kindergartens are naturally very limited, but the numbers show their presence both in public and private institutions. Most reports simply mention that there is a specialized music teacher in the team; some reports, however, indicate the frequency of the activities organized by those teachers – which, in most the cases, is weekly. A few projects describe the existence of partnerships and protocols that make the presence of the specialized music teacher financially possible. A few other projects describe the existence of pedagogical collaboration between music teachers and kindergarten generalist educators.

Although this collaboration is legally possible (MEC, 2015), according to Santana & Santana (2014) it rarely happens. One of the reasons might be that teacher training degrees for specialized music teachers do not contemplate (and have never contemplated) preschool. Consequently, research done by specialized music teachers on the topic of music in early childhood education is also very rare in the numbers found in this study: 2 PhD theses and 9 Masters theses in the field of music.

Although these theses and Practicum Reports written by specialized music teachers or music researchers are in a very small number, they confirm a growing interest of those professionals in early childhood music education and describe some of their activities. Finally, those reports also reveal a critical eye of the specialized teachers on the generalist teacher's music activities.

The significance of the information collected is more than enough to raise reflection, and it is particularly important for the discussion of the curricular organization of teacher training degrees for music education at different age levels in Portugal. The presence and action of specialized music teachers in early childhood education contexts is a fact, but this reality is invisible in official reports. This article aims at being one of the first scientific contributions to the discussion of early childhood music education and teacher training in Portugal and to the international discussion about the role of specialist music teachers in early childhood education.

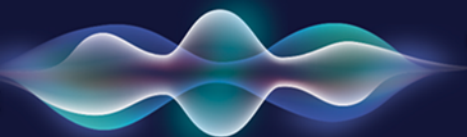
This study allows for the conclusion that there is an absence of consistent public policies for the regulation of music education labor in preschool contexts and that present legislation and curricular orientations are not enough to respond to today's reality. If, on the one hand, less prescriptive orientations favor teachers' autonomy, on the other hand, solid teacher education and technical competence seem to favor their real professional competence and autonomy levels. By the same token, Vieira (2009), Souza (2010), Penna (2013), and Figueiredo (2013) alert to the fact that the lack of specific legislation and orientations creates pedagogical discontinuities and does not guarantee a solid music education for preschool children.



The growing presence of specialized music teachers in preschool contexts is a reality wake-up call for political rulers and educational decision makers. Curricular orientations need careful examination in face of educational evolutions and sociological changes. Educational quality depends on this awareness of the dynamic involvement of teachers in curriculum development, and on the ability to predict where our educational systems might be heading.

Table 1: Categorization phases

Search Phase	Button search, Search Word/Phrase	Manual Search	Number of Reports Obtained
1	"Música pré-escolar"		850
2		Title, abstract and keyword search	- 130 = 720
3	Search for missing institution Reports "Nome da Instituição" + "Pré-escolar"		+ 350 = 1070
4		Manual Analysis Ctrl+F procedure: search for "Música" word: categorization of reports	- 769 = 301



and theses	
Total number of documents selected for the initial study	301

Table 2: Document classification

Document Type	Characteristics and information	Number of Documents Obtained
“Mestrado em Educação Pré-escolar” and “Mestrado em Educação Pré-escolar e Ensino do 1º Ciclo” Practicum Reports	Music as the main topic (44) Music as subsidiary pedagogical tool OR absent (241) Mention of the presence of the specialized music teacher in the preschool contexts (210)	285
Music Education Practicum Reports, master’s and PhD theses in the area of music	Description of a Pedagogical Practice developed by a specialized music teacher in preschool contexts OR research component carried out with preschool age children	11
Other Masters Theses and PhD theses in the area of education	Focus on the theme of music and music pedagogy with preschool age children in different contexts OR discussion of the issue of the specialist music teacher from the point of view of the teachers	5

(Abstract 816)

The Process of Developing the Second National Music Curriculum in Vietnam

Masafumi Ogawa

Yokohama National University, College of Education

Based on my experience as an international curriculum consultant for the Ministry of Education and Training--

Abstract

From May 2017 to August 2018, I worked as an international curriculum consultant for the Ministry of Education and Training of Vietnam to produce the second music curriculum

guidelines. This curriculum was approved by the National Assembly on December 26, 2018, and was implemented in 2020. This paper reports and reflects on how the curriculum guidelines were produced and decided in Vietnam and an overview. The paper consists of five sections:

- 1 How was the latest Vietnamese national music curriculum developed?
- 2 What was done in the process of producing the national curriculum?
- 3 What are the characteristics of the completed national curriculum?
- 4 How was "Japanese-style education" reflected?
- 5 What are the implications for school education and music education in the world?

The Vietnamese government has invited and hired foreign consultants to introduce a "new style" in all subjects to achieve the above objectives. The World Bank and the National Curriculum Committee of Vietnam chose the international consultants. A total of 11 consultants were selected. The countries of origin were as follows: Belgium 1, Hong Kong 1, Singapore 2, the Netherlands 1, the United Kingdom 3, Germany 1, the United States 1, and Japan 1. As the only Japanese consultant, the author collaborated with three Vietnamese consultants to develop the music curriculum. The draft of the national curriculum was produced over three phases from May 2017 to August 2018 through consultation between three Vietnamese consultants and the author.

The implications of developing a new national music curriculum in Vietnam can be described as follows: First, the process of creating a new national curriculum involves a social change through music education. The word "social change" implies huge events that transform social structure or policy at a national level. School music education is one of the most effective means to individuals of any country. Therefore, music educators should realize that teaching music is a powerful vehicle for social change.

Second, although educational reform in developing countries has been quite popular these decades, it is rare for a national curriculum guideline to be developed with overseas consultants. I admire the decision of the Vietnamese government.

The Process of Developing the Second National Music Curriculum in Vietnam --Based on my experience as an international curriculum consultant for the Ministry of Education and Training--

Introduction.

From May 2017 to August 2018, I worked as an international curriculum consultant for the Ministry of Education and Training of Vietnam to produce the second national music curriculum. This curriculum was approved by the National Assembly on December 26, 2018 and was implemented in 2020. This paper reports and reflects on how the curriculum guidelines were produced and decided in Vietnam and an overview.

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5. What are the implications for school education and music education in the world?

1. How were the Vietnamese music curriculum guidelines developed?

1.1 Education Reform in Vietnam

Vietnam has achieved remarkable economic development due to the Doi Moi (renewal) policy in 1986. This has led to the need for education reform, and comprehensive education reform was initiated by Resolution No. 88/2014/QH13 of the National Assembly of Vietnam in 2016 (Ministry of Education and Training 2017). With a grant of \$80 million from the World Bank, a fundamental reform of school education from primary to high school was launched. The project, called the Reforming School Education Project (RGEP), aims to develop a new curriculum, develop and publish textbooks, analyze and evaluate school curricula for their continuous development, and oversee and facilitate their operation (Ibid.).

In developing the new school national curricula, the Ministry of Education and Training has created a unified curriculum policy across all subjects (Ministry of Education and Training Vietnam 2017). These policies of the reform include:

- (1) the active introduction of overseas educational trends and practices,
- (2) the development of a "competency-based" curriculum, aimed at character building and the development of knowledge and skill competencies,
- (3) the development of a learning environment that allows for the constant accumulation of knowledge and the devising of ways to apply school learning throughout life,
- (4) three essential character traits: 1) independence, 2) cooperation, 3) creativity, and
- (5) four minimum skills: 1) communication, 2) computer, 3) aesthetics, 4) health (Ibid.).

1.2. About the International Curriculum Consultant

The Vietnamese government has invited and hired foreign consultants to introduce a "new style" in all subjects to achieve the above objectives. The selection of consultants was made by recommending the "National Curriculum Committee (CTC)" of each subject or the World Bank. A total of 11 consultants were selected. The countries of origin were as follows: Belgium 1, Hong Kong 1, Singapore 2, the Netherlands 1, the United Kingdom 3, Germany 1, the United States 1, and Japan 1. As the only Japanese consultant, the author collaborated with three Vietnamese consultants to develop the music curriculum.

The following seven tasks were assigned to the consultant.

- 1) Involvement in the development of the new curriculum, providing advice on terminology, objectives, ideal students and children, consistent and continuous development process, competency-based back-mapping curriculum
- 2) Advice on achievement goals for each subject, the structure of the Vietnamese curriculum guidelines, and curriculum evaluation; and Advice on the development of the curriculum.
- 3) Provide information and advice on textbook development,
- 4) Provide advice on the development of teachers' manuals based on the situation and trends in other countries,
- 5) Provide advice on the development of an online teacher training system,
- 6) Establish a research organization for the development of school education, teacher training,
- 7) Advice on establishing a research organization for school education development, teacher training, and addressing critical issues in each subject, Active participation and participation in conferences, symposia, and workshops held in Vietnam (Ministry of Education and Training 2017).

1.3. Curriculum development process and reform of the music department

The draft of the Courses of Study was produced over three phases from May 2017 to August 2018 through consultation between three Vietnamese consultants and the author. In Vietnam, music was introduced as a regular subject in school education as late as 2002 (the first round). Only singing education and music theory were taught, with no instrumental music education such as recorder. Also, as an "art course," it is taught together with arts and crafts, and the textbooks are combined with arts and crafts (Khai 2011).

The study of the new curriculum began with three Vietnamese consultants proposing changes based on the first curriculum guidelines for each music grade area. The author gave his opinions on these changes and made new proposals based on overseas trends. In particular, the author was asked to explain the purpose and structure of the Japanese Courses of Study, various problems associated with the introduction of instrumental music education, methods of developing child-centered classes, and the balance between Western music and traditional music in Vietnam. In Vietnam, not only music but also teacher-led knowledge transfer style classes are still the mainstream, and the know-how on this point was a great suggestion. I also advised that "listening" should be a part of all music activities, and this has been introduced as a pillar of the national music curriculum.

2 What was done in the process of producing the curriculum guidelines?

2.1 Shifting from "activity-based" to "competency-based"

The new national music curriculum has shifted from "activity-based" to "competency-based." There are three basic competency categories to be achieved along with the grade. The first is "performance skills" of singing, playing instruments, and creating music. In Vietnamese terms, it is called "show music." For example, at the elementary school level, students are required to be able to "sing along and sing with others," "express melodies and lyrics," "describe the nuances and feelings of the song."

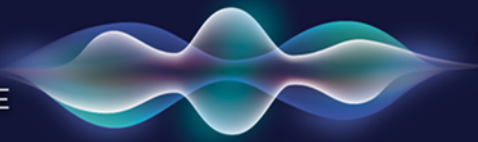
The second competency is "feeling and analysis skills." In Vietnamese terms, it is called "feel and savvy." Students are required to analyze and construct the meaning through musical experience. For example, they are asked to "know the assessment of skill to express the music of themselves and others at the junior high school level."

The third competency is "transfer skills." In Vietnamese terms, it is called "application and music creation." The new curriculum explains this as to "connect the capacity, use of knowledge, skills and music experience into practice," "understand and use music in relationships with history, culture and other types of art."

2.2. Introducing music as one of the electives of the art subjects at the high school level

The new national music curriculum has introduced music subject as one of the art subjects at the high school level. The reason for this is because the new curriculum regarded the upper high school period as "the stage of choosing a future occupation." It is also the stage for finding talented youths in all subjects, including music. Therefore, it is assumed that a student with musical talent would be encouraged and supported by the government to pursue their music study.

2.3. Introducing music instrument



One of the most salient characteristics of the new national music curriculum is introducing the musical instruments into the music classrooms. Before this educational reform, Vietnam was the only country that did not include musical instruments in music activities. It may be an inevitable consequence that Vietnamese school education included instrumental music education to match the world trends of school music education in the world. However, there has been a struggle with introducing instrumental music education into the music classes. There were no courses for instrumental teaching methods in the teacher training colleges in Vietnam, nor did any in-service Vietnamese music teachers have experience teaching musical instruments. Starting a new thing is challenging, as always.

2.4. Introducing “Listening” as core activities throughout the grades

The new Vietnamese music curriculum introduced listening as one of the core activities in the music class. Listening has not been included as a core activity in the previous music curriculum in Vietnam. I have proposed the importance of "listening" in music activities at the appreciation and the playing or singing.

"Listening" is added as a core music activity throughout grades 1-12.

2.5. Evaluation criteria are changed from three to five

In the previous national curriculum, the evaluation criteria for music class were three folds; Knowledge, Skills, and Attitude. The new curriculum set five new criteria for evaluation, Activities, Knowledge, Feeling, Creativity, and Application. The new curriculum put more emphasis on application and creative skills than the former.

2.6. Introducing “movements” within the music classes

It was also new to introduce movements into the music curriculum in Vietnam.

Movement activities did exist in the previous curriculum. However, it was restricted to expressing the meaning of the song texts. Body actions within the music activities have not been exercised before, such as body percussions, dancing with the music. It is assumed that music had been taught separately from moving bodies in Vietnam. In fact, "body percussion" was denied being included in the curriculum because it is not considered part of musical activities. A summary of curriculum changes between the past and the present is shown in the table below.

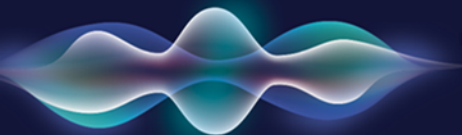


Table 1. Difference between the Past and the Present Music Curriculum of Vietnamese Schools

GENERAL INFORMATION ABOUT VIETNAMESE MUSIC EDUCATION	
Past	Present
<p><Primary & Secondary></p> <ul style="list-style-type: none"> • Music is compulsory in the school curriculum from 1st to 9th grades — one class per week. A class period is 35 minutes in primary schools (grades 1-5) but 45 minutes in middle schools (grades 6 -9). • Music is taught in ordinary classrooms, clubs, in and out of schooltime. • Students do not play any musical instruments. • Some teachers can play musical instruments (PK) to support music class. <p><High School></p> <ul style="list-style-type: none"> • No music subject. 	<p><Primary & Secondary></p> <ul style="list-style-type: none"> • Music is a compulsory subject in the school curriculum, from 1st to 9th grade. • Music is taught in ordinary classrooms, clubs, in and out of schooltime. • Students play various musical instruments. <p><High School></p> <ul style="list-style-type: none"> • From grades 10th to 12th, music is an optional subject with special musical topics taught to gifted music students who love music. • Music is taught in art clubs, out of schooltime.
<p>Music education content:</p> <ul style="list-style-type: none"> - Singing - General music knowledge - Musical Theory - Solfège 	<p>Music education content:</p> <ul style="list-style-type: none"> - Singing - General music knowledge - Musical Theory - Solfège - Instruments
<p>Content-Based Music Education Curriculum</p>	<p>Competency-Based Music Education Curriculum</p>
<p>Teaching and Assessment Criteria</p> <ul style="list-style-type: none"> - Knowledge - skills - Attitude 	<p>Teaching and Assessment Criteria</p> <ul style="list-style-type: none"> - Activities - Knowledge - Feeling - Creativity - Application
<p>Only one Music Textbook Set used all over the country</p>	<p>Various Music Textbook Sets are used all over the country.</p>

Information Compiled by YAMAHA Vietnam (YAMAHA Vietnam 2016)

3 What are the characteristics of the completed Courses of Study?

The final draft of the Vietnamese national curriculum was completed in June 2018 and sent to the reviewing committee. After a few corrections had been made based on the reviewing committee's recommendation, the national music curriculum was legalized by the Vietnamese congress vote on December 26, 2018. The new curriculum became effective in 2020 from the first and seventh grades.

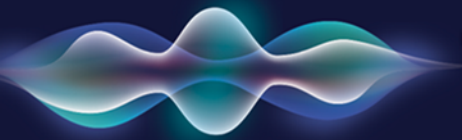
3.1. Structure

The curriculum consists of eight units; (1) Course characteristics, (2) Perspectives regarding the curriculum, (3) Objectives, (4) Output achievement standards, (4) Educational contents, (5) Specific requirements, (6) Assessment, (7) Interpretation and implementation guidance, and (8) Glossary (Ministry of Education and Training 2018).

3.2. Aims

There are five fundamental aims of music education in Vietnamese schools.

- 1) To foster aesthetic feelings and love music, Have Rich spiritual life, formation, and development Qualities High Beauty.
- 2) To experience and explore musical arts through various activities, development of communication capacity, and cooperation.



- 3) Formation and development of the characteristic musical capacity based on the platform Knowledge and skills of popular music, thereby Developing self-motivation and self-study.
- 4) Recognizes the diversity of the musical world and the relationship between music with culture, history, society, and other types of art, forming the sense of protection and famous traditional music values
- 5) To promote the potential of musical activity, with appropriate career orientation, development of the capacity to solve problems and creatively (Ibid.).

3.3. Curriculum contents and sequences

In the new music curriculum, there are six units of music activities to be studied. Singing, listening, reading, musical instruments, music theory, and general musical knowledge. There are sub-categories of contents under each unit. The contents units and order of introduction are presented in the table below.

Table 2 Curriculum contents and sequences of the Vietnamese music curriculum

Content	Class											
	1	2	3	4	5	6	7	8	9	10	11	12
SINGING												
Age of Student Songs	√	√	√	√	√	√	√	√	√	√	√	√
Vietnamese folk	√	√	√	√	√	√	√	√	√	√	√	√
Foreign songs	√	√	√	√	√	√	√	√	√	√	√	√
LISTENING												
Music lyrics	√	√	√	√	√	√	√	√	√	√	√	√
Music without Words	√	√	√	√	√	√	√	√	√	√	√	√
READING												
C- major	√	√	√	√	√	√	√	√	√	√		
a- minor				√	√	√	√	√	√			
Major and minor modes with 1 - 2 sharps and flats										√	√	√
MUSICAL INSTRUMENTS												
Rhythmic	√	√	√	√	√	√	√	√	√	√	√	√
Melodic				√	√	√	√	√	√	√	√	√
Harmonic						√	√	√	√	√	√	√
MUSIC THEORY												
Notation and Common symbols				√	√	√	√	√	√	√	√	√
Additional musical knowledge						√	√	√	√	√	√	√
GENERAL MUSICAL KNOWLEDGE												
Learn Musical Instruments	√	√	√	√	√	√	√	√	√	√		
Musical Story	√	√	√	√	√							
Composers and Musicians	√	√	√	√	√	√	√	√	√			
Performance styles; musical forms, and structure	√	√	√	√	√	√	√	√	√	√	√	√
Music and Life						√	√	√	√	√	√	√

4 How was "Japanese-style education" reflected?

During the curriculum development process, I have been asked to advise Vietnamese music colleagues in detail. Therefore, my opinion and knowledge about the curriculum from Japan and foreign countries were reflected and embedded in the curriculum to some extent. At least five characteristics are identified in the new Vietnamese curriculum. First, Japan's Guidelines for Teaching Music have adopted emotional goals (emotion, rich musicianship). Second, the introduction of the child-centered approach was first introduced into the curriculum. For example, introducing ice breakers, creative expression are entirely new activities for Vietnamese music classes. Third, the concept of using one teaching material in multiple areas of singing, instrumental music, and creative writing is introduced, which is unique in Japanese school music education. Forth, the range of content for physical expression was

expanded (non-locomotive movements), and body percussion was adopted. Furthermore, newly inserted "listening activities" show that listening is necessary for all musical activities.

After implementing the new curriculum, various movements and developments accompanying instrumental music are expected in Vietnamese school music education. It is also inevitable that need to change the mindset of Vietnamese teachers and urgent reform of teacher training programs (there are still few educational universities with music education departments). In addition, training researchers in music education is necessary. There are only a few who can be active in international communities such as ISME.

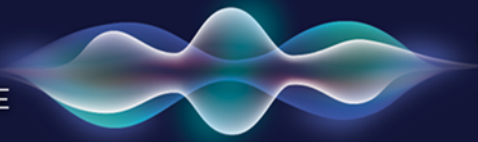
5 What are the implications for school education and music education in the world? First, the process of developing a new national curriculum means involving a social change through music education. The word "social change" implies huge events that transform social structure or policy at a national level. School music education is one of the most effective means to individuals of any country. Therefore, music educators should realize that teaching music is a powerful vehicle for social change. We are armed with the power of music and could negotiate with society and the authorities to better our environment.

Second, educational reform in developing countries has been quite popular in these decades. However, it is pretty rare for a national curriculum guideline to be developed with overseas consultants. I admire the decision of the Vietnamese government. In Japan, it is impossible that the original draft of the national curriculum was prepared solely by music education specialists. Developing the Vietnamese music curriculum reminded me that the Japanese government developed the educational system about one hundred and forty years ago. Japan invited a music educator from the United States and cooperated with the Japanese musicians to set the national school music curriculum.

Lastly, it became clear that there are some countries where music is not a compulsory subject in the school curriculum. Also, it became clear that some countries have a new approach to music education that has yet to be introduced. Therefore, I would like to propose the following statements to an international music and music education organization.

ISME, Other International Music Organizations, and UNESCO Should:

- Keep pushing some countries where music has not yet been included in the school curriculum.
- Keep pushing some countries where music subject is peripheral in the school curriculum.
- Inform and Encourage that Every Music Teacher has the power for Social Change and Social Reform.
- Inform and Help to Where and How Music Teachers Should Use Their Power in Their Situated Environment.
- Appeal the Importance of Music Education to the Society and Advice to the Government to Prioritize Music Education soon national projects.



Engaging Deeply With Cognitive Science In A Conservatory Of Music: Using Student-centred Learning To Enhance Learning Outcomes In Music Students

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Abstract

Concepts from cognitive science (CS), including music psychology and performance science, are rarely taught to conservatory students, even though these topics are likely useful for their practice and performance of music. This study examines the effectiveness of student-centered learning (SCL) and project-based learning (PBL) methods for teaching CS to undergraduate conservatory students in a module on The Psychology of Music Performance. The results gleaned from student assignments and feedback show that the module activities, especially the SCL and PBL components, were largely successful in deeply engaging the students, resulting in knowledge acquisition as well as critical thinking. The findings suggest that a well-balanced teaching approach incorporating elements of SCL and PBL is capable of instilling both breadth and depth of learning of relevant CS findings in the music conservatory context.

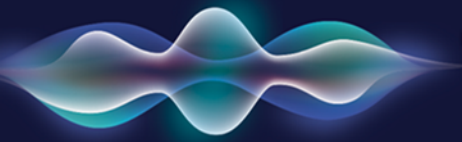
Keywords: Student-centered learning (SCL), project-based learning (PBL), interdisciplinary pedagogy, psychology, music performance, learning outcomes

Introduction

Cognitive Science (CS) has informed best practice in a range of applied areas such as sports and pilot training (e.g., Williams & Leffingwell, 2002), but comparatively little CS research has informed the practice and performance of music. Although some studies do explicitly connect CS and music performance (e.g., Thompson et al., 2006), there is relatively little awareness and engagement from music students with this knowledge. At the same time, teaching CS to conservatory students may prove challenging, as most music students are not familiar with this discipline or its analytic, scientific approach. This paper explores a new module taught by the first author on 'The Psychology of Music Performance', which was offered at an internationally-acclaimed conservatory of music. The module covered topics such as memorization techniques, empirically-informed practice strategies, and music performance anxiety. In terms of the teaching approach, the module aimed to leverage student-centered learning (SCL), and project-based learning (PBL) more specifically, to enhance student motivation, engagement, and learning outcomes.

SCL is an instructional approach that tailors classroom activities and assessments to the students. PBL is a type of SCL in which students are presented with a hands-on opportunity to solve real problems by conducting a project (Blumenfeld et al., 1991; Krajcik & Shin, 2014). In a PBL classroom, students are responsible for their own learning by designing, executing and reflecting on their projects (English & Kitsantas, 2013). This approach allows students to explore topics that they find genuinely important, which tends to foster higher engagement and deeper understanding (English & Kitsantas, 2013), and can even help students achieve better learning outcomes compared to traditional methods (Kokotsaki et al., 2016; Bell, 2010).

In music education, student projects have a long tradition (Tobias et al., 2015), with examples of PBL found in music education training (Cayari, 2015; Lasauskienea & Rauduvaiteb, 2015)



and in general music education classrooms (Bamberger, 1999). To our knowledge, however, PBL has not been applied to help university music students internalise scientific concepts, such as those from CS, in order to improve their performance practice, even though PBL is likely an ideal approach for this goal (Tobias et al., 2015).

Given the strengths of SCL and PBL, we aim to evaluate the effectiveness of these approaches in teaching cognitive and performance science to conservatory music students, focusing on a new module that incorporates interactive teaching and learning (T&L) methods. We analyzed the impact of these methods on the module's learning outcomes by evaluating students' assignments and module feedback (see Table 1).

Table 1. An overview of the teaching methods, intended learning outcomes, and data sources used in this research.

Teaching/Learning Methods	Learning Outcomes	Data sources
<ul style="list-style-type: none"> Classroom activities (lectures, assigned readings, demos, educational games) Student blog posts (SCL) Individual research project (PBL) 	<ul style="list-style-type: none"> LO1: Factual learning and conceptual knowledge LO2: Critical thinking and reflection LO3: Engagement 	<ul style="list-style-type: none"> Blog Research project Focus group discussions

The three learning outcomes used to gauge the module's effectiveness are 1) factual learning and conceptual knowledge, 2) critical thinking and reflection, and 3) engagement. These outcomes are broadly based on the revised Bloom's taxonomy as applied to music education (Hanna, 2007). Bloom's taxonomy revolves around the tenet that applying knowledge is more important than simply acquiring knowledge (Bloom et al., 1956), which is highly compatible with our goals for the SCL and PBL approaches.

The first learning outcome broadly maps to the lower two levels of the Bloom's taxonomy, and refers to students' ability to recognize, recall, and understand the concepts taught. To define critical thinking (LO2), we drew inspiration from the upper two levels of Bloom's taxonomy (e.g., analyze, evaluate, create), which have been shown to be a suitable gauge of critical thinking (DeWaelche, 2015). This view emphasizes that critical thinking involves higher-order thinking skills such as analysis, reflection, and metacognition. The third learning outcome (engagement) refers to the degree of involvement and effort that students expend towards classroom activities and assignments, and whether they applied what they learned outside of the classroom. We adopted a cognitive and behavioural approach towards assessing engagement (see Wang et al., 2014), which encompasses meaningful processing of

information, strategy use, participation/effort, and observable displays of motivation in students.

Study Methods and Module Information

Participants

13 out of 21 students enrolled in The Psychology of Music Performance module volunteered to participate in this study (participation refers to allowing the research team access to their de-identified module materials for analysis). All but one of the participants were music performance majors enrolled in [conservatory name]; the remaining student is a serious musician who plays in the [university name] symphony orchestra. All student data were coded using participant numbers (P1-P13) before analysis.

Module Overview

Lessons in the 13-week mode were comprised of lectures (with accompanied readings), in-class discussions, and activities such as “game show questions” and demonstrations. The module activities, and how they were analyzed for this research, are briefly outlined below.

Blogs

Students were asked to write a blog post every week to reflect on how the weekly topic (such as “techniques for combating performance anxiety”) relates to their practice and performance of music, and to later comment on their peers’ posts. The blog posts were assessed in terms of evidence of Recall, Application, and Evaluation.

Individual Research Project

The module’s main assessment activity was an individual research project, conducted throughout the second half of term, in which students implemented and empirically tested a strategy of their choice from those taught in class, examining the strategy’s effect on their practice of music. Of the topics discussed, deliberate practice was the most popular among the students, followed by music performance anxiety. Before starting their projects, students had to submit a research plan for their proposed research project. After receiving at least one round of feedback and submitting a revised plan, they carried out their projects for four weeks. Finally, they submitted a written report, and gave a brief presentation to the class.

The students’ reports were analyzed through a deductive process of identification, summarization, and analysis of patterns (recurring ideas across students) to assess the impact of the module on the three intended learning outcomes.

Focus group discussion

Semi-structured focus group discussions (FGDs), facilitated by the teaching assistant, were held online at the end of the module. These groups consisted of 6-7 students, and each FGD lasted approximately 90 minutes.

The discussions were transcribed from audio recordings and proofread to ensure accuracy. The data were then coded according to whether the students’ utterances corresponded to learning outcome LO1, LO2, or LO3 (column 2 of Table 1), and classified based on the teaching and learning (T&L) method (column 1 of Table 1). Trends from the FGD were then identified, distilled into key points, and assimilated with the trends identified from the

research projects in an iterative process. Our findings from this process are described below for each of the module's LOs.

Results and Discussion

We analyze below the ways in which the various T&L methods helped students achieve the stipulated learning outcomes.

LO 1. Factual and Conceptual Knowledge

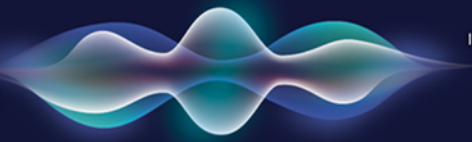
Overall, students were able to effectively grasp the majority of concepts taught in the module, although expectedly, the extent of understanding varied across students and topics. Although evidence of LO1 was found across all T&L components, the classroom activities, especially lectures and readings, provided the basis for most factual and conceptual learning. The FGDs revealed that the readings were seen as difficult. The majority of students found the lectures significantly more accessible, and helpful in clarifying the readings.

In terms of the SCL/PBL components, analysis of students' blogs confirmed that the majority of students demonstrated recall and application in their weekly blog posts. Evaluation and self-evaluation were less consistently present in their responses and seemed to depend heavily on the blog prompt. Overall, however, the blog posts demonstrated that students were able to recall and discuss factual and conceptual information they had learned. In addition, all students successfully managed to execute their individual projects, and motivate their projects by citing appropriate literature, which demonstrates sound understanding of the materials. Students reflected in the FGDs that the blogs and research project encouraged them to review the class materials regularly, which several students described as helpful in deepening their learning. In other words, classroom activities facilitated the majority of factual and conceptual learning, and SCL/PBL activities promoted greater interaction with this knowledge.

In terms of the facts/concepts learned, students made various comments in the FGDs about how the module (in general) introduced them to concepts that were beneficial for their music practice and "being able to perform at a better level" (P7, FGD1). All students indicated that they aim to take forward at least one strategy they learned in the future, and many mentioned that they will refer to this module when confronted with future musical challenges. According to the FGDs and project reports, students found the most helpful facts/concepts learned in the module to be deliberate practice techniques (e.g., interleaved practice strategies), mental rehearsal, and strategies for combating performance anxiety.

In terms of T&L challenges relevant to LO1, a difficulty in teaching this module is that some topics and strategies are more relevant for certain instruments/individuals than others. Whereas some students were able to, e.g., generalize instrument-specific strategies for their instruments, others found this challenging, especially when asked to write and reflect about these topics in their blogs. For this reason, a few students remarked that traditional assessment options, such as quizzes, would be a good alternative to blogs to test their factual/conceptual knowledge.

In summary, students were able to gain a solid factual and conceptual understanding of the course material, with the foundation of their knowledge acquired through classroom activities (primarily lectures and readings), and a deeper understanding, review, and application of the concepts stemming from the SCL/PBL components (blog posts and individual projects).



LO 2. Critical Thinking and Reflection

A theme that emerged across the projects and FGDs is that the module helped students be more intentional and analytical during their practice sessions. Students commented that while it can be difficult to ascertain whether a strategy would work well for them based on the lectures and readings alone, the project allowed them to test and personalize strategies. Students acknowledged that it was not until they had applied concepts/strategies in projects and in-class demos that they realized that some of their previous mindsets and behaviours were counterproductive, such as practicing “in auto-pilot mode”, having self-defeating thoughts, or failing to set practice goals. For example, one student reflected, “During the data collection, I proved that my practice sessions in the past were very mindless!” (P13, research project). After recognizing these patterns, students evaluated how the strategies they learned could help solve their problems.

During PBL, students often expressed that their solutions involved thinking more critically when approaching practice and performance. Some students even made detailed evaluations of how and why the strategies they tried worked, or did not work, for them. This process facilitated reflection and self-discovery:

After pondering upon the data, I came to the conclusion that the results make sense. Though I was more confident in playing when I was implementing Strategy A, as the color coding helped build a solid system and memory in my head, I was totally discarding the musical aspect of the music. I was very much just playing it through. But for Strategy B, when I listened to recordings before performances, I often feel more inspired and expressive in my execution. (P5, project report)

In terms of SCL, students remarked that writing and reading their peers’ blog entries also helped them analyze which strategies work for them, reflect on their practice, and ultimately understand themselves better (e.g., in their approach to certain musical activities), and. For many students, (self-)reflection gradually became an ingrained feature of their practice. For example, one student recounted, “if I start to like, split a note or maybe switch a note, I would, instead of continu[ing] to practice it mindlessly, I would ponder, ‘why did I miss the note?’.” (P6, FGD1)

Further, several students were able to go beyond the facts they learned by personalizing strategies or connecting disparate topics. For instance, one student’s project involved using deliberate practice strategies to tackle performance anxiety, while another student tailored the existing memorization strategies according to her needs. This ability to generate new approaches from existing materials embodies the pinnacle of Bloom’s Taxonomy (i.e., “create”). An example of this is below, which also highlights the prevalence of critical thinking in students’ projects:

If [P10] said that we’re going to a clothes store and all the [class] material are the clothes, then for me, it's not only like they look good by themselves, but when I try them, I need to kind of adjust something... for me, I also need to, kind of change the material a little bit by myself... for example, I use the memory map. But I find out that for me, [I] would prefer to like... create a story line when I... memorize a piece instead of just analyze the score... Yeah, so ...[the] individual project helps me, and this really gave me a lot of like my style. (P9, FGD2)

Lastly, several students also expressed in the FGD that they are more open to analytical thinking and adopting a psychological approach to practice and performance after taking the module. This change in mindset shows that a SCL/PBL approach has the potential to shift fundamental perspectives. While the blogs, in-class discussions and demonstrations prompted students to critically examine and reflect on what they had learned in lectures/readings, the greatest evidence of LO2 stemmed from students' individual projects.

LO 3. Engagement

Students displayed many signs of being engaged (i.e., motivation to learn and apply knowledge) by the interactive components the module (SCL, PBL, and in-class discussions/games/ demonstrations) but found the readings comparatively less engaging. A recurring theme throughout the FGDs was on the benefits of applying strategies to their music practice (as required for their blogs, projects, and demonstrations). As one student aptly summarized, "when we learn, it's a different thing from applying it" (P1, FGD1). Students mentioned that the benefits of applying their knowledge included: knowing that the strategies works for them personally, having a more in-depth understanding of the topics, and providing motivation to attempt/persist with the strategies. Some students particularly appreciated how the project and blogs motivated them to implement strategies and reflect on them regularly through structured assignments.

When you read [the strategies] in the reading it's like, okay, this this this happens, so we must do A-B-C, and then... it will magically fall into place. But most of the time that's not the case. Had it not been for the project right, I would have probably given up after a couple days.... But I think it was thanks to the

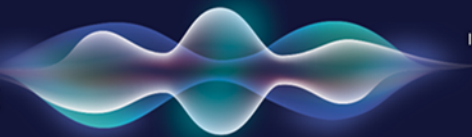
project which... kind of in that sense "forced" me to keep at it, and it was only after a certain period of time, did [my playing] ... improve. (P7, FGD1)

The projects promoted active involvement and positive engagement from all students. Views on the other main SCL component (blogs), however, were mixed. Some showed little engagement, especially when they did not believe the blog's topic applied to themselves. Others thought blogging was the best part of the module, seeing it as a way to interact with other students, reflect on their own struggles, and find friends tackling similar issues. Writing blogs fueled engagement in most students by encouraging regular reflection on concepts/strategies, and through interaction with peers: "I think for me, it was mostly the blog post that I found very helpful... not only for self-reflection, but... I thought it was really important for fellow musicians to share experiences..." (P12, FGD2).

Students also found the classroom activities to generally be engaging. In the FGDs, many students remarked that the lectures (including slides and entertaining videos) were engaging, as well as the in-class discussions and activities, especially the educational games and live demonstrations, which helped bring factual information alive.

Lastly, a few students mentioned spending time outside of class to do further research on the topics that they found interesting, or to practice new strategies. This shows a deep level of engagement and commitment to the material. Overall, students found the readings the least engaging, lectures, classroom activities, and blogs to be quite engaging, and live-demos and projects to be extremely engaging.

Conclusions and implications for music education



We have examined the impact of the T&L methods on the three target learning outcomes in this module on 'The Psychology of Music Performance.' The interactive SCL/PBL approaches were found to be particularly successful in enhancing conservatory students' engagement and ability to apply concepts from cognitive science towards their practice and performance of music.

Naturally, the T&L methods each had their relative strengths and weaknesses for achieving the three LOs. While classroom activities facilitated the greatest factual/conceptual knowledge, they did not produce the greatest reflection or engagement. In comparison, the individual projects bolstered critical thinking, reflection, and engagement, but they necessarily focused on one topic of the student's choice, rather than allowing for a broad selection of concepts to be learned, as was possible through the classroom activities and blogs. Arguably, it was the breadth of traditional classroom activities and blogging, combined with the depth of the individual projects, that facilitated learning, critical thinking, and engagement in the module. As a result, we suggest that an effective teaching approach for helping students learn and apply CS concepts to their practice of music involves balancing traditional teaching methods with SCL/PBL approaches.

(Abstract 861)

Online environment as a music learning resource for adult choir from the perspective of self-regulation

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Abstract

This work is part of a doctoral research based on the Social Cognitive Theory (Bandura, 1978) that aims to investigate how an online learning environment applied to choral singing could be developed from the point of view of self-regulation of learning (Zimmerman, 2000). In addition, some issues related to the design of instructional material in multimedia environments will be pointed out from the perspective of information processing and the principles that involve cognitive demands. This study proposes the continuity of the Master's research, in which a survey and the application of digital technologies that could contribute to the development of musical perception, expansion of the musical and cultural universe of the choir, as well as organizational and administrative aspects related to the conductor were carried out. In its entirety, for the method, the doctoral research aims to develop a study of mixed methods through a quasi-experiment applied to a sample of non-professional adult choristers in an online learning environment. This article specifically, focuses on addressing some issues related to the use of online learning environments, as well as taking a survey to explore the potential and the resources that could be used in a hybrid way in music education, especially in the choral area based on self-regulation. As a result, some resources of a Learning Management System (LMS) and its possibilities of application of activities to choral singing developed from the point of view of self-regulation were explored and described. It is expected that the instructional material be designed in a way to manage cognitive processing of choristes, as well as contribute to the development of self-regulation. Furthermore, the work will encompass aspects involving metacognition, emotions and motivation of chorus singers in order to increase the engagement and motivation of

choristers. Regarding the implications for music education, the use of these resources could be extended to other areas of music education, such as musical instrument teaching, music and schools and early childhood music education. This research may contribute to the development of online learning environments applied to music education. **Keywords:** choral singing, hybrid teaching, self-regulation, online environments.

Introduction

Digital technologies can be used as a supportive tool for learning in music education. Non-professional choirs can be developed in different places, such as schools, communities, churches or companies and are usually made up of volunteers who are music amateurs. Choral singing is a space that contemplates the potential development of singers in rhythmic, melodic, harmonic and even emotional and social aspects. The practice of choral singing has been severely affected during the coronavirus pandemic. However, the use of video communication services such as Zoom, Google Meet, Microsoft Teams and other resources allowed the continuity of meetings and virtual rehearsals with the choirs.

This work is part of a doctoral research based on the Social Cognitive Theory (Bandura, 1978) that aims to investigate how an online learning environment applied to choral singing could be developed from the point of view of self-regulation of learning that, according to Zimmerman (2000, p. 14), “refers to self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals”.

Zimmerman (2000) structured cyclical self-regulatory phases which are known by forethought phase, performance phase and self-reflection phase. The forethought phase precedes action and refers to task analysis and the establishment of goals and strategies considering self-motivation beliefs, such as self-efficacy and outcome expectation. The performance phase is related to self-control and take into account the self-instruction and attention focusing. This phase occurs during the learning process. The self-reflection occurs after performance and includes self-judgment with self-assess and self-reaction. After the actions are carried out, there is a process of self-reflection, which in turn influences the forethought that involves planning and defining strategies, completing a cycle of self-regulation.

This study proposes the continuity of the Master's research, in which a survey and the application of digital technologies that could contribute to the development of musical perception, expansion of the musical and cultural universe of the choir, as well as organizational and administrative aspects related to the conductor were carried out. The research was applied for three months with a college adult choir and involved face-to-face and virtual activities. The environment that integrated all the resources used was the Google Classroom platform. The study was accomplished before the coronavirus pandemic and was based on Technological Pedagogical Content Knowledge (TPACK) framework (Mihsra & Koehler, 2006).

In its entirety, for the method, the doctoral research aims to develop a study of mixed methods (Creswell, 2014) through a quasi-experiment applied to a sample of non-professional adult choristers in an online learning environment (Campbell & Stanley, 2015). Considering the wide possibilities of musical studies that could be carried out by the choir singers through an online platform during the week, even after the return of the in-person rehearsals, this article aims to address issues related to using online learning environments, to take a survey to explore the potential of online learning environments, and

to describe some resources that could be used in a hybrid way in music education, especially in the choral area based on self-regulation.

Hybrid teaching and information processing

Linder (2017, p.12) indicates that “hybrid education is an additional way that instructors can ensure that students are engaged with the course content by incorporating online learning communities, synchronous and asynchronous discussion, and a variety of online collaboration methods”. This type of approach can promote the singer's interactions with their peers, as well as with the conductor during the week, creating different possibilities for musical learning.

In addition to the hybrid teaching proposal, this study considers the information processing from a constructivist perspective. Information processing assumes that the human mind forms mental representations and is based on the existence of the visual and auditory channels, on limited processing capacity in working memory, on active processing that requires student engagement during learning and on knowledge driven which concerns the integration of knowledge established in long-term memory (Mayer, 2012).

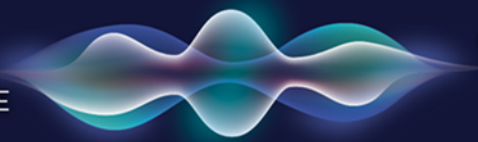
Information processing assumes the existence of three cognitive demands: extraneous processing, essential processing and generative processing. Extraneous processing refers to cognitive processing brought about by instructional design that does not support learning objectives, as well as unproductive instructional design. Essential processing is related to the content to be assimilated. Content with more complex aspects will require more essential processing load. Generative processing is a cognitive processing that will make sense of the material and is related to the student's motivation to learn the content (Mayer, 2014).

Considering the aspects involving the three cognitive demands, the amount of information circulating in different types of media, such as applications, social networks, web pages and the non-linear characteristics of online environments, students need to pay attention to what is essential so as not to overload the working memory. A principal cause of "disorientation" and "cognitive overload," often cited in open-ended hypermedia learning environments, has been the quantity of simultaneous information which a learner needs to process (Iyohsi & Hannafin, 1998).

With the objective of creating and using multimedia instructional environments, three principles were developed in order to conduct the three demands of cognitive processing: reduce extraneous cognitive processing which refers to free up cognitive capacity for essential and generative processing, manage essential cognitive processing which is intended to provide more space for generative processing, and foster generative processing which aims to encourage the student to engage more deeply in learning (Mayer, 2014; Mayer, 2012).

Self-regulation of learning encompasses cognitive, behavioral and social aspects that act together and can interfere with the actions of individuals (Usher & Schunk, 2018). Although cognitive issues related to information processing must be taken into account in the design of an online instructional environment, musical learning in choral singing also involves emotional and motivational aspects of singers. Thus, besides the cognitive processing issues involved, the conception of an online learning environment that promotes singers' self-regulation must consider the singers' metacognitive, emotional and motivational aspects.

Learning Management System



The elaboration of a specific environment for choral singing that could be used in a hybrid way, would demand the existence of financial resources or sponsors, as well as the formation of multidisciplinary teams involving the areas of music education, computing, information technology in education, among others. Another issue involved is related to the software's intellectual property, which would make access difficult for a large number of educators. On the other hand, open source software projects may eventually be discontinued for different reasons.

A learning environment can be defined with the concept of Learning Management System (LMS), which according to Paulsen (2002, p. 5-6) is used to define “systems that organize and provide access to online learning services for students, teachers, and administrators. These services usually include access control, provision of learning content, communication tools, and organizations of user groups”. Additionally to the resources relevant to a learning platform, it is possible to incorporate music software and websites, such as digital audio workstation (DAW), music notation software, video sharing service using the software ecosystem concept which can be defined as “the interaction of a set of actors on top of a common technological platform that results in a number of software solutions or services” (Manikas & Hausen, 2013, p. 1297).

There are currently several paid LMS, such as Blackboard, D2L-Brightspace, Canvas and Schoology, as well as open source platforms like ATutor, ILIAS and Modular Object-Oriented Dynamic Learning Environment (Moodle). It is worth mentioning that the proprietary software platform, Microsoft Teams, besides its business use, provides educational resources and has been widely used in schools and colleges.

The purpose of this article is not to classify which would be the best LMS to be used, as this will depend on the partnerships that the school or university in which the educator works makes with the companies that supply these services. However, as a way to expand the possibilities of using for choir conductors who are not linked to a school or university, some features of LMS Moodle will be explored, which is an open source environment that has been widely used in schools and universities and it has a community of developers, educators and administrators around the world.

Resources applied to choral singing in aspects of self-regulation

First, the design of the instructional material intends to consider the principles of reducing extraneous cognitive processing, manage essential cognitive processing and foster generative processing, so that choristers can focus on learning music.

Considering the structure of cyclical phases of self-regulation of learning, in forethought phase, the student could plan the objectives to be achieved, as well as the strategies to be used. The conductor could assist in setting the goals, as well as proposing deadlines for carrying out the activities. In this sense, the calendar feature could be used, as well as the assembly of a Google G Suite table or spreadsheet, here applying the concept of software ecosystem. The calendar is a useful resource for sending choristers reminders about dates and activities (Copeland, 2009).

During the learning process, in performance phase, there are different types of tools that could be explored in individual activities as well as in collaborative tasks. The lesson is a resource that allows the insertion of different types of content and questions and can be

programmed so that the singer is directed to a more basic or more advanced level, depending on the results of

the tests performed. When performing an activity that is easier, the singer with little experience can gradually improve their self-efficacy, as well as those who already have more experience in the activity can move on to more challenging activities (Schunk, 2012). This type of resource can help balance the learning of heterogeneous choir students regarding musical experiences.

In performance phase the conductor could use the file folder feature and upload audio files from the repertoire, choir videos, sheet music, lyrics, among others. The file folder could be associated with the task resource in which the chorister would be asked to send the analysis of a song or even the recording of a piece of the repertoire to be later evaluated by the conductor. The musical performance process can lead students to reflect on what was produced (Bauer, 2014).

Other resource that can be used in performance phase is wiki that is a collaborative tool and allows students to build activities collectively. A possible application of the wiki would be to develop a creative music listening activity with students. Kratus (2017), for example, proposes that students listen to a song and (in this specific case it could be a recording of a choir) seek to develop the elements of fluency, flexibility, elaboration and originality. In the fluency aspect of listening, students could write a list of things they thought or felt. After this step the singers could share their notes with other members on the wiki. In the development of flexibility, singers would be asked to listen to a recording, write at least one rhythmic, melodic, harmonic and even an imaginative aspect about the music that could be represented in an image or story. In the elaborative aspect, the singer would be encouraged to perceive contrasting aspects in the music and to register them simultaneously. In terms of originality, the student would be stimulated to listen to the music and write something he or she imagined or felt that no other member would write. At the end of each stage, the singer would be asked to make changes to the wiki and to observe the way in which the other members perceived and felt the same music (Kratus, 2017).

As a collective activity, choristers can research musical terms, composers and different types of choirs and can use the glossary resource. In order to share ideas about activities relevant to the choir, such as rehearsals, trips and get-togethers, the forum resource could be used. This resource could also be used to foster musical issues among the group (Weidnaar, 2013).

In the self-reflection phase, the choristers may be invited to write in the diary tool their impressions about the activities developed in a given period, as well as reflect on their development and on the need to change or try another strategy in carrying out the tasks. The self-reflection activity can allow the student to assess their facilities, difficulties and challenges in a given topic.

Another resource that could be used in the three phases is the questionnaire. This tool can provide feedback to the chorus singers about the development of the activity, which could encourage self-reflection. In this sense, the importance of evaluation and formative feedback is highlighted. Carless et. al (2011) point out that feedback can contribute to the self-regulation of learning and that it needs to be carried out continuously in activities to support students to foster future activities.

Conclusions and implications for music education

This article proposed to discuss some points involving the use of online learning environments applied to adult choral singing. It turns out that there are open source Learning Management Systems (LMS) that could be used in a hybrid way in teaching an adult choir. The online learning environment would expand the possibilities of interactions with the group and the conductor and would allow the development of multiple musical skills due to the time that could be devoted to learning different concepts.

As a result, some resources of the LMS and its possibilities of application of activities to choral singing developed from the point of view of self-regulation were explored and described. The learning environment could be cyclically assessed and improved. These resources could be extended to other areas of music education, such as musical instrument teaching, music and schools and early childhood music education, for example.

It is expected that the instructional material be designed in a way to reduce extraneous cognitive processing, manage essential cognitive processing, foster generative cognitive processing of choristers, and contribute to the development of self-regulation. Beyond cognitive issues, the work will encompass aspects involving metacognition, emotions and motivation of chorus singers in order to increase the engagement and motivation of choristers. This research may contribute to the development of online learning environments applied to music education.

(Abstract 898)

The Didactics of Minkaringana from Mozambique: Searching potentials for musical arts education through the IKS

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Abstract

Storytelling has long been used in oral traditions as part of the Indigenous Knowledge Systems (IKS). This study seeks to understand Minkaringana (indigenous musical storytelling from Mozambique) as part of the IKS of Mozambique, and how it may be used in musical arts education. For understanding the context of IKS as a whole and of storytelling in particular qualitative research was conducted, grounded in the lenses of phenomenology, transformative theory and the social-constructivism paradigm. Data was collected in KaMatala (a countryside location of Maputo province in Mozambique) where a community storytelling event was organised for this study, and in KaMubukwana Municipality of Maputo Town where some families arranged family storytelling sessions. TV and Radio broadcasting station also offered digital resources of past programs in which storytelling was featured. The findings have shown that the colonial past of Mozambique, the globalisation trends, and the early political context of Mozambique have negatively impacted on the application of the IKS as a means for entertainment and transmission of knowledge in Mozambique. Minkaringana is part of IKS in Mozambique and have shown to be equipped with features that may be suitable to scaffold musical concepts in musical arts learning and teaching settings of Mozambique. However, this musical storytelling practice has fallen out of favour

and neglected, especially in townships where people have more access to entertainment and information options available using modern technologies.

Keywords: Indigenous Knowledge Systems (IKS); musical storytelling; minkaringana; musical arts education; didactics.

(Abstract 937)

Learning Differentiation Music Education Theory Course Development: From Praxis to Practice

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ABSTRACT

“Learning Differentiation Music Education Theory Course Development: From Praxis to Practice,” is a theoretical exploration of curricular course development for pre-service music educators as an extension of Learning Differentiation Music Education Theory (Raponi, 2019). The course design focuses on the transformative impact of music education through a learning differentiation music education theoretical framework and examines socio-inclusive issues in the music education classroom, including praxial learning environments with diverse social and cultural contexts, differentiated abilities, and teaching and learning issues among identified special needs students in music education settings. Other categories of students in music education settings in LDMET curriculum construction include those from varied backgrounds such as racial and cultural origins, language groups, sexual identity, religion, gender, English Language Learners, and socio-economic situational family units. Specific musical characteristics and the needs of multiple types of learners are examined along with varied teaching methods and strategies to employ in inclusive settings. Philosophical and theoretical foundations are grounded in Paulo Freire’s (1968) *Pedagogy of the Oppressed*, Elliott and Silverman’s praxial curriculum theory, Tomlinson’s differentiation theory, and Markku Kaikkonen’s (2016) philosophical manifesto “Music for All.” (2016)

Fundamental methods of LDMET in course practicum

LDMET is structured according to five core pillars: Environment, Content, Process, Assessment, Praxis, conceived from a philosophical foundation of teaching and learning that integrates all aspects of personhood and learning diversity. Musical action and creation represents the foundation on which all teaching and learning domains are embedded. The methods approach proposed in the course seeks to embed fundamental aspects of the pillars of LDMET through a critical understanding of practicum-based knowledge of varied learner needs in inclusive contexts. Expectations of fundamental aspects of practicum based knowledge is fully outlined in the paper and include some of the following learning outcomes:

Demonstrate an understanding of:

- critical concepts social-emotional environmental constructs to establish positive learning environments.

- delivering curriculum through differentiated instructional strategies with multiple pathways for expressive music and listening-as-knowing.
- social justice issues within various educative contexts including, but not limited to oppressive barriers, privilege, and racialized educative infrastructure.

LDMET curriculum development, as conceived from praxial musicing and differentiation teaching and learning methods, may lay the groundwork for pre-service music educators from which they may design curriculum to address varied learner needs, teach mindfully and confidently throughout the learning process, and shape the musical learning of each individual in mixed ability, full inclusion contexts.

(Abstract 942)

Musical Formation in the state of Goiás - Brazil in the 19th century: agents and institutions

Flavia Maria Cruvinel

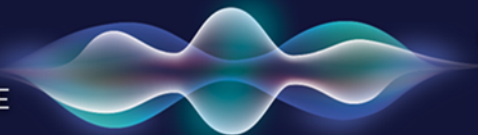
Federal University of Goiás

This text is linked to the Research Project "Music Formation Brazil in the 19th Century" (PI01937-2016) and the Research Group on Music and Formative Processes, from the School of Music and Performing Arts of the Federal University of Goiás/Cnpq and aims to investigate the processes of musical formation in nineteenth-century Brazil. The family musical tradition via inherited cultural capital (Bourdieu, 2004) was decisive in promoting the field of musical production in Goiás. Tourist attractions: Vila Boa de Goyaz, current City of Goiás, Pirenópolis, Corumbá de Goiás and Jaraguá. As a method of investigation, the Bourdieusian praxiology was used (Bourdieu, 2004, 2013, 2014) through the construction of the object via Social History, from the sociocultural context of Goiás nineteenth century. From the literature review of authors such as Mendonça (1981), Pina Filho (1986), Borges (1998), Souza (2007, 2013), Cruvinel (2007, 2018), Pinto (2012), Vieira (2013), Laurindo (2017) and research in primary sources in periodicals of the time: "Correio Oficial de Goyaz", "O Publisher Goyano", "A Plebe: Pátria e Povo" "O Porvir" and *Jornal do Commercio*, available at Hemeroteca Digital of the National Library As results, it is expected to reveal the relations of power and music, as well as which are the dominant agents and institutions in the field of music production, as well as what were the conceptions, teaching methodologies, repertoires and practices that permeated the training music in cities surveyed in the 19th century.

Keywords: Musical Formation; Agents and institutions; Brazil; XIX century

Introduction

Since the beginning of the settlement of Goiás in the 18th century, music has been present in the Goiás scene, both in religious festivals and in activities related to the rural bourgeoisie that validated the power structure (Souza, 1998) through recitals, musical soirees and theaters with music called operas in a private environment. In this context, the two main gold extraction centers stand out: Nossa Senhora do Rosário de Meia Ponte, currently Pirenópolis, and Vila Boa de Goyaz, current Cidade de Goiás and former capital. Although these two cities are considered the most developed in terms of music production, other villages also



presented outstanding musical life, such as Corumbá, Jaraguá, Santa Luzia (Luziânia), Bonfim (Silvânia), Santa Cruz and Traíras.

In the first decades of the settlement of the old Arraial de Sant'Anna, territory of the legendary Goiás or Guayazes Indians, (Meireles, 2014) in the 18th century, music was present in the Goiás scene. Mendonça (1981) states that the precursors of musical education in Goiás were linked to the church, as was usual at the time. Already in the year 1760 there is news of the festivities due to the restoration of health of D. José I, the then newly installed governor João Manoel de Mello summoned the entire city to celebrate for eight days when the city was all lit up as required by the occasion and the program included parades of troops, mass sung "by good musicians" when at the end of the sermon a Te Deum Laudamus was sung and in the evening, a banquet at the Palace was offered, followed by a Mask Ball. (Betran; Faquini, 2002 apud Souza, 2007).

Vila Boa de Goyaz had a considerable musical program such as staging of plays with musical accompaniment, recitals in the homes of traditional families and at the Government Palace. The capital of the State of Goiás at that time had several musical organizations, in addition to the Musical Bands, where musicians occupied a prominent position in society. In the 19th century, there are records that Teatro São Joaquim, inaugurated in 1857, received companies from Rio de Janeiro and São Paulo, forming a demanding audience in Goiás audiences (Meireles, 2014). Through recitals, musical soirees and theaters with music called operas in a private environment, the city had several musical organizations, in addition to Musical Bands, where musicians occupied a prominent position in society. Among the important figures in this period are José do Patrocínio Marques Tocantins and his wife Anna Francisca Tocantins who would form another family of intellectuals and musicians.

The family musical tradition via inherited cultural capital (Bourdieu, 2004, 2011) was decisive in promoting the field of musical production in Goiás. The Marques Tocantins family was formed by various agents in the music scene of the former capital, led by the couple José do Patrocínio Marques Tocantins and Anna Francisca Tocantins. José Tocantins was a music teacher at the Liceu de Goiás and drew up the institution's music education program in 1882. He founded and conducted the National Guard Music Band in 1864 and the Philharmonic Orchestra in 1870. He also worked in the press, being editor of the newspaper The Goyano Publisher. In her large family, music and lyrics were present in the family's daily life, which draws attention due to the number of women active in music and in the press, such as Anna Gabriella Tocantins, Luiza Suzana Tocantins, Maria do Rozario Xavier de Barros and Joana Pereira Marinho who worked in the office of typographers-composers, being responsible for the intellectual part and for the separate works of this periodical.

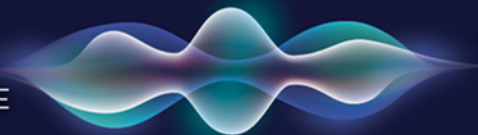
In Meia Ponte, currently Pirenópolis, the work of the Rodrigues Nascimento family, descendants of São Paulo, contributed decisively to the cultural development of the city in the 19th century. The head of this family, professor José Inácio do Nascimento (1787-1850), considered a great artist in the region. "In teaching, he was master of other masters; the music, was instrumentalist of the classical musical group that existed in the beginning of the 19th century, composer and conductor of the Igreja Matriz; in theater, he acted as director, ambassador and actor (...)" (Pina Filho, 1986, p. 2). He belonged to the instrumental group directed by Father José Joaquim Pereira da Veiga (1770-1840), living in the village of Meia Ponte with musicians Hilário dos Santos Silva (17?-1815) and Manoel Joaquim Batista (17?-1850) and others musicians considered to be from the second generation of half-breeds (Pina Filho, 1986).

The family musical tradition, that is, the cultural capital inherited by the Bourdieusian bias, allowed other members of this family to dedicate themselves to the study and the musical profession, such as Father Francisco Inácio da Luz (1821-1879), Nascimento's first son, responsible for the creation an orchestra and the Corporación Musical Euterpe. In turn, he took care of the musical education of his brother, Antônio da Costa do Nascimento (1837-1903), known by the nickname Tônico do Padre, master of music and outstanding composer, left approximately four hundred titles of musical works (Pina Filho, 1986). Likewise, he acted as musical director of the Church, also exercising the activity of teacher, following the tradition of musical education in Goiás when most of the precursors were linked to the Catholic Church (Mendonça, 1981). His most outstanding students such as Joaquim Propício Pina founded the Phoenix Music Band and Silvino Odorico de Siqueira was the master of the Euterpe Music Band (Pina Filho, 1986). In the city of Corumbá de Goiás, the first Music Band “União Corumbaense” was founded in 1866 by Father Manoel Inocência da Costa Campos. In 1890, another band was created, “May 13th”. The bands were responsible for musical training, constituting schools whose methodology was based on theoretical initiation, instrumental technique and ensemble practice aimed at rapid musical training and focused on the needs presented. (Borges, 1998).

Little is known about the educational processes and who the agents were and which institutions were present in the field of music production. Musical training was based on theoretical initiation, instrumental technique and ensemble practice aimed at rapid musical training and focused on the needs presented (Borges, 1998). On the other hand, in popular tradition, the revelry of the kings was already present in the Goiás scene when the passage of the French traveler Saint-Hillaire witnessed a group that collected donations for the Festa do Divino in Curralinho, a village around Vila Boa (Moreyra , 1983).

Methodology

The methodological path of this research, based on praxiology as a method based on the work of Pierre Bourdieu (1930-2002), brings epistemological principles for the investigation of social phenomena, especially those belonging to the symbolic field. The author conceived a way of thinking and analyzing through exhaustive research in order to unveil issues considered fundamental to the social world, such as the processes of domination, cultural heredity, the social trajectory, forms of entry, permanence and success in school career, among other topics. Thus, the praxiological method was constructed from observations of the practices of the relationships between structure and conjuncture in a dialectical way. Taking as a starting point the basic concepts such as habitus, field, capital, the Theory of Practice seeks to break with the objectivism-subjectivism dichotomy present in the analysis of social phenomena, understanding the social space in the dialectical relationship between the structure and the social agent, resulting in of simultaneity between the interiorization of the exteriority. In this way, it was decided to investigate the object, families of musicians in the field of cultural production in the City of Goiás in the 19th century, based on their Social History from two perspectives: bibliographical research and documental research. To build the Social History of the investigated object, the bibliographical research will be returned from the literature review consisting of research available in Thesis Banks, books and scientific articles. The literature review will be based on the works of Mendonça (1981), Borges (1998), Souza (1998, 2007, 2020), Cruvinel (2007), Dias (2010), Pinto (2012), Vieira (2013), Santos and Clímaco (2018), as well as in primary sources through periodicals from the 18th century Goiás made available by the Hemeroteca Digital of the National Library.



In the second phase of the investigation, in addition to continuing the bibliographical research, documental research will be carried out for periodicals of the time present in the Hemeroteca Digital of the National Library (<https://bndigital.bn.gov.br/hemeroteca-digital/>). In the previous work plan (2020-2021) the following journals available in Hemeroteca Digital were researched: Revista do Instituto Historico de Goianna (GO) - 1871, O Porvir (GO) - 1882, O Publisher Goyano (GO) - 1885 to 1889, Almanak de Goyaz : Calendar for the year 1887 Compto Ecclesiastico (GO) - 1887, The Plebe : Homeland and People (GO) - 1890, The Cross : Catholica Magazine (GO) - 1890 to 1891, Jornal do Commercio (GO) - 1880, Correio Official de Goyaz (GO) - 1837 to 1921, 1882. From the search for keywords such as "Music", "musical", "instrument", "orchestra", "band", "choir", "singing", "piano", "violin", "opera", "mass", "party", "maestro", "regent", the following data were found: 1) In the periodical O Publisher Goyano (GO) - 1885 to 1889, from the keyword "Missa" two mentions were found of Pedro Celestino, musician and one of the founding partners of the Phil'harmonica de Goyaz society; and a band composed of members of the Fleury Curado family. 2) No foot Almanak de Goyaz : Calendar for the year 1887 - Compto Ecclesiastico (GO) - 1887 the hiring of music teacher Joaquim de Sant'Anna Marques in Vila Boa de Goyaz was announced; 3) In the periodical A Plebe : Pátria e Povo (GO) - 1890, on September 15, 1890, on page 2 the societies of the time and workers were mentioned. Telegrapho Societies, Societies: Loyalty and Charity, Mechanical Artists, Liga Operária Musical 13 de Maio, Operários do Progresso, Club Republicano, Recreativa Gorrápio. The Caixeiral Class in the city of Goiás; 4) Correio Official de Goyaz (GO) - 1837 to 1921 has 14 mentions about the musical field of Goyaz in the 19th century. In the periodicals A Cruz: Catholica Magazine (GO) - 1890 to 1891, Jornal do Commercio (GO) - 1880, Goianna Historic Institute Magazine (GO) - 1871, O Porvir (GO) - 1882 no mention of music was found.

Final Considerations

Through literature review and documentary research, data on the field of music production have already been found. As highlighted, since the beginning of the settlement of the state of Goiás, there is news of the presence of music both in Churches, institutions that valued music as an important function in liturgical and festive accompaniments, as well as in private activities of wealthier social classes. The main musical centers of the period were the cities of Vila Boa de Goyas, now Cidade de Goiás, Meia Ponte, now Pirenópolis) and Corumbá de Goiás.

The family musical tradition via cultural capital inherited from the Bourdieusian perspective is evident. The role of musical bands as educational institutions both in the context of musical education, whose methodology was based on the association of theory with instrumental technique in practice, and in the formation of musical taste and diffusion. .

(Abstract 948)

Adaptation of a questionnaire to verify metacognitive processes in violin students

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Abstract

Metacognitive knowledge, for Anderson, Krathwohl, Pintrich et al (2001) can be defined as awareness and knowledge of cognition itself. Thus, in metacognition, cognitive monitoring allows students to be aware of the strategies they use to learn, in addition to making them take appropriate decisions in choosing these strategies (Flavell, 1979). In this sense, metacognition is a relevant process in the study of music. The objective for the present study was to present the adaptation of a questionnaire to help violin teachers to follow the metacognitive process of their students, in order to optimize learning. The methodological procedures included two steps:

(1) adaptation to the context of violin teaching of the questionnaire developed by Schraw and Denninson (1994) called MAI - Metacognitive Awareness Inventory and translated into Portuguese by Bártolo-Reibeiro, Simões and Almeida (2016); (2) application of the adapted questionnaire in a pilot test for eight students of strung ropes from a public university in southern Brazil. The pilot test had as its main focus the verification of the internal consistency of the questions, the feasibility of applying it in the context of studying the violin and the clarity of the questions. As a result of this process, we obtained a final version of the questionnaire with 17 questions on knowledge of cognition and 29 questions on regulation of knowledge. About knowledge of cognition, the questions were organized into 3 groups: Declarative knowledge (e.g., question 5 - I recognize my strengths and weaknesses as a violinist); Procedural knowledge (e.g., question 27 - I am aware of what strategies I use when I study); and conditional knowledge (e.g., 29 - I use my strengths to compensate for my weaknesses while playing the violin). Regarding the regulation of knowledge, the questions were organized into 4 groups: planning (e.g., question 8 - I specify what the objectives are before starting a task); strategies for information management (e.g., question 47- I divide my study time into small sections); comprehension monitoring (e.g., question 28 - I analyze all useful strategies to study a certain repertoire); correction strategies (e.g., question 51 - I stop and review new information when it is unclear). We concluded, from the pilot study, that the referred instrument is suitable to be applied with violin students. The questions allow the teacher to understand the metacognitive processes of their students, favoring possible interventions in the instrument's teaching development.

Keywords: metacognition, violin, learning, violin pedagogy.

Theoretical background

One of the first authors to bring the term metacognition was Flavell (1979). The author began his studies discussing cognitive monitoring which is a process that allows the students to be aware of the strategies they use to learn, in addition to making him make appropriate decisions in choosing these strategies to be used in each task, evaluating them for their effectiveness and changing them when they do not produce the desired results (Ribeiro, 2003). Metacognitive knowledge, for Anderson, Krathwohl, Pintrich et al (2001) can be defined as the awareness and knowledge of one's own cognition. Thus, in metacognition cognitive monitoring allows the student to be aware of the strategies they use to learn, as well as causing them to make appropriate decisions in choosing these strategies (Flavell, 1979).

For Schraw and Moshman (1995) metacognition can be elaborated by two factors: the first to systematize metacognitive knowledge; and the second to understand and plan one's own cognitive activities within a formalized framework, which is the regulation of cognition.

In the first factor, regarding metacognitive knowledge, Schraw and Moshman (1995) report that cognitive knowledge refers to what individuals know about their own cognition and includes three different types of metacognitive awareness: declarative, procedural, and conditional knowledge. Declarative knowledge refers to knowing about things, including knowledge about oneself as a learner and about what factors influence one's performance; procedural knowledge refers to how to do things, that is, knowledge about performing procedural skills; and conditional knowledge refers to knowing the why and when of certain cognitive aspects, identifying the right time to apply various cognitive actions.

As for the second factor, the regulation of cognition, Schraw and Dennison (1994) divide the regulation of cognition into five sub-factors: planning, information management strategies, monitoring of comprehension, and strategies for correction and evaluation. In this work, the authors deepened the study by including two important elements for monitoring and correcting strategies concerning the regulation of cognition, which are the strategies of information management and the strategies for correction, including these steps strategically before and after monitoring.

Directing to studies carried out in the musical environment, Benton (2014) states that metacognition promotes students' awareness of their own thoughts, allowing them to plan and monitor their own learning, evaluating their progress and the products of their work. According to Benton (2014), these actions result in the development of progressively greater degrees of self-awareness and self-regulation, factors that are fundamental to musical learning.

Focusing on musical development, Benton (2014) specifies that music learning involves the acquisition of knowledge and skills in the cognitive, psychomotor, and affective domains. In the cognitive domain the author explains that music students must acquire content knowledge, deep understanding of the subject matter, and develop the ability to perform analysis and synthesis in relation to their musical activities. In the psychomotor domain, Benton (2014) specifies that musical performance requires skills built from the psychomotor learning domain, adding that every music student must acquire a multitude of motor skills along a continuum of increasingly complex and refined abilities. As for the affective domain, the author points out that the acquisition of a deep understanding in the domain of affective learning is necessary, arguing that because music is art, many of the reasons for learning music are in the affective domain of spirit, emotion, and the desire to communicate with an audience. Benton (2014) further adds the development of the affective domain includes knowledge for appropriate performance practice, as well as an understanding of musical expression and the ability to shape sound in performance for meaningful artistic communication.

Aim

In the metacognitive process, teachers are mediators of learning with students, helping them in the process of planning, monitoring and evaluating the results obtained. In this sense, the focus of this work is on metacognition in the process of learning the violin. The question that guided this study was defined as follows: Is it possible for violin teachers to monitor the metacognitive process of their students? The objective for the present study was to present the adaptation of a questionnaire to help violin teachers monitor the metacognitive process of their students in order to optimize learning.

Method

To achieve the objective of this study, an adapted version of the questionnaire developed by Schraw and Denninson (1994) called MAI - Metacognitive Awareness Inventory was used, whose focus is to identify the level of cognitive awareness of those who are in a learning process. The model was translated into Portuguese by Bártole-Reibeiro, Simões, and Almeida (2016). The instrument was designed using a 5-point Likert scale and oriented by means of two factors: (1) knowledge of cognition, which included questions about declarative, procedural, and conditional knowledge; and (2) regulation of knowledge, which included questions about planning, strategies for managing information, monitoring comprehension, and strategies for corrections. In addition, in adapting the scale, some specificities of violin study were considered. The questionnaire was applied as a pilot test to eight students of violin strings from various stages of development from a public university in southern Brazil. The questionnaire was applied over the internet, on the Google forms platform. The application of the questionnaire occurred in December 2018.

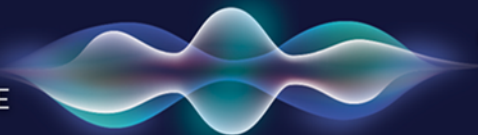
Results

The questionnaire, adapted from the MAI (Metacognitive Awareness Inventory) for the violin context, had its definitive version after the pilot test. The pilot test focused mainly on checking the internal consistency of the questions, the feasibility of application in the context of violin study, and the clarity of the questions. As a result of this process, we obtained a final version of the questionnaire with a total of 52 questions to evaluate the metacognitive process of violin students. These questions are divided into two groups: 17 questions about knowledge of cognition and 35 questions about regulation of knowledge. On knowledge of cognition, the questions were organized in three groups:

- Declarative knowledge: e.g., question 5 - I recognize my qualities and my weaknesses as a violinist; question 46 - I learn more when I am interested in the subject.
- Procedural knowledge: e.g., question 3 - I try to use study strategies that have worked in the past; question 27 - I am aware of what strategies I use when I study.
- Conditional knowledge: e.g., question 15 - I learn better when I have some knowledge about the topic; question 29 - I use my qualities to compensate for my weaknesses while playing the violin.

On regulation of knowledge, the questions were organized into 5 groups (Planning, Information Management Strategies, Comprehension Monitoring, Debugging Strategies and Evaluation of Learning):

- Planning: e.g., question 8 - I specify what the goals are before starting a task; question 45 - I organize my time in the best way to accomplish my goals.
- Information Management Strategies: e.g., question 37 - I create pictures and diagrams to help me understand new information; question 47 - I divide my study time into small sections.
- Comprehension Monitoring: e.g., question 28 - I analyze all useful strategies for studying a certain repertoire; question 34 - I take regular breaks to evaluate my comprehension.
- Debugging Strategies: e.g., question 51 - I stop and review new information when it is unclear; question 52 - I ask the teacher to explain again when something is unclear.
- Evaluation of Learning: e.g., question 7 - I am aware of my evolution when I finish an exercise or a new song; question 50 - After finishing a task, I ask myself if I have learned everything I think I am capable of learning.



Conclusions and implications for music education

We concluded, from the pilot study, that this instrument is appropriate to be applied with violin students. The questions allow teachers to understand the metacognitive processes of their students, favoring possible interventions in the teaching of the instrument.

Within this context, metacognition in music education plays an important role, as teachers together with students set specific performance goals, and look for ways to develop them. Concina (2019) reports that students learn metacognitive strategies within a particular cognitive domain, and then they go on to transfer their metacognitive skills to other areas of learning. According to the author, educators can play a key role in promoting this process by using the problem-solving-based learning approach in a way that encourages students to apply what they have learned to other areas involving learning.

Finally, we hope that this study can be developed in the future in two ways: first, it can be applied to a variety of instrument teaching scenarios, and this questionnaire can be adapted for any musical instrument. And second that this questionnaire can be adapted and developed with students of various levels of musical development and expertise, because in the metacognitive process, the teacher cannot leave the development of metacognition to chance, and must model effective learning strategies himself, and then ask students to choose among several options to complete a learning task. To promote metacognition with his students, the teacher can ask the student to evaluate which strategies worked best and why, because in this way, there is a balance between the teacher's predominance in the learning process and the student's complete self-direction, causing this balanced approach to lead students to self-regulate their learning processes.

(Abstract 951)

Learning music by playing an instrument: self-regulated learning for instrumental music education

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Abstract

This article deals with the motivations for the development of a research project at the University of Montreal (Canada) during a visiting researcher internship. This project proposes a new transposition of the self-regulated learning model "learning through reading" by Prof. Sylvie Cartier (Cartier, 2007) for musical instrument learning. The four-month period as a guest researcher at the Faculty of Education of the University of Montreal under the supervision of Professor Sylvie Cartier aims to develop the theoretical foundations for the creation of a self-regulated learning model aimed at "Learning music by playing a musical instrument". The research methodology for the theoretical foundations adopted will be speculative research (Van Der Maren, 1996). It is expected with this research to propose a model of self-regulated learning that can be applied to the didactics of musical instruments, attending in totality, all the aspects of this theoretical construct and able to contribute to the formation of citizens of the 21st century protagonists of their learning.

Keywords self-regulated learning, instrumental didactics, learning protagonism

Introduction

Acquisition of expertise during instrumental performance

A major reason for discussion since forever, the topic of musicians' practice habits for the development of expertise in an instrument and the factors involved in musical learning began to appear more systematically in scientific publications in the 1990s.

Ericsson, Krampe, and Tesch-Romer (1993) demonstrated that intense and prolonged practice for at least ten years is the main success factor in performance among expert¹ instrumentalists. Even among the best, the differences are closely related to the quantities evaluated in the deliberate practice (Ericsson, Krampe, and Tesch-Romer, 1993). However, Corenblum and Marshall (1998), as well as Sloboda and collaborators (1996) state that only the time of practice is not the essential factor, but rather what and how to practice. For example, it is important to address technical exercises, sound exercises, repertoire, among others, but also to choose, from specific strategies, which elements should be studied in priority.

In 1999, Nielsen initiated studies on how instrumental practice is carried out in order to verify the regulation of strategies during the learning of the instrument. She analyzed the learning strategies of a "talented" third-year organ student at the Norwegian Academy of Music in Oslo during the initial phase of preparing a complex piece for a public recital. Their main results demonstrated that strategic treatment depends on the coordination between different components (e.g. metacognition, motivation and a knowledge base) in order to achieve effective use of learning (Nielsen, 1999).

Then, Hallan (2001) demonstrated through a comparative study, that professional instrumentalists have a metacognitive reasoning (development of skills able to identify their own strengths and weaknesses, assessment of task requirements and development of strategies to overcome particular difficulties, as well as optimize performances) much more elaborate than the beginning instrumentalists. His results thus speculate that the development of the expert instrumentalist is directly related to the number of years of practice in his instrument.

The learning of practice (how do I learn by practicing my instrument?): more than fifteen years after the first studies on the learning strategies of the instrument of Ericsson, Krampe, and Tesch-Romer (1993), Leon-Guerrero (2008) notes that the systematic return to the beginning of a piece without any self-assessment is always the strategy most used among young instrumentalists.

Garcia et Dubé (2012 et 2014) believe that music learning, as with language learning, can be stimulated for beginners in a way oriented to the development of metacognitive reasoning. So, the instrument teacher can favor the development of expertise in his apprentice. In this sense, we believe that discussing how self-regulated instruction can be integrated into teaching practice would be an essential contribution to music teachers.

Self-regulated learning

Currently, self-regulated learning is one of the main educational goals, gaining prominence in the member countries of the Organisation for Economic Co-operation and Development (OECD). and in the implementation of the Programme for International Student Assessment (PISA) (Famose and Margnes, 2016). If defining as "the process by which individuals activate, guide, monitor, and take responsibility for their own learning" (Boruchovitch and Gomes, 2019, p. 9), self-regulated learning acts as the main factor for the acquisition of key competence "learning to learn". If developed during schooling, self-regulated learning can conceive to the student the ability to be the protagonist of his own learning, which has proved fundamental in all segments of schooling, especially in countries facing educational problems, such as Brazil (Boruchovitch and Gomes, 2019). In a recent publication, Ganda and Boruchovitch highlight the positive impact on student learning in intervention programs in self-regulated learning at the national and international level in the last 15 years. However, the vast majority of these studies are predominantly about foreign language learning (Ganda and Boruchovitch, 2019).

We emphasize, with a certain objectivity, that there is no consensus regarding the definition of the construct of self-regulated learning, so there are several theoretical perspectives used to approach it, which can be cognitivist, phenomenological, social-historical, and sociocognitivist.

Self-regulated learning and music

In a systematic review of the literature on Self-regulation and music Learning, VARELA, ABRAMI, and UPITIS (2014) analyzed 25 studies between 1999 and 2011, all in English. In our integrative literature review (in press) of the last twenty years (2009-2019), we also included articles in Portuguese and found 8 more articles on the same subject. In both revisions, Nielsen's article entitled Regulation of Learning Strategies During Practice was published in 2009: A case Study of a single Church Organ student Preparing a particular work for a concert performance published in the prestigious journal *Psychology of Music* as the first publication on Self-regulation and music Learning.

The approach chosen by researches on music and self-regulated learning was that established by the socio-cognitive theoretical current, more precisely the cognitive social theory developed by Albert Bandura (Bandura, 2007). In 1991 Bandura develops the theoretical framework that underlies the self-regulation studies of learning from the socio-cognitive perspective, called the Social Cognitive Theory of Self-regulation (Bandura, 1991). Among the followers who most influenced the educational field are Zimmerman, Schunk and Pajares (Azzi, 2015). This approach based on Bandura understands that self-regulated learning develops in a cyclical and multidimensional process that presents three main phases: planning, execution and evaluation (Zimmerman and Schunk, 2011).

We found that studies in the area of music on self-regulated learning, both in Brazil and abroad, are based theoretically, essentially on Zimmerman's texts or with his collaborators.

Among the authors of the area of music on the construct of self-regulation of learning, we identified that some of these do not associate metacognition with self-regulation. In the recent article by Veloso and Araújo (2019), based on a theoretical essay, they suggest the need for approximation of social cognitive theory and metacognition to advance research on self-regulation in musical learning.

We glimpse the association between contributions of Bandura and Flavell to support a procedural and cyclical model of self-regulation of cognition and behavior, in which the main phases (planning, monitoring, self-assessment and self-reaction) are interspersed with intermediate realizations (task execution, verified performances, making inferences, self-directed changes) that act as indispensable mediators to advance in the self-regulatory process (Veloso and Araújo, 2019).

Therefore, we found several gaps in the studies on music and self-regulated learning:

- 1 studies on music and self-regulated learning are based on a theoretical perspective, namely socio-cognitive, mainly through an author (Zimmerman). According to Azzi (2015), this unique choice enables the risk of "faded" research (p. 15), and
- 2 although the precepts that guide Zimmerman's texts associate metacognition as an integral part of the self-regulation process, most studies on music and self-regulated learning do not include metacognitive aspects in their processes.

Thus, we found that studies on self-regulated learning and music still have, in addition to difficulties in establishing the associations already defined in Zimmerman's studies, the inclusion of Metacognition in his construct, as well as including other theoretical perspectives (cognitivist, phenomenological and socio-historical). So, these require, as discussed in our initial reflections, the inclusion in the didactics of the musical instrument of the factors arising from the learner's history and/or the individual's social and cultural context. Therefore, more studies on the interactions between individuals, relatives, teachers and cultural influences are necessary (VARELA, ABRAMI, and UPITIS, 2014).

Self-regulated learning in the Francophone International Network for Research in Education and Training (REF)

Founded in 1989, the Francophone International Network for Research in Education and Training (REF) brings together researchers from Belgium, France, Quebec, Switzerland, and other countries outside the Francophone area. The main objectives of this network are to enhance the diversity and complementarity of research and practices in education and training, to facilitate relations between individuals and organizations, and to intensify international cooperation for studies in education and training (Cartier and Berger, 2020, p. 15).

The REF symposia on self-regulated learning have so far brought together about 40 researchers since 2015. The union of these different theoretical perspectives by the REF (socio-cognitive, cognitive, phenomenological and socio-historical), develops a fertile space where self-regulated learning is studied under multiple dimensions, namely cognitive, motivational metacognitive, emotional or behavioral, as we can see in the collaborative work developed by this network in recent years by Cartier and Mottier Lopez (2017), Mercier-Brunel, Mottier Lopez and Cartier (2019 a and b), and Cartier and Berger (2020).

In my studies with REF researchers, I verified the important leadership role developed by Professor Sylvie Cartier, organizer of the main publications of the group, as well as an intense intellectual vigor on the subject. Thus, Sylvie Cartier directs her work at the University of Montreal with the aim of ensuring and supporting the schooling of all (children, youth and adults) through the democratization of an educational system that promotes equal opportunities for individuals to succeed and achieve their personal and professional aspirations.

The combination of these varied theoretical perspectives (socio-cognitive, cognitivist, phenomenological and socio-historical) by the REF develop a fruitful space where self-regulated learning is studied under multiple dimensions, namely cognitive, metacognitive, motivational, emotional or even behavioral, as we can see in the cooperative works developed by this network in recent years as Noël and Cartier (2016), Cartier and Butler (2016) or Cartier and Berger (2020).

Among the works developed by the REF, we observed that Lebrun and Giglio (2016) propose the possibility of articulation between self-regulated learning under multiple dimensions of reading and music. In another study, even more recent, Giglio, Chatelain and Moor (2020), still under the theoretical perspectives of the REF, demonstrate the importance of the individual/context relationship to better understand the self-regulated learning in music, exactly as it was identified by the bias of learning through reading.

In this sense, the research of Sylvie Cartier studies how individuals learn alone in different learning contexts, from the perspective of studies of self-regulated learning. Moreover, her research relates self-regulation between the individual and the context, studying the problems of an individual who cannot adapt to a particular context, as well as a context that fails to support an individual with difficulties in adaptation (Cartier, 2016)².

Self-regulated learning through reading stands out in the more than twenty-year career of the professor of the Faculty of Education of the University of Montreal Sylvie Cartier. Analyzing her main publications, I could see that already in 2007 with the book "Apprendre en lisant au primaire et au secondaire: mieux comprendre et mieux intervenir" (Cartier, 2007), the researcher can associate self-regulated learning with metacognition, engagement for learning, social interactions, and cultural and community contexts in a contemporary perspective. This model has already been successfully transposed to the fields of design engineering and health sciences (Cartier et Butler, 2016, p. 51).

In recent years, Sylvie Cartier continues to develop her model of learning through reading, encompassing what she calls "multimodal" aspects, i.e., other resources besides texts such as graphics, figures, photographs, as well as the technological resources available in recent years (Cartier and Martel, 2020; Cartier et al. 2019)³.

After these findings, the interest arises to carry out by this author, an internship as a visiting researcher at the Faculty of Education, University of Montreal, with the aim of developing a research project that proposes a new transposition of the model of learning by reading "learning through reading" Sylvie Cartier for learning musical instrument.

How could the "Learn Reading" Model (Cartier, 2007) be transposed into a "Learn playing an instrument" model?

Self-regulated learning through reading is the result of more than twenty years of work by Professor Sylvie Cartier. Reading her main publications, I realized that her research can linking learning to: self-regulation learning, metacognition, engagement with learning, social interactions, and cultural and community contexts in a contemporary perspective. This model has already been transposed to the field of engineering design and health sciences (Cartier et Butler, 2016, p. 51). It is exactly a new transposition that I wish to propose in relation to learning musical instruments.

Research Objectives:

Developing the theoretical foundations for creating a self-regulated learning model aimed at "Learning music playing a musical instrument". The development of these theoretical foundations will be divided into three specific objectives: a) to deepen the knowledge about the learning model developed by Sylvie Cartier "Learning through reading"; b) To understand and identify problems related to students learning musical instruments, and c) To develop tools and adaptations in Sylvie Cartier's model that will enable the enrichment of self-regulated learning in music learners.

Methodology

In the production of a theoretical statement (Learning by playing an instrument) from another theoretical statement (Learning through reading), Van Der Maren defines such production as a speculative research (Van Der Maren, 1996). So, this part of the research will be organized in two lines of simultaneous and reciprocal actions, namely:

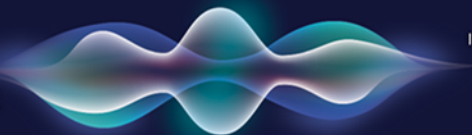
- a) discuss in depth the concepts of self-regulated learning based on the theoretical statements and practical results of the work of Sylvie Cartier and her collaborators. In this part we will use mainly three data collection procedures, literature review (systematic analysis of the production of Sylvie Cartier and collaborators), testimonial collection (Sylvie Cartier and teachers who applied her model) and non-participant observation (in environments where the model is applied). b) to make a relation between the appropriation obtained in the first line of action and my own experience as an instrument teacher and researcher in the field of musical education.

Aiming to speculate on the possibilities of applying the "Learning through reading" model to musical education, the conceptual analysis procedure (Van Der Maren, 1996) will be chosen as a mode of analysis. For Van Der Maren, the conceptual analysis aims to "identify the meaning and possibilities of application of a concept or notion, identifying the constituents of the semantic field of this concept or notion and its interactions with other fields" (Van Der Maren, 1996, p. 139). According to Van Der Maren (1996), the conceptual analysis procedure is divided into three phases.

The first phase of the analysis aims to record the history of the development of the model, in this case the model developed by Sylvie Cartier, focusing on representative extracts of its historical evolution. The aim is to appropriate its first steps, to know its first reference authors, as well as to identify the significant transformations between its original use and contemporary uses.

The second phase of analyses aims to compare the relationships between the various theoretical occurrences of Sylvie Cartier's model by different authors or by the author in different contexts. For Van Dar Maren (1996) these theoretical occurrences may be important passages or excerpts from theoretical discourses in which the pivotal concept(s) are used (Van Der Maren, 1996, p. 145).

In the third phase of analysis will be stipulated a comparative analysis between the theoretical discourses and the procedures described by the authors, in order to measure and observe them. To do this we will resort to visits to Montreal schools where Sylvie Cartier's model is applied for learning by reading.



Conceptual analysis will thus try to identify, through total immersion in the model "learning to read", comparisons with other models of self-regulated learning, as well as to verify the intention or understanding of the concept and what is its extension or scope. The results of this phase will provide the foundation for the production of a first version of the model "learning by playing an instrument" to be validated and adjusted by peers.

Conclusion

Despite the difficulties of operationalizing a nonlinear process limiting the validation of a self-regulated of musical learning theory, this approach offers new possibilities to observe and articulate paths in musical learning. Thus, we believe that this project, which will use other theoretical references besides those proposed by Zimmerman, notably the "learning through reading" model (Cartier, 2007), can contribute to the formation of 21st century citizens protagonists of their musical learning.

Acknowledgements

I thank the researcher, Professor Sylvie Cartier, who since 2019 has contributed enormously to my reflections about self-regulated learning, and consequently, to the construction of this project. I would also like to thank the Faculty of Education at the University of Montreal for inviting me to spend a scientific stay as a research associate at the institution in 2022.

¹ The young violinists were also asked to estimate in minutes of playing time how much music they could perform from memory without preparation. The best violinists reported an average of 128.9 min, which is longer than the 79.1 min reported by the good violinists... (ibidem, p. 374)... The two best groups practiced alone for 3.5 hr per day and the music teachers for 1.3 hr per day for each day of the week including the weekend. As the second step, we assessed the frequency of practice as a function of time of day. The frequency distributions across all weekdays shown in figure 2 suggest a preference by the two best groups for practicing alone before lunch, whereas no corresponding pattern is observed for the music teachers.

² Professor Sylvie Cartier's interview for the University Montreal. Available in <https://www.youtube.com/watch?v=DBTEHGxndAY&feature=youtu.be>

³ Many of the features developed by Sylvie Cartier are available on the website <http://www.apprendreparlalecture.education/>

(Abstract 981)

Coloniality and Decolonial Perspectives in Popular Music Programs in Brazil

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Abstract

This paper presents the results of a research project conducted in Brazilian higher music education, focusing on popular music undergraduate programs. It discusses and analyzes how coloniality has impacted the current reality of popular music programs. Beyond that, the paper reflects on how the Brazilian intangible musical heritage can contribute to decolonial perspectives to broaden and strengthen the diversity of these programs. The article's theoretical framework approaches many perspectives on coloniality (Mignolo, 2011, 2012; Moraña et al., 2008), coloniality higher music education (Chávez & Skelchy, 2019; Holguín, 2018; Queiroz, 2017; Souza, 2019), and decolonial options in music teaching nowadays (Queiroz, 2020). Based on a qualitative approach, the study encompasses bibliographic research on themes and topics directly related to the study; and documentary research covering educational projects, websites, and other information about popular music undergraduate programs in Brazil. The results show that creating bachelor and music teacher

education degrees in popular music positively expanded the diversification of music programs in higher education. On the other hand, the study also shows that the popular music knowledge at this educational level aligns primarily with the consolidated canons of Brazilian popular music. It also evidenced that the curriculum designs remain hostage to the coloniality traits that historically marked the institutionalization of music in Brazil.

Keywords

Popular Music, Undergraduate Programs, Higher Education, Coloniality; Decolonial Options

Introduction

Since the music teaching institutionalization in Brazil, which started in the 1840s, Western European classical music has become hegemonic. This process has historically defined musical knowledge and contents, music curriculum, and musical teaching methodologies of this music as the primary reference for Brazilian music schools, curriculum, and music teaching methodologies at different educational levels.

Research and analyses that evidence this reality are increasingly present nowadays in the field of music and related areas (Penna & Sobreira, 2020; Queiroz, 2017, 2019). These studies have evidenced the relevance of continuing to research, understanding, and problematizing this reality and the need for studies, analyses, and propositions that enable Brazil to transcend this scenario. A scenario marked by hegemonies, exclusions, and domination of a specific musical praxis over others, especially the power of European classical music over others, including Brazilian music.

In this context, popular music—and prevalent Brazilian popular music—and other musical expressions of the country and abroad, has been largely neglected. This tendency led Brazil to weave a trajectory of music teaching in schools, conservatories, and universities based mainly on unilateral and colonial dimensions of European culture. Among several other aspects, it excluded and weakened the formal teaching of Brazilian popular in music education institutions (Penna & Sobreira, 2020; Queiroz, 2020).

However, despite current research showing the continuity of this European classical music domination, the maintenance of forms of curriculum organization centered on the models defined by European conservatories, and persistence of teaching strategies and methodologies based on the parameters of this musical culture, there is also evidence of decolonial openings and ruptures that have been implemented in the music education scene in Brazil. Among these openings and ruptures, we highlight the inclusion of popular music programs at different national education levels, emphasizing undergraduate Programs. Popular music degrees in higher education started being created in the country from the late 1980s, reaching more expressive growth over the first decades of the 21st century.

This work digs into this universe and presents the results of a research project that aim to understand epistemological bases and educational praxis that have supported the undergraduate programs in popular music in Brazil. Besides, from the general analyses of the program curricula, the paper points to perspectives that have been incorporated to strengthen Brazilian popular music in higher education nowadays.

The qualitative research approach that supports this work encompassed: 1) bibliographical research on the production of knowledge about higher education in music, training in popular music, curriculum, and related topics; 2) documental research, contemplating pedagogical projects of the studied programs, information, and different internet sources obtained from

the institutions' official websites, data on pedagogical activities and praxis gathered from the institutions, professors, digital and online platforms.

Coloniality in the music institutionalization process in Brazil

Coloniality traits are explicit in the trajectory of the music institutionalization in Brazil (Queiroz, 2017, 2019, 2020). Therefore, understanding what coloniality represents and how it defines important pillars for music education is crucial to analyzing and problematizing popular music programs' historical features and the present-day scenario.

Colonialism is an official control from one nation over another. It works based on an explicit hegemony and authority of power, domination, and sovereignty. Under the guidelines of the colonizer nation, this regime concentrates the resources and management to promote economic, political, social, and cultural domination. (Maldonado-Torres, 2010). It was the political regime officially maintained in Brazil between 1500 and 1822. Over this period, the country was a Portugal colony, making Brazil submissive to the colonizers' decisions and definitions. Nevertheless, officially, although Brazil was still ruled by Portuguese emperors between 1822 and 1890 (the year it became a republic), since the second decade of the 19th century, there has been no more colonialism in the country, in the terms specified above.

However, if, on the one hand, Brazil has overcome official colonialism, on the other hand, coloniality remains alive and highly present in the Brazilian society since the colonization process. Unlike colonialism, coloniality is constituted as a cultural, symbolic, invisible, and unofficial power of domination, materialized in the people's ways of being, thinking, feeling, and living (Mignolo, 2011; Moraña et al., 2008). Coloniality is, therefore, characterized by a deep process of oppression and hegemony of the colonizer countries that lead the colonized society to incorporate their cultural traits, values, arts, ways of thinking, being, and acting. One of the darker sides of coloniality is that the victims are the foremost defenders of its traits and maintenance because of the oppression process historically consolidated. Thus, dominated by the colonizers' ways of being, feeling, thinking, and acting, the colonized societies are culturally "trained" to defend and perpetuate the dominant and hegemonic culture, contributing to their own culture exclusion. Regarding Anibal Quijano:

With the conquest of the societies and the cultures which inhabit what today is called Latin America, began the constitution of a new world order, culminating, five hundred years later, in a global power covering the whole planet. This process implied a violent concentration of the world's resources under the control and for the benefit of a small European minority – and above all, of its ruling classes. (Quijano, 2007: 168).

In the case of music, as evidenced by Queiroz (2020), coloniality proliferated and consolidated classical music produced in Western Europe between 1500 and the first decades of the 20th century as a "universal" reference, as a parameter of "good music" and as a hegemonic pattern that should be at the base of the compositional, interpretive, and educational processes of this art. This premise was the basis for the creation of music conservatories in Brazil, which, since the first institution of this nature, the Imperial Conservatory of Music (1948), have adopted Western European classical music as a synonym for quality, noble art, and civility that should be the pillar of any "serious" institutional music education process (Augusto, 2010). This tendency established a trajectory of music teaching that, in a reproductive, passive, and uncritical way, has, in terms of Queiroz (2020), been reproduced in Brazil since that time, resulting in a "hegemonic and unilateral form of

planning, organizing and implement higher education curricula in music in the country." (Queiroz, 2020: 171).

The analysis of this reality shows that coloniality in music goes far beyond the repertoire crystallized in institutions. Thus, this phenomenon crosses worked knowledge, taught musical parameters and systems, studied composers and artists, curricula designs, the used textbooks, and several other aspects that weave the complex network of musical education.

From this prospect, that has been studied and problematized by several researchers in Brazil nowadays, a vital question has emerged: how the institutionalization of popular music has happened, what innovations and advances have characterized it, and how the trajectory that marked institutionalization of music education in the country has impacted this universe? We will stick to this analysis in the next part of this work.

Popular Music Programs: Different Repertoires in the Same Old Framework

Popular music genres and styles, in some sense, have always been present in music programs in Brazil, given their social, cultural, and artistic representation. However, in many cases, this presence was limited in the curriculum periphery, without direct participation in the core curricula and, mainly, without specific and specialized programs. However, popular music's social and cultural strength, its aesthetic particularities, and its representation in contemporary musical production ensured that little by little, artistic expressions with this profile gained varied contexts of music education. Initially, it started in private and informal spaces, but from the 2000s on, popular music programs reached schools, conservatories, and universities.

Because of the limited extension of text like this, we will not invest in a more detailed analysis of the trajectory of popular music and its teaching in Brazil. Thus, we will analyze below the trajectory of popular music in higher education to understand how historically Brazilian universities have created and implemented undergraduate programs that approach this type of music.

The inclusion of popular music in the country's bachelor and music teacher education programs happened in two different perspectives: 1) as a curricular component of undergraduate programs that focus on other profiles of musical background; 2) as the central axis of programs aimed at educating popular musicians or popular music teachers. In this paper, we will specifically analyze the second category, considering that we are interested here in understanding the institutionalization process of specific popular music undergraduate programs.

The first undergraduate program created in Brazil was the "Bachelor of Music in Popular Music" at the State University of Campinas in 1989. As a pioneering proposal, this bachelor was essential to signal the need for programs with this training profile in an age when the hegemony of European classical music was absolute. As highlighted in the text by Torres et al. (Torres et al., 2017): "Since its origins, it was a program that was concerned not to mimic a conservatory", says José Roberto Zan, one of its first professors". Despite the idea of not reproducing the profile of a conservatory, the text also shows that the program's proposal did not envisage an opposition to the teaching of classical music. According to the authors: [...] the educational project document, signed by the group of specialists, makes clear their desire to "redefine the Brazilian model of music education, without prejudice", collaborating for the

construction, in universities, of a “more intimate dialogue between the classical and the popular.” (Torres et al., 2017).

This perspective of dialogue and interaction with the classical music programs, without contraposition to them, has two consequences. If, on the one hand, it points to promote interactions and dialogues between programs with different profiles, on the other hand, it kept the central pillar of classical-based music curriculum dominant, even in popular music programs.

This trait is outlined not only in the UNICAMP Program implementation. It became a feature of several other popular music programs created in the 1990s and from the 21st century on in Brazilian universities. Thus, the “new music” that comes with these programs came to be implemented in the disciplinary-course-based curriculum framework, based on prescriptive and normative curriculum models that, built on the intricacies of European conservatories of the past, insert popular music into the old ways of thinking, organizing and develop teaching.

From an extensive outlook, the analysis of the historical trajectory of popular music programs in Brazil shows this process has been an expressive advance. These programs have contributed to increasing diversity in undergraduate music programs and break up in many ways with the colonial hegemony of European classical music or musical praxis inherited from this tradition. In some sense, this programs' foundation represented incorporating a new set of music genres and styles in the undergraduate music system. Indeed, it brought out an inevitable paradigm shift for the field of music in the country.

However, the innovation of including a “new music” did not lead popular music undergraduate programs to think of a new way of organizing curricula and thinking about the music education process and, as shown by Queiroz's research results (Queiroz, 2017, 2020), we just suited a “new music” into an “old frame” of teaching. As the author highlights:

Analyzing the most consistent scene of this change [in undergraduate music programs in Brazil], the foundation of popular music programs, we can realize just a replacement of repertoires and knowledge that exchange European classical music for popular music. Certainly, this already represents a considerable advance compared to the past, but we have changed music without absolutely questioning the failed disciplinary model, which remains untouchable in higher education in music in Brazil. (Queiroz, 2020: 180).

Considering this recent trajectory of popular music programs in music higher education in Brazil, the innovations and maintenance that emerged from this process, and the need to envision an increasingly consistent path for popular music education at this educational level, we analyze in the following topic the features of the current programs in the country.

Coloniality in Present-day Popular Music Programs Goals and Program Profile

In general, the goals and program profiles defined by popular music programs in their educational project are comprehensive and generic, providing a limited understanding of the program's primary focus. Thus, the analyses of the programs' official documents and information available on the internet show that the programs do not emphasize specific aspects of popular music that they cove in the educational process.

An example that illustrates this characteristic is the programs' goal and profile description in the educational project of the Federal University of Bahia. Regarding the Program official document:

The Bachelor of Music in Popular Music is an undergraduate program that aims to promote artistic training, with a humanist basis, develop critical thinking, social participation, and citizenship, in addition to fostering the construction of knowledge, skills, and competencies for autonomy and insertion plural in social life and the field of work. At the same time, the program seeks to enable the interaction of subjects with different references and experiences, expanding creative, expressive, and professional opportunities. (Federal University of Bahia, 2017: 17).

Even when the programs provide more detailed specifications, for instance, in the State University of Campinas' program profile definition, they bring generic information about education and performance in the universe of popular music. How the page of the mentioned institution specifies:

One of the major program's concerns [popular music] is to offer students the necessary tools for their professional practice in all possible popular music specialties, whether as an instrumentalist, arranger, or music producer. (State University of Campinas, 2021).

It is important to note that even with the idea of educating professionals to work "in all possible specificities of popular music", the description itself denies this expectation, reporting right away that "all" is limited to the universe of the instrumentalist, arranger, or music producer. This definition excludes, for example, the possibility of educating composers, singers, among other possibilities of professional practice in the popular music universe.

The worked knowledges and contents

A general analysis of music programs in Brazil, encompassing the twenty largest institutions, shows that popular music as a curricular component is incipient. The Figure 1 shows popular music knowledge and contents represent only 6% of the total curricula components offered in music programs: 3% refer to the universe of popular music in general, and 3% approach the specific Brazilian popular music. This Figure also reinforces the broad domination of European classical music, as evidenced by Queiroz's studies (2017, 2019, 2020) over the last few years.

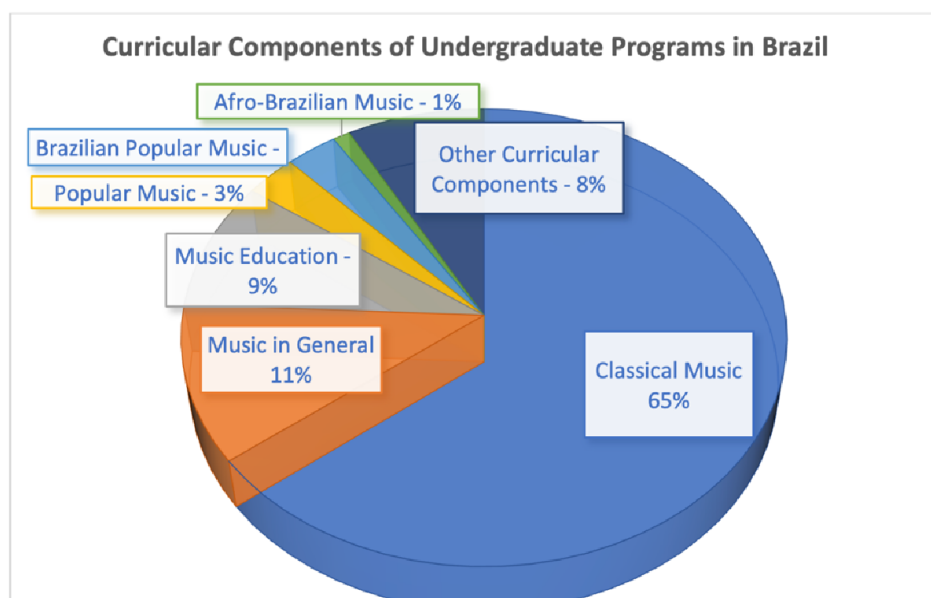


Figure 1: Curricular Components of Undergraduate Programs in Brazil

However, explicitly diving into popular music programs there are some very positive data. As evidenced by Figure 2, these programs have significantly expanded the range of music covered by higher music education. Thus, in this context, 60% of the curricular components are related to popular music and, consequently, out of the dominant Western European classical music logic.

Another critical point about assuming an identity linked to the Brazilian culture is that, within this majority quantity of components linked to popular music in general, the most significant part, 32%, are components directly related to the universe of music Brazilian popular music. Although there is a long way to run, this data shows a necessary change in the undergraduate music programs' scenario, considering that popular music, and Brazilian music in general, have been historically excluded from formal music education.

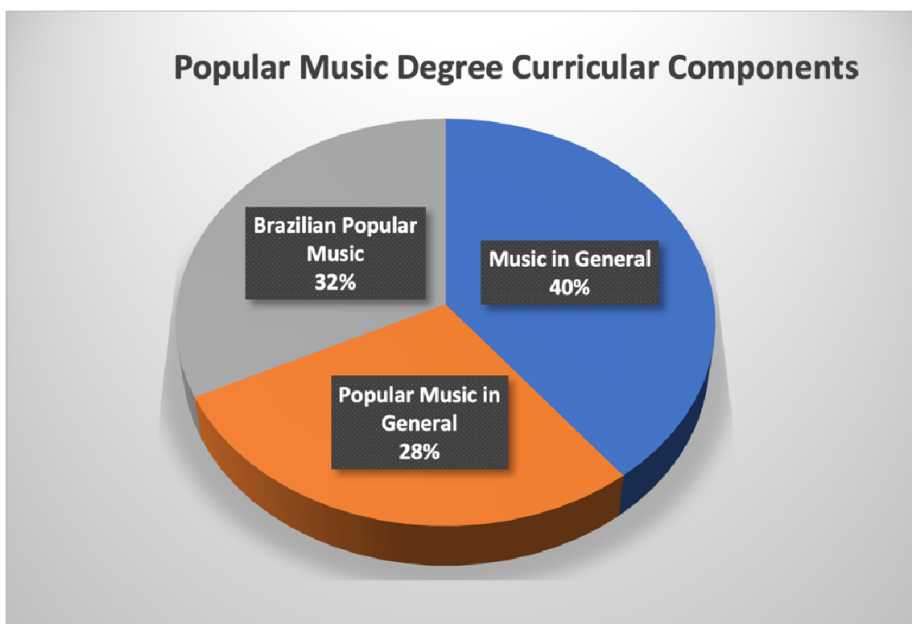
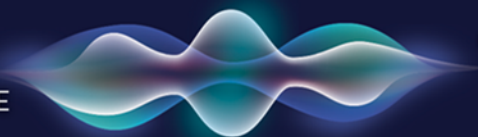


Figure 2: Popular

music degree curricular components

Curriculum designs

The analysis of the program's curriculum designs reveals a different trend from the previous analysis. Thus, if the knowledge and contents approached in present-day popular music degrees have promoted, to a certain extent, decolonial ruptures and options, on the other hand, concerning the curriculum framework, the analyzed programs remain homogeneously aligned with canonical standards of the disciplinary-course-based curricula.



In this sense, the analyses of the researched programs' curricular framework evidence that all of them set up their curricula in the disciplinary logic, offering a broad set of separate and fragmented courses. This feature perpetuates the trend of European modernity of fragmentation between theory and practice, doing and knowing, playing, and thinking, among other aspects. This finding leads us to agree with Queiroz that "even when we change the songs, [in the case of these programs including popular music, historically excluded from the dominant model of music education in Brazil] we maintain "the colonial education frame". (Queiroz, 2017, p. 154).

Conclusion

The colonial trends that marked the music education institutionalization in Brazil and limited the insertion of popular music in formal education still strongly impact the national scene. Because of this fact, the inclusion of popular music programs happened late and slowly. Although all the advances, if we consider the number of music education and the diversity and richness of popular music, we must conclude that the quantity of popular music degrees is still embryonic.

The analysis of the current reality of undergraduate music degrees in Brazil shows advances and ruptures relatively with the canonical music education model. Furthermore, it also demonstrates limits and maintenance of coloniality that need to be known, analyzed, and overcome in the country's educational scenario. Thus, while the popular music programs' knowledge and contents bring new elements, the curriculum framework is still held onto standards instituted and legitimized for the western European classical music-based teaching. A model from the past extremely liked to the tradition of western coloniality modernity.

This research shows outstanding achievements to be celebrated and taken as an example of ruptures and colonial breaches implemented in higher music education in Brazil, specifically about Popular music undergraduate programs. However, this positive data must guide us towards critical reflections assuming that to create programs contextualized with the nuances of Brazilian popular music and popular music from other world contexts, it is also necessary to problematize the curriculum framework model and the teaching praxis. This fact emerges from both: 1) the increasing awareness about the importance of expanding the taught knowledge; 2) the certainty that expressive changes and decolonial ruptures imply broadening the curriculum framework and teaching perspectives.

(Abstract 1070)

Perceptions of a Music and Songwriting Course in a Juvenile Detention Center

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The purpose of this study was to examine elements of a music and songwriting class for youth aged 12-17 living in a juvenile detention center. Grounded-theory methodology was used to answer the following research questions: 1) How do pedagogical approaches (direct instruction, student-center instruction, and/or constructivist learning) impact music making in a juvenile detention center? 2) How does the social climate impact interactions and

music-making among participants? 3) What impact does music and songwriting instruction have on overall mood and self-esteem of participants? 4) What are the lyrical and musical content of the resultant songwriting works? Data include focus group interviews, individual interviews, participant writing, field notes, lyrics, and recordings. Findings indicate the importance of student-centered teaching including repertoire selection, adapting instruction to the high rate of student turnover in a juvenile detention center, and creating a positive social atmosphere that alleviates frustrations and builds group comradery during the time constraints of a weekly, one-hour course.

(Abstract 1109)

Breaking the master-apprentice tradition: Sharing hidden expectations

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Abstract

The purpose of this paper is to explore issues surrounding the master-apprentice tradition as it pertains to violin professors' expectations of incoming students. While the master-apprentice style of knowledge transfer has been the primary method for violinists to gain expertise, this study revealed that it can also be exclusionary and secretive. A descriptive instrumental exploratory study was conducted online to explore violin professors' expectations of auditioning incoming violinists in the United States, their perceptions of how these expectations are being met, and how these students can be prepared to meet these expectations. The findings show a discrepancy between violin professors' expectations and how they are being met by auditioning students. This discrepancy can be ascribed to the closely-guarded, siloed nature of the master-apprentice tradition. Findings show that violin professors do not share the explicit details of their expectations, likely due to the unintentional perpetuation of the secretive master-apprentice tradition. For students to successfully meet violin professors' expectations, these expectations must be made visible from the invisible.

Keywords

applied music, master-apprentice, violin, higher education

Focus of the work

The purpose of this paper is to explore issues surrounding the master-apprentice style of knowledge transfer as it pertains to violin professors' expectations of incoming students. For centuries, in Western European classical music, the one-on-one master-apprentice model has been the standard manner in which students learn to play their instruments (Burwell, 2013; Jørgenson, 2000). The master-apprentice model, by its very nature, is exclusionary, secretive, and siloed. Researchers have described what happens in the one-on-one lesson as "voodoo," a "mystery" (Brand, 1992/2010, p. 3), "a private affair" (Gaunt, 2013, p. 51), and a "secret garden" (Burwell et al., 2019, p. 372).

Theoretical/pedagogical background

In the master-apprentice dyad, the teacher is the authority and master whose objective is to transfer technical and musical skills to the student, who takes on the apprentice role. Other attributes of this dyad include

the acquisition of experiential knowledge or skill; the use of demonstration and imitation; the master positioned as representative of the practice, with a high level of expertise; the apprenticeship as a source of identity for the learner; and the important and rather particular nature of the master-apprentice relationship. (Burwell, 2013, p. 287)

In the master-apprentice tradition of applied instrument or vocal training, lessons are generally teacher-centered, although recent research indicates a movement in music education towards student-centered learning. However, “the very late appearance of research . . . has tended to enforce the separation of theoretical and practical work” (Gaunt & Westerlund, 2013, p. 2), implying the current practice of applied lesson teaching maintains a teacher-centered focus. Today’s applied music professors, violin professors in particular, are products of the old master-apprentice tradition and have blind spots and assumptions regarding their expectations of auditioning students.

Background

While research shows that the most effective way to gain skill and expertise is through one-one-one tuition (Gruber et al., 2008; Lehmann & Kristensen, 2014; McPherson et al., 2017; Shuler & Shuler, 2020), one-on-one instrument instruction is an under-researched area of music education likely because these lessons take place outside of the regular primary and secondary school curriculum (Barry, 2007; Ha, 2017b; Kennell, 2002; Montemayor, 2008; Nelson, 1983). The long tradition of master-apprentice style knowledge transfer in violin supports the importance of the private teacher. However, literature about private violin lessons; “despite its importance, string instrument teacher development has received little attention from researchers in music education” (Ha, 2017, p. 603).

High-profile performers are often appointed to prestigious teaching positions at universities and conservatories; “teachers of orchestral instruments in conservatories have often been appointed on the strength of their status as performing musicians . . . Playing, rather than teaching ability has generally appeared to be the major factor in making an appointment” (Purser, 2005, p. 287). Ironically, in a study of 37 music professors at the Royal College of Music in London, they described themselves as either performers or musicians; none described themselves as teachers (Mills, 2004c). The results of many studies show that there is tremendous disagreement that a strong performer is also a strong teacher (Fredrickson, 2007a; 2007b; Fredrickson et al., 2012; Fredrickson, Moore, & Pope, 2013; Fredrickson, Gavin, & Moore, 2013; Mills, 2004a; Parkes, 2009; Persson, 1994; Persson, 1996a; Persson, 1996b); “to be a formidable artist and a formidable teacher may well be the attributes of the same individual, but the two invariably describe different roles as well as different skills in different contexts” (Persson, 1996, p. 25). This sentiment appears to be universal between music educators, performers, and students. Nonetheless, high-profile performers continue to be favored for teaching positions at musical institutions (Persson, 1994).

Little research supporting the training, background, and experiences of violin professors, beyond memoirs by noted artists, exists, possibly due to the secrecy of the master-apprentice tradition. Although the data from this study did not explore violin professors’ own training, it likely would have included regular private lessons from a young age, followed by rigorous study at a conservatory or top university music program working with a well-known violin pedagogue. Violin professors, especially high-profile performers, would have been deeply immersed in the master-apprentice tradition from a very young age.

Method

A descriptive instrumental exploratory study was conducted online to explore violin professors' expectations of auditioning incoming violinists in the United States, their perceptions of how these expectations are being met,

and how these students can be prepared to meet these expectations. The participants were tenured or tenure-track violin professors in the United States who teach at four-year institutions accredited by the National Association of Schools of Music. Data collection tools included a survey, semi-structured interviews, and review of documentary materials. The online survey design included open-ended questions, Likert-type items, multiple-choice questions, and percentage questions. Of the 121 eligible participants who agreed to participate in the study, 18% (n = 22) partially completed the survey and 82% (n = 99) completed the entire survey. At the end of the survey, participants were asked to volunteer for a video interview; 44 semi-structured interviews (n = 44) were conducted. Interviews lasted from 25 to 60 minutes depending on the length of participants' responses.

Structural, descriptive, in vivo, process, and axial coding were used to analyze the interview data. Quantitative data from the survey was analyzed using simple statistics such as counts, averages, and percentages. Qualitative data from the survey was coded separately from the interview data. Documentary materials were also coded and all data sources were triangulated.

Summary of the main ideas

Two main themes emerged from the data collection and analysis that pertain to the master-apprentice tradition. First, there was broad consensus among the participants about their technical, musical, and repertoire expectations of incoming first-year violin majors. Secondly, the participants generally assumed that their expectations should be known by pre-university violin students and their teachers despite the fact that these expectations are not explicitly detailed on audition websites or other resources potential music majors may access.

Participant consensus of expectations

The participants agreed that incoming violin majors should meet the following expectations:

1. Demonstrate a solid technical foundation including (a) scales and arpeggios, (b) études and exercises, and (c) healthy posture and setup (98%, n = 42 of interview participants and 98%, n = 97 of survey participants)
2. Perform developmentally appropriate repertoire that aligns with their technical level (72%, n = 31 of interview participants and 98%, n = 97 of survey participants)

Participants also expect auditionees to perform their audition repertoire at a high performance standard, exemplified by participants' preference that students perform less advanced repertoire at a higher performing standard than more advanced repertoire at a lower performing standard (98%, n = 97). Most frequently occurring aspects of a high standard of performing were quality of tone production (70%, n = 30) and secure intonation (35%, n = 15).

Participants may agree about their violinistic expectations because of the standard canon of violin repertoire which reaches back to the Baroque Era (circa 1600-1750). To perform these pieces to a high level, violinists must have the requisite technical abilities:

More precisely, instead of being absorbed with coordinating bowing and fingering, and being distracted by upcoming difficult passages, technically skilled violin players may devote their full attention to the act of “making the notes sound like music”. . . good technique should make it much easier for the violin student to focus on the particular musical-interpretive characteristics. (Johansson, 2015, p. 129)

Another reason participants’ expectations are aligned is the likelihood that violin professors have had similar master-apprentice style training. While several prominent schools of violin playing emerged in the 18th century, including the Franco-Belgian, German, and Russian schools (Han, 2019), most violin professors can probably trace their lineage back to the same 17th-century teacher: Arcangelo Corelli (McVeigh, 1992/2011; Milsom, 2003; Swartz, 2003). Corelli’s “teaching initiated the first major school of violin playing, the violinistic descendants of which can loosely be traced down to the present day” (McVeigh, 1992/2011, p. 50). This may explain why the technical requirements remain similar from participant to participant. The data did not reveal how the physical technique of executing these requirements may differ from school to school of violin playing, nor to which school of violin playing the participants may ascribe.

Thirty-seven percent (n = 16) of the interview participants explicitly correlated their expectations of PVMs with their own pre-college background and training. This indicates that these participants may be supporting the perpetuation of the master-apprentice tradition. One interview participant said, “I expect the students to be prepared the way I was when I was auditioning for schools, quite honestly.” Now that these violin professors are the “masters,” they continue to have the same expectations of incoming violin majors, who can be considered apprentices. The study does not reveal whether participants are knowledgeable of the master-apprentice style of knowledge transfer or if they are cognizant of their own experience with and continuation of the master-apprentice tradition.

Interestingly, which the participants mostly agreed on their expectations of incoming violin majors, they were uncertain about whether they were in the majority. This illustrates the secrecy and isolation of the master-apprentice tradition. If violin professors themselves are uncertain about other professors’ expectations, how can incoming violin majors know what they are?

Secret and invisible expectations

Unfortunately, the participants unanimously stated that they perceived more than 50% of auditioning violin majors fall short of violin professors’ expectations. Similarly, more than 50% of all participants stated that they have heard PVMs perform repertoire beyond their technical ability. At the same time, 58% (n = 25) of the interview participants believe that violin professors’ expectations are unknown to potential violin majors and their teachers. The private and exclusionary milieu of the master-apprentice tradition seemed to be invisible to the participants until they were directly asked whether they thought their expectations are known to others.

In general, the data collected for this study show an absence of communication of violin professors’ expectations to potential violin majors and the people who prepare them. The most likely reason why so many students were perceived to fall short of violin professors’ expectations is these auditioning students and the people who prepare them do not seem to know what they are. This is in line with prior research into higher education; “while everyone

agrees that improving [postsecondary] educational performance entails more concerted interactions with primary and secondary schools, the linkages between them remain weak” (NCPI, 2002, p. 3). In the case of violin study, private teachers, along with classroom music teachers, should be included in these interactions. Violin professors do not seem to have provided details of their expectations to people outside of their master-apprentice relationships. Research into success in classical music performance suggests that potential violin majors “would benefit from established professionals and gatekeepers making their tacit knowledge of what matters ... more explicit” (Jarvin & Subotnik, 2010, p. 79).

The lack of publicly available audition information beyond what is detailed on interview participants’ institutions’ websites may explain why the participants in this study perceived that less than 50% of auditioning students meet their expectations. As described above, survey and interview participants stated the importance of scales, arpeggios, études, exercises, setup, and posture as the central tenets of a solid technical foundation. Survey and interview participants also stated that private teachers should carefully select repertoire aligned with students’ technical development. However, students and teachers researching audition requirements to major in violin at university would not learn this information from participants’ institutions’ audition websites nor learn how audition performances are assessed. Fourteen percent (n = 6) of the interview participants initially assumed that the information provided on their institutions’ audition websites presented adequate information for auditioning students. After the researcher compared what the interview participants said to what was listed on their institutions’ audition websites, these interview participants realized the discrepancy between their detailed expectations and what their institutions’ audition websites actually list.

Rethinking the master-apprentice tradition

There is clearly a problem in communicating violin professors’ expectations as exemplified by the data: less than 50% of auditioning students were perceived to meet their technical expectations, less than 50% performed level-appropriate repertoire, and 58% (n = 25) of the interview participants believe that their expectations are unknown to potential violin students and their teachers. This lack of communication on the part of violin professors may be ascribed to the secrecy of the master apprentice tradition. Violin professors are likely accustomed to working only in isolation, given that they began their own training in a one-on-one setting at a young age and continue to work in this dyad; they “have had so few opportunities to share their ideas ... through workplace contact ... and the institution that houses them” (Burwell et al., 2019, p. 386).

When auditionees were perceived to fall short of expectations, participants could be grouped into two categories regarding the responsibility of communicating their expectations. Some actively strive to improve the status quo, and others appear to have passively accepted the status quo by accepting the disconnect between their ideal expectations and reality.

Forty percent (n = 17) of the interview participants actively engage with their communities to communicate their expectations in an effort to raise the overall violinistic abilities and skills of incoming violin majors. Some of the activities that these student-centered interview participants have undertaken included: directly working with potential violin majors by offering free or reduced-rate lessons (n = 8), engaging in outreach work in the form of performances and masterclasses in the community (n = 5), developing and maintaining a network of relationships with local music teachers (n = 4), providing professional development workshops and presentations for K-12 classroom music teachers (n = 4),

providing resources to underserved communities by sending students or coaches to work with potential violin majors in one-on-one or small group settings (n = 4), being involved with their institutions' community music school (n = 3), giving free trial lessons to potential violin majors before or after the audition (n = 3), visiting high school music programs and guidance counselors (n = 2), working with private teachers (n = 2), training their own students to prepare future violin majors (n = 2), actively recruiting students by establishing long-term, multi-year relationships with them (n = 2), and creating a local pedagogical community for violinists (n = 2). These activities deliberately pivot away from the teacher-centered “secret garden” (Burwell et al., 2019, p. 372) of the master-apprentice tradition. These professors are sharing their expertise and knowledge with local communities outside of the one-on-one lesson setting and are actively shifting from the traditional master-apprentice style of knowledge transfer towards a broader and more inclusive method of sharing knowledge.

In contrast, 30% (n = 13) of the interview participants spoke at great length and in great detail about the perceived shortcomings of auditionees and the people who prepare them. At the same time, they did not provide any strategies or describe any current undertakings to improve the situation. This mindset seems to stem from a teacher-centered approach and a passive attitude about their own roles and responsibilities. It did not seem to occur to these participants that violin professors that potential violin majors and their teachers may not know expectations because these populations may either be (a) be part of a master-apprentice dyad that lacks expertise or (b) not in a master-apprentice dyad at all. Violin professors, deeply entrenched in the master-apprentice tradition, may not even realize they may be “reluctant, defensive, or even secretive about sharing” (Burwell et al., 2019, p. 387).

Conclusion, recommendations, and implications

The findings of this study indicated a clear disconnect between violin professors' expectations and how potential violin majors are perceived to be meeting them. Less than 50% of auditionees were perceived to have the required technical foundation, and less than 50% performed developmentally appropriate repertoire. The reasons for this disconnect can be traced to the isolation and secretive nature of the master-apprentice style of knowledge transfer. Several participants realized that they inadvertently were withholding the details of their expectations to potential violin majors. As one participant put it,

We also need to probably put it on our website — this is what's most important. Because everybody's assuming somebody else is covering it, right? I'm as a professor going, “Oh, my God, how can this —? What? Who told them this was okay? Why isn't this word out?” But if they don't know, it's all of our responsibility.

Violin professors should examine how their experience in the master-apprentice model has impacted their teaching and positioning. They may explore whether insecurity or competitiveness due to the secrecy of the master-apprentice model may prevent them from sharing their expectations and recruiting violin majors. They should also realize that the secrecy of the master-apprentice tradition may not benefit them nor potential violin majors. The researcher intends to start an organization of violin professors that will eventually expand to include all violin teachers to create a professional learning community to break down the barriers of the traditional master-apprentice dyad.

This current study may also be generalized to potential majors and professors of different musical instruments, including other stringed instruments. However, the findings from this

study may or may not be replicable with studies on other instruments, given each instrument's unique history, development, pedagogical tradition, and repertoire.

As applied music professors, we must recognize that applied music education is changing and evolving and that maintaining the secrecy of the master-apprentice tradition is unsustainable. We cannot assume that our expectations are widely known nor can we assume that potential violin majors work with teachers who have the necessary subject matter knowledge and pedagogical content knowledge. This is where we, as violin professors, can step in and share our expertise. If we wish to keep classical violin music alive, we must share the details of our expectations of incoming violin majors and help provide resources for them to meet our expectations.

(Abstract 1146)

The Effectiveness of Integrated Studies Centered Around Music Education: Based on Follow-Up Interviews with Graduates

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Abstract

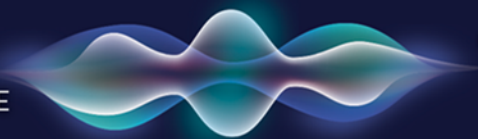
The current revision of the Courses of Study in Japan calls for “creating new values by using sensitivity and working with others” as the purpose of revising music studies. The author has been involved in practical research on integrated expressive activities in elementary and junior high schools in Japan and has found that expressive activities in music education helps to cultivate a variety of abilities in children.

The author helped develop cross-curricular activities for a junior high school program in Niigata Prefecture with the goal of producing a student-created musical stage production. The class, which was centered around the school's music class, ran for 20 years. To learn more about how graduates of the school currently viewed their participation in the program, the author created a Follow-Up interviews for graduated students to discuss the merits of the program and to determine why it was so successful for such a long period of time.

The survey was given to 15 graduates who experienced this stage production during the 2011 and 2012 school years, and this paper focuses on three students whom the author believed

played key roles in the programs. The questions were administered via e-mail and Zoom, and asked students how they viewed their experiences from an educational and social perspective. She also wanted to know if the experience was beneficial to them in their current lives. The same questions were also given to two music teachers who oversaw the program during different time periods. Both surveys were conducted in June and July of 2021.

The students' replies focused on the difficulties and the rewards of collaboration, discoveries about their musical abilities and how they were able to navigate the various group dynamics required to produce a student-created musical performance. The teachers talked about how they helped manage conflicts between students, and how working toward a common goal as a group helped the students grow individually as human beings.



The author believes that the graduates' answers showed that they valued the process of collaborative creation and have been able to apply lessons learned from participating in the program to their current job and academic endeavors. She also believes that the program provided the students with basic knowledge and skills in music, and that this knowledge helped enrich the students' collaborative efforts.

Keywords: Integrated studies, student-created musical, Follow-Up interviews, collaboration, "School Traditional Culture"

1. Theoretical background of the paper

1) New Aims for Education in Japan

Traditionally in Japan, music education has been viewed from the perspective of "art," with a heavy emphasis on skill mastery. However, with the advent of the AI age, "social and emotional skills" as well as "physical and practical skills" are becoming more important qualities and abilities that children should develop (Shirai, 2020). In the current revision of the Japanese Courses of Study for both elementary (MEXT, 2018a) and junior high schools (MEXT, 2018b), one of revisions of music education is to "create new values by using sensitivity and collaboration with others".

Similarly, at the beginning of the current revision of Japan's music curriculum guidelines, the importance of music in relation to life and society was emphasized for the first time (MEXT, 2018a) (MEXT, 2018b). The author has been involved in practical research on integrated expressive activities in elementary and junior high schools in Japan and has found that expressive activities in music education helps to cultivate a variety of abilities in children (The author, 2016).

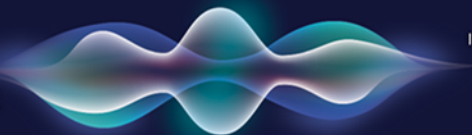
2) Cross-Curricular Learning

In the 21st century, students are expected not only to acquire knowledge, but also to apply what they have learned to practical situations. In addition, in this globalized world, calls for collaboration with others who are different from oneself have been prominently featured in the recently revised Courses of Study (MEXT, 2018a) (MEXT, 2018b). In order to cultivate a wide range of these skills, it also promotes cross-curricular learning. Especially in Japanese junior high schools, where students are assigned to different subjects, the hurdle to cross-curricular teaching is much higher than in elementary schools (The author, 1999).

However, since the mid-1990s, the author has worked on cross-curricular, creative activities involving stage expression in which a junior high school's music department collaborates with teachers in other educational departments to complete a student-created project (The author, 1997). In particular, the author had been deeply involved in a project at F Junior High School. There, she helped develop cross-curricular activities for producing a student-created musical stage production (The author, Endoh (Kami, 2008)). The program was so successful that it ran annually for a 20-year period (The author, 2017).

3) Student-Created Stage Musicals

During the period it was produced, it had become a tradition for the third year students to work on this project. In December, before the graduation ceremony in March, each of the third grade classes would present a creative musical stage production based on school life. The venue was the gymnasium, and the audience consisted of first-year students, second-year students, teachers, parents, and community members (The author, 2002).



To create this staged musical performance, students worked together with teachers from various departments and, occasionally, outside experts, to solve problems during the course of activities and learn to refine their creative expressions through verbal analysis. The goal for the students was, through collaboration and compromise, to create music by having an image of what they wanted to express, and, afterwards, using the characteristics of sound materials to devise structures, such as repetition, change, and contrast, to compose a cohesive musical score (Figure 1.).

Scenario creation, casting, instrumental performances, choral and solo aspects, and other vital parts of the play were all decided through repeated discussions with the 40 students in the class. Each aspect required repeated class discussions (Figure 2.).

As an example, during one year, the scenario of “the Preciousness of Peace” was chosen following a school trip to World War II battle sites in Okinawa. However, it was not the only possible theme, so the students had to discuss many possibilities before the theme was set. It was only after the scenario was decided that the music, creative dance, and stage production for each scene began (Endoh & Kami, 2006).

2. Focus of the Study

The author knows of no other example in Japan of a cross-curricular program centered around a school’s music class that ran for 20 years. Therefore, the author will also discuss what merits the students and teachers found in this practice and why it was so successful for such a long period of time.

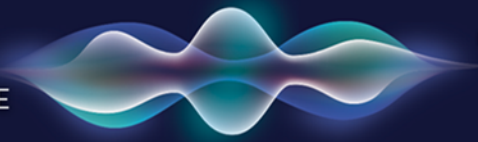
3. Questionnaires and Interviews

For this study, the author examined 20-years of answers to questionnaires given to the students who participated in the stage production class. She collected further data from Follow-Up interviews of the students who took part in the 2011 and 2012 productions and two teachers who were involved during those years. In her Follow-Up interviews, which were conducted in June and July of 2021, the author asked the graduates and teachers who had experienced this activity what they learned and gained from various perspectives, including musical, educational, and societal.

While a few other teachers were in charge of the program in its later years, the teachers chosen for interviews by the author were Mr. Taizan Hasegawa, who oversaw the creative musical stage production program from its launch in 1996 to 2005, and Ms. Yoshiko Endoh, who followed Mr. Hasegawa, and was the only music teacher in the school to oversee the program.

While other teachers took part in the program, these two teachers were chosen because of their deep involvement. The author interviewed Mr. Hasegawa and Ms. Endoh about the changes that took place during their time overseeing the program.

The author was also able to gather information from a total of 15 graduates of the school, eight who participated in the 2011 stage production and seven who participated in the 2012 stage production. These students responded by mail to a questionnaire that asked them if and how their experiences in the program helped them in their current social and professional lives. Further, the author also conducted Zoom and telephone interviews with two graduates



who were in charge of the music composition and direction of the 2011 stage production and one graduate, currently enrolled in the author's graduate school, who was in charge of conducting the chorus and other musical direction of the 2012 stage production.

4. Results and Summary

1) Follow-Up Responses from Graduate Students

The author obtained responses from the graduates on how their experiences in the program were subsequently utilized by the students to achieve their future objectives. One of these graduates, Mr. D.M., who, during his time working in the stage production program, was a music director on “Stairway for Dream,” a scenario about two groups of high school students, one rich and the other poor, living in a rural town in the United States, who reconcile their differences after a series of twists and turns. The story is about the value of humanity and how it cannot be determined by money.

After graduating from F Junior High School, he went on to major in literature, theater, and stage direction at a university in Tokyo. In 2020, he was selected from a field of more than 100 candidates to be a staff member of the New National Theater, Tokyo, Opera Studio, Artist Training Department. He noted, “It is an indisputable fact that I would not have been able to major in my chosen fields at college nor would I have been able to get my current job if I had not experienced the creative musical stage production program in my third year at F Junior High School.”

Ms. E.K., who, in 2011, played a major role in the creation of the scenario and also served as the general director of the stage production, is currently a graduate student majoring in psychology. She told the author “Until then, I had never experienced singing while dancing to choreography. I came to understand that by singing while expressively moving my body, my actions appeared more visually appealing and presented a stronger message than they would have by just solely singing. I also realized that by moving my body, I could unconsciously use my abdominal muscles more and sing with a richer sounding voice.”

“I am currently majoring in psychology, and the experience of performing with and negotiating differences with my peers has helped me to understand how to better deal with others. I believe I can use this knowledge in my professional career going forward.”

Mr. R.U., a graduate student who is studying to become a music teacher at a junior high school, served as music director, and conducted and composed the chorus for the 2012 production. He remembered that the school had hired a new music teacher, replacing Ms. Endoh who had been teaching at the school for many years. Her replacement was not as experienced, so, as a result, he said that he and his classmates were often left to explore and work independently. Conversely, while this situation also gave him an opportunity to work with new ideas, he also mentioned there were times when he felt he needed more guidance.

A solution for him was to simplify some of the work he was doing to make it easier for the group. “In my choral music class,” he said, “I came up with the idea of singing in unison at the main break of the piece. I then incorporated this into the composition, hoping that it would make it easier for my colleagues to sing.”

Students also learned that they had to rely on each other to complete all their tasks. Mr. D.M. remembered “As a composer, I did not know how to play instruments other than the piano

and the recorder, so I was limited in my expertise. For example, when composing the piano parts, I was able to add the words 'una corda,' or 'soft pedal,' to the background music. This is a term of instruction for the piano player to weaken the sound so that it would not interfere with the actors' lines. On the other hand, I left the playing of the double bass, the clarinet, and the drums, which I was not familiar with, to the performers.”

As they prepared for the stage performance, the students often experienced both the joys and frustrations of collaboration with their peers. All the students had to agree on the scenario, casting, instrumental performances, choral works and many other aspects of the performance, sometimes through repeated discussions. Therefore, there were many situations where the students were required to adjust their opinions.

Mr. D.M., remembered another situation where he had composed a song for the play that he felt was satisfactory, only to have classmates tell him that it needed to be changed for various reasons. “To be honest,” he said, “I felt angry, but when I went through the process of revising the piece according to their requests, I felt we had created it together, and I could feel the power in that. This was something I had not expected. I was able to discover the value of creating with friends.”

2) Follow-Up Responses from Teachers

Ms. Endo said that this was part of the plan. She added, “We tried to provide indirect support by placing and leaning on the complex peer relationships of adolescent children in our junior high school.”

“In addition, in order to avoid any unfairness in the selection process, at least once in the performance, each student was allowed to perform in the spotlight, either speaking, singing, playing instrumental music, or dancing on stage.”

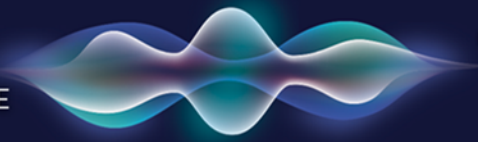
She stated that this helped to bring harmony to the entire school. Teachers from different subjects came to observe the production. “This led to a better understanding of art as a subject and its interaction across curriculums,” she added.

She feels proud that during her tenure, the school’s faculty, after much discussion, named this activity as “School Traditional Culture.” Ms. Endoh also noted that the synergistic effect of all the musical competencies, singing, instrumental music, appreciation, and creative writing, practiced in parallel, has improved how music is taught in the classroom.

Since 2016, the school has discontinued large-scale stage productions. However, parts of the project live on through the school’s chorus classes, wherein teachers still use physical expressions in their performances. They also continue to hold an inter-class chorus competition twice a year, in spring and fall.

Mr. Hasegawa was the school's vice principal in 2016 when the school was forced to downsize the musical. He said the reason for the downsizing was that teachers were overwhelmed with teaching basic subjects related to high school entrance examinations, and they no longer had the time or staffing ability to help the students produce large-scale musicals. However, he added that he appreciated how these types of activities provide an opportunity for students to better learn how to communicate with others, to learn to appreciate the opinions of others, and to enhance individual self-esteem.

5. Conclusions and Implications for Music Education



Large-scale student-created performances require students to reflect on their actions, to share their ideas with their peers, and to work as a team to build up their creations. However, beyond the performances themselves, the process that students experience can also help them in their future endeavors.

From the interviews with those involved, it is clear that music as a mediator contributes to the qualitative improvement of learning in other subjects and music itself. These interviews also show that the graduates valued the process of collaborative creation and were able to apply lessons learned from participating in the program to their current job and academic endeavors. Further, they show that the basic knowledge and skills in music that were taught in the program helped enrich the students' collaborative efforts.

Cross-curricular activities are gaining popularity in educational circles worldwide. New methods and approaches, such as STEAM education (Yang, 2019) are increasing in Japan and have support at administrative levels. However, there are few examples in Japan where arts education are included in cross-curricular studies. The author believes the "School Traditional

Culture" class at F Junior High School could be a potential model for future cross-curricular studies that utilize arts education. The author hopes that the day when creative musical stage performances can be fully revived is not far off.

Acknowledgements

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(Abstract 1203)

Utilizing ICT Devices in Collaborative Lessons in High School Music Classes

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Abstract

Theoretical Background

The latest Japanese curriculum guidelines strongly recommend that schools cultivate students' abilities to become familiar with and to be able to use Information and Communication Technology equipment. It also calls for students to use their sensibilities and imaginations to appreciate and be able to express their views about their lives and environment.

Aim/Focus of the Study

The objective of this study is to provide students with simple and accessible ICT tools to create music. Instead of relying on musical skills, students learn to choose available sounds

from music-creating software and to arrange them based on their own sensibilities, their connection to their environment and their emotions.

Methods

This project is based on the authors' 2019 and 2020 music class lesson plans for high school seniors. The plans called for students, who were already familiar with the music-creation software, Vocaloid, to use the applications SONG MAKER and GarageBand on an iPad to compose short pieces of music based on situations in their daily lives. For instance, students could create sounds for a personalized wake-up alarm or for audio-sensory imagery reflecting their environment, for instance, autumnal sounds. Afterwards, students were required to collaborate by sharing and critiquing each other's compositions.

Results

The students, after trials and errors, were able to present their sound images to the class and explain how these sounds were connected to their daily lives or their environment. The authors believe that the activities allowed students to share their feelings and to adjust their work after incorporating the opinions of their peers.

Conclusions/ Implications for Music Education

ICT tools are easily accessible and often easy to use. The authors believe these tools help students to focus on the act of creation. However, as many students are not confident in their skills, it is important for the teacher to create a classroom environment where students are allowed to explain their creative decisions while also learning to accept advice from teachers and peers without fear.

Going forward into the AI age, teachers and students should learn to utilize easily available self-learning programs and devices as these sorts of applications are becoming more prevalent in society. The authors believe ICT devices will continue to be useful in academic settings, especially in music classes, and repeated exploration and adjustment of best-use practices should continue to be explored.

Keywords: ICT software, 1 device for 1 student, jingle, SONG MAKER, GarageBand, LoiLoNote School

1. The theoretical background

In the age of AI, not only "physical and practical abilities" but also "social and emotional abilities" have become important qualities and abilities for children to develop (Shirai, 2020). One of the revised points for music education in the current revision of the Courses of Study for Senior High School (MEXT, 2019) is "to create new values by utilizing sensitivity and collaborating with others". Similarly, the current revision of Japan's music curriculum guidelines emphasized the importance of music in relation to life and society (MEXT, 2018a) (MEXT, 2018b).

MEXT (Ministry of Education, Culture, Sports, Science and Technology) also wants to promote Information and Communications Technology (ICT) education for all subjects, including music. According to an analysis by the Programme for International Student Assessment : (PISA, 2018), when it comes to utilizing ICT at the school level, Japan ranks last.

However, by a large margin, Japanese students rank number one when totaling the hours spent in internet chatrooms or playing online games.

To try and mitigate this problem, officials at MEXT devised the “1 device for 1 student” program. (MEXT 2021). This is a plan which promotes information education by equipping each student in Japan with a personal digital device to enhance their learning. In this way, ICT education is supported at the administrative level (MEXT 2020).

However, Tatsuya Horita (2014) noted that Japanese music classes now rank last among all subjects in the utilization of ICT equipment and software and that more practical research would be required to bring Japanese music departments up to date. Japanese students have the abilities and opportunities to use ICT at a private level, but, in most cases, not at the school level.

Further, Chikako Ogawa (2014), who analyzed PISA’s results, stated that, compared to teachers in other countries, most Japanese school teachers do not have the skills required to manage ICT classes. However, the authors believe that existing applications and software that are both intuitive to use and free for download can be utilized in junior high school and high school classrooms. Also, they can be used in such a way that they meet another of the new national goals for music in the Courses of Study for Elementary and Junior High Schools (MEXT, 2018a) (MEXT, 2018b), “fostering the ability to think, judge, and express oneself and learning how to apply what one has learned as a goal for future classes”.

In September of both 2019 and 2020, one of the authors worked with high school third graders in creative music composition classes, using the 2011 version of Vocaloid, a software program that uses speech synthesis technology. This practice was also conducted in October of both 2019 and 2020. Vocaloid, however, required teachers to have a greater knowledge of music theory. Afterward, the authors sought to provide students with simpler and more easily accessible ICT tools to create music. Instead of relying on musical skills, students would learn to choose sounds based on their own sensibilities by connecting them to images from their environment and their emotions.

2. Method and Focus of the Study

1) Lesson Plan Software Used: SONG MAKER

The target audience was 19 third-year high school students taking Music II, and the program was conducted in October 2019. Similarly, in October 2020, the same program was conducted with a different set of students.

To start with, these students, guided by one of the authors, created melodies with SONG MAKER, a web application from Chrome Music Lab (2018) created to make music education more accessible. After that, the students used GarageBand, a music production software, to create songs representing the seasons to be played on school airwaves. One month prior to this study, these same students created their own musical ideas using Vocaloid.

Students use SONG MAKER by tracing squares that look like music notation to play a short piece of music. It's like drawing a picture, and even younger children can easily create a song using this intuitive software. It allows users to choose from a variety of instruments, such as piano and marimba, and to add percussion sounds, such as drums and congas (Figure 1).

2) Reasons for Utilizing SONG MAKER

The author taught "Sound and Composition" at O High School in September 2019 and September 2020. Before the author began teaching the class, the previous instructor of this class used "Sibelius" and "Finale", both advanced music composition software packages. However, the author chose not to use them in her lesson plan because of their difficulty of use.

Some software, such as Vocaloid, require teachers to have a basic understanding of solfege. SONG MAKER, however, is so simple and easy to use that it can be used in classes run by non-musically trained teachers, even in elementary schools.

One of the authors believed that SONG MAKER would not hinder students from creating songs even if they had limited musical skills. She also hypothesized that, by sharing their compositions, students would learn to appreciate each other's individuality instead of focusing on differences in technique.

3) Using SONG MAKER

In 2019, one of the authors, decided a goal for music composition class students would be familiarizing them with the creation of melodies using SONG MAKER. Another goal, she decided, would be "acquiring the skills for composition by utilizing techniques such as pattern repetition, melody changes, and stylistic contrast", all basic music elements.

With four hours of class time allotted, the plan called for the students, after listening to an explanation from the teacher, to create a sound logo of up to 16 beats using SONG MAKER. A sound logo, a short distinctive melody or other sequence of sounds often used to identify products in radio and television commercials, was chosen because it can leave a lasting impression on a listener despite its short length.

Students would use the SONG MAKER interface as they desired without input from the teacher. After completing the task, students would present their compositions as well as listen to and critique each other's finished works.

4) 2019 and 2020 Practice Lessons: Thoughts and Issues

The results of student performance evaluations during the lesson and student surveys after the lesson showed that 90% of the students enjoyed composing with SONG MAKER. It allowed students to easily determine the value for height or pitch, and to use matrix notation with squares instead of notes. Each student could listen to the sound of his or her own work on the computer. The teacher could collect all the compositions and the whole class could listen to them.

One student wrote that they were impressed by how the mood of a song could be changed with just a half-beat rest and found the process of trial and error on the iPad screen to be fun. Another student commented that he was excited to collaborate with others to create a work of art.

5) Using GarageBand

The 2020 version of GarageBand is a type of sequencing software that combines various sound sources to create Desktop Music. It is part of iLife, Apple's integrated software product for macOS (Figure 2).

Students were given an iPad with GarageBand as one of the applications and told to use it to help them visualize the musical elements and to create songs to be played during school

announcements. They were also asked to think of images associated with the seasons as well as school activities and events.

The students' assignment called for them to create sounds and music to represent an image. They combined sounds that fit the image and combined them to form melodies created from the image. Through trial and error, students adjusted the relationship between the elements of the music. Through the repetition of these activities, student tried to develop the image they wanted to express.

5) Using GarageBand

1. *Creation of jingles to be played during school broadcasts*

In 2019, one of the authors directed students to create two jingles, one for school broadcasts and another for a group project. The first would be played every day before or during morning, lunchtime, and after-school public announcements. Each student was put into a group. Once in the groups, the students would choose a theme that they would like to express in their jingle.

As an example, Group A chose "Morning" as its theme. The students in this group tried to use sounds that would create a "fresh" image in other students' minds when they listened to the morning broadcast. The members of the group spent a lot of time discussing and sharing their thoughts about what sounds would be appropriate with their peers. They chose to use a bouncy dotted rhythm in a major key with eight beats set at a mid-tempo. For instrumentation, they chose to use a vibraphone and strings.

After creating the jingle, the students presented their works to the class. They could then make changes to their work based on the advice they received from their peers.

2. *Creation of jingles to represent the seasons*

In 2020, the authors decided to create four groups of students who would then be tasked with creating jingles based on the sounds of the four seasons. Again, these student-created jingles would be broadcast during public announcements.

As an example, the students in Group B chose the theme of "Autumn". As a group, they discussed what sounds might create an image of autumn in a listener's mind. After much debate, they decided to base their jingle on the sounds of insects that can be heard in a natural autumnal environment and tried to think of ways to translate that into music. The group members recorded the sounds of insects from the natural environments near their homes and used the sound sources as references. They then used various techniques to imitate these natural sounds. For instance, they used triangles and glockenspiels to represent the sound of bell crickets.

3. *Sharing the finished work with LoiLoNote School*

The authors also used the export function of GarageBand to download both the completed musical works and the students' written notations in LoiLoNote School. LoiLoNote School is a learning support multiplatform app designed for classroom settings. It provides a cloud

desktop where users can save information as multimedia cards. The cards can be stacked, connected, and arranged freely.

The created cards can also be shared among connected terminals, and visual presentations can be made simply by tracing the cards with a finger in the order in which students choose.

Interactive learning can be realized as students present and compare their ideas with their classmates' cards.

3. Discussion and Implications for Music Education

According to Hirata (2019), the author of a major textbook for music teachers used throughout Japan, ICT in music classes is best used for creative music activities. Further, Makabe (2016) states that one advantage of using ICT could be the elimination of the need for the teaching of reading music and of learning musical grammar, which, in turn, could allow teachers and students to focus more on creative activities.

In Japan, the move towards the realization of an educational ICT environment that is individually optimized for each child has only just begun. Though “1 device for 1 student” is a start, there are still many problems to overcome. Teachers need to develop lesson plans that can help students living in an increasingly digital 21st-century society support their abilities to express their ideas using this technology.

In consideration of student abilities, the authors decided that software with complex functions, such as Sibelius or Finale, were not ideal for learning basic musical competencies. In music classes, they found, easier, more intuitive software was best for both teachers and students, allowing those who lacked confidence in their understanding of solfege to participate in a meaningful way.

However, they determined that ease of use was not the only requirement. The authors also ascertained that, since music is a temporal art form, a medium that could easily record sound sources and performances would be necessary. This kind of function would allow students to safely participate in collaborative creation activities with their peers and give teachers the ability to collect and assess materials efficiently.

While, currently, the use of ICT devices in music classes is still at a formative stage in Japan, the authors believe that they can become increasingly useful in academic settings, and that repeated exploration and adjustment of best-use practices should continue. The authors are convinced that ICT can help both teachers and students better realize the joy of music creation and can help encourage a better classroom environment for collaborative musical endeavors.

Acknowledgement

The authors would like to express special thanks to O High School's teachers and students.

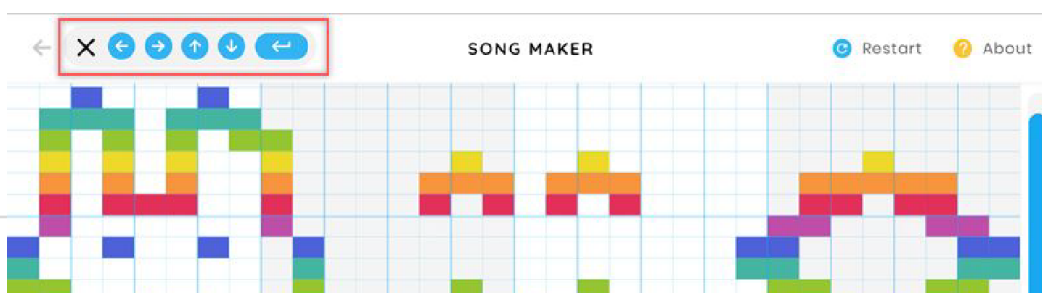


Figure 1. Main Interface of SONG MAKER

SONG MAKER plays a sound by selecting a square. The squares are colorful and visually pleasing, just like these illustrations.

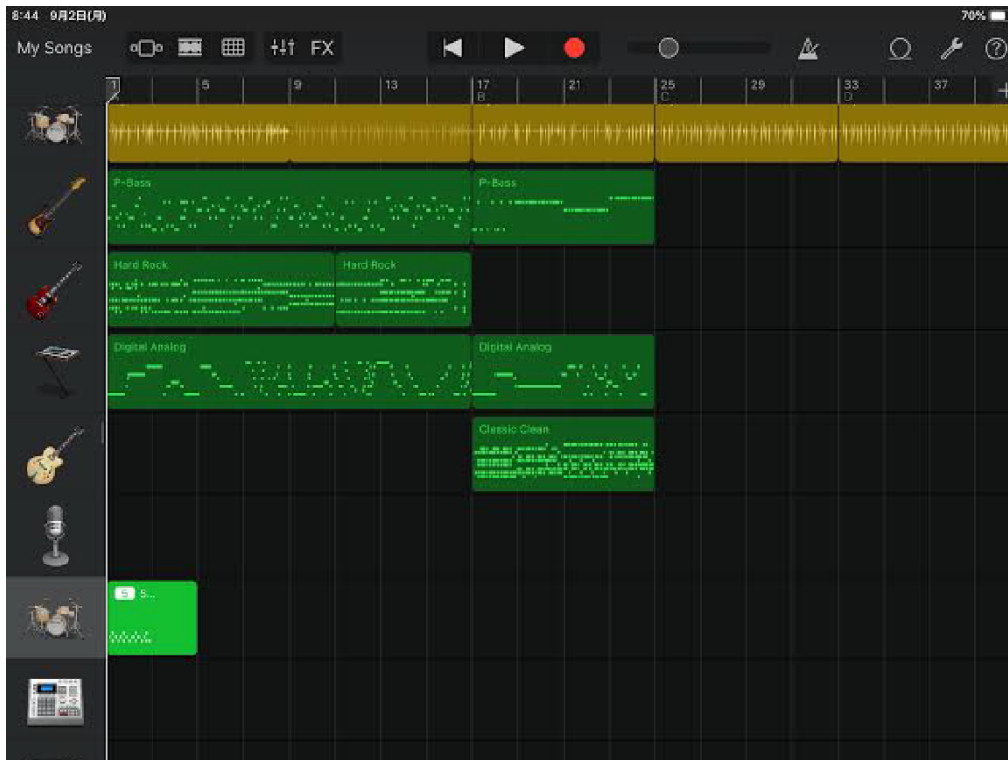
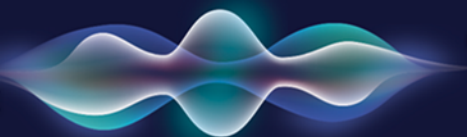


Figure 2. Main Interface of GarageBand

In GarageBand, students can choose various instruments as they compose their own music.

(Abstract 1204)



Mechanisms and challenges implementing music teaching in formal education in Indian subcontinent

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Abstract

Indian musical tradition is one of the oldest musical forms and is unique for a variety of reasons. The Indian education system has several success stories when it comes to science and technology. However, in the post-colonial era of India, music has taken a back seat primarily due to difficulties in formalising the various traditions spread across the subcontinent into a palatable academic setting even after several attempts through National Education Policy, and the National Council of Education Research and Training curriculum framework for music. In this article we trace the mechanism at policy level and challenges at ground level that might have led to the current situation.

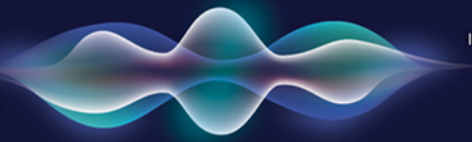
We review the formal education systems of India at school and university level and the programs that exist in these streams to study Indian music. We compare the technology, logistic and resource support system available outside India through our online survey and the facilities that are in place in India. We refer to the National Education Policy 2015's takes on bringing Indian music into formal education and discuss some of the downsides, and gaps in their account. Ultimately, we probe the landmark conference conducted by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 1953) from which we highlight insights which are relevant even today.

Brief history of Indian music

Indian classical music has a long history and is broadly categorized into Carnatic music, practiced in the south and Hindustani music, practiced in the north (Bhatkhande, 1974). The music was of course the same at least till the 13th century. This we know through the landmark text by Sarangadeva called the Sangita Ratnakara from the 13th century. This major work has seven chapters: (i) Swara, (ii) Raga, (iii) Prakirnaka, (iv) Prabandha, (v) Tala, (vi) Vadya and (viii) Nrtya. In the medieval period, the southern music, after it gained its own identity so to speak received a copious upsurge in both textual works as well as musical content. The late 18th century marks a stellar period in the entire history of Indian music with the arrival of the trinity of Carnatic music, Syama Sastry, Thyagaraja and Muthuswami Dikshithar. They were all born in the town of Thiruvavur and led a revolution in the Carnatic realm that still reverberates. These composers of all their brilliant traits left behind a shishya parampara or a musical lineage to keep alive their contributions. In the gurukula system, the student learns from his teachers by spending all the time at the teacher's place performing all the duties mandated by the teacher or the guru. This has remained till today the only form of music education system and has not expanded into the formal curriculum as has the sciences.

Post-independent era (1947-today):

The story of Carnatic music took several turns after the turn of the twentieth century. It saw multitudes of drastic changes and has now reached the fore of concert circuit. Independent India failed to institutionalize Indian music and handicapped the performing artists as well as a whole host of teachers, instrument makers, students alike. This led to the development of an alternative learning system which for the most part mirrors the gurukula system. The change from a traditional gurukula system to the 'modern' however can be traced back just as the colonial rule ended. With only 12% of the population literate, the government's



short-sightedness led to a complete neglect of the art form, artists and artisans involved in creating the art. Thus, with only the rich class to stay and enjoying all the wealth of the culture nourished for thousands of years, it was then taken over by the haute monde. Clear evidence of this is the migration of the so called forte of Carnatic music, shifting from legendary places like Thanjavur, Mysore to financial centers like Chennai and Bangalore. These evidence lead us to say post-independence was not necessarily an independence for Carnatic music from the clutches of the elite to the general public. Music remains a stronghold in the hands of the high society even today.

Indian education system, its ambitions

National Council for Education Research and Training (NCERT) forms the fundamental architects of Indian education system. They have set some grand ideals for the Indian arts which however has not managed to translate to reality due to lack of focused efforts and failure to establish independent educating bodies.

NCERT ideals on art:

To quote from the National Council for Education Research and Training (NCERT) report on art education (AEI, 2010):

“The Government of India has brought out The Right of Children to Free and Compulsory Education Act as a landmark for the educational provision in India in 2009 and it is in action from April 2010.

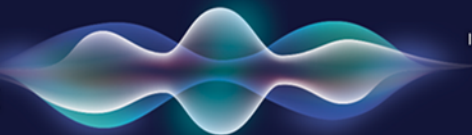
- It has set the stage for providing free and compulsory education to all children in the age group of 6-14 years.
- It has made provision in its Norms and Standards for teaching art education to classes 6 to 8, by providing separate teacher for teaching arts.

Art education was given importance in all documents of India since independence at school level and teacher-education level, but never got the desired place and acceptance. Prior The Right of Children to Free and Compulsory Education Act (RTE 2009), in 2005 the NCF reiterated the values enshrined in our Constitution including reduction of curricular burden on children, ensuring quality education for all and systemic changes as markers of curricular reforms.”

Here NCF is the National Curriculum Framework (NCF, 2005) published in 1975, 1988, 2000 and 2005 by the NCERT. NCF is a platform that gives the framework to create syllabus for teaching in the school education. We highlight a point alluded by the NCERT report which is the misplaced results of art education. This is in essence pointing fingers that the modus operandi undertaken by the government in implementing arts at school level. If art had in the true sense of the word been prioritized and as the report claims if all the documents had been inclusive about art (while we know art today is exclusionary only to the elites of the society), we would never have reached the appalling state we presently are in.

We quote the recommendations made by Focus Group on Arts, NCF 2005 and access its merits with an eye towards the reality we experience post these discussions. We also analyze what would happen if these ideas were to be extended to Music which is of interest to us. They are

- “Arts education must become a subject taught in every school as a compulsory subject (up to Class X) and facilities for the same may be provided in every



school. The four main streams covered by the term arts education are music, dance, visual arts and theatre. Special emphasis may be given to Indian traditional arts, which currently face the threat of being drowned out by so called mainstream and popular arts.

- Teacher education and orientation must include a significant component that will enable teachers to efficiently and creatively include arts education.
- Resources for research development and training must be allocated. More material on arts education should be made available for arts education teachers including electronic media aids. The group also recommended that there should be a unit of arts education having faculty in different areas of arts to empower the teachers, states and develop materials.
- I further envision those arts in India are also living examples of its secular fabric and cultural diversity. An understanding of the arts of the country will give our youth the ability to appreciate the richness and variety of artistic traditions as well as make them liberal, creative thinkers and good citizens of the nation. Arts will enrich the lives of our young citizens through their lifetime, not merely during their school years.”

These ideals seem to be only on paper and the sad truth is that it has not translated to ground impact.

Music education curriculum at School level:

Music education is not available in every school in India. This is not concluded just from our anecdotal evidence during our visits but is one of the well-known facts. Although, music has got its place in the NCERT syllabus, most of the private schools affiliated to central and state boards do not have music education as part of their academic or extracurricular activity. In those private schools which offer music classes, we found that they offer courses through their own in-house curriculum. But it is not the case of schools in US and Europe, as most of them (74.5%) follow a common syllabus prescribed by the state.

NCERT has recommended music syllabus for the high schools. However, this is not taught in practice. CBSE has music as only an elective along with prescribed syllabus in both vocal and instruments (percussion and non-percussion) at XII level. Apart from prescribing the syllabus, there is no enforcement from the board about the recommended practices followed. On the top of it, the music aesthetics manuals have not been developed or peer reviewed by music teaching experts or professionals. The reviewer for Carnatic and Hindustani music courses is by a 5th grade music graduate from Trinity College London, whose expertise is on electronic keyboard form. The question here is how far from a musician with a background in the western music (partially qualified) can review and certify Carnatic and Hindustani music courses? The entire process lacks seriousness and demands a complete revamp. Another great falter in framing the curriculum is that it provides no scope for teaching regional language songs to primary school children. A child of ten years of age is tender in understanding and articulate in mother tongue, which can be overcome by giving rigorous training in the art forms like music, in their local language. With our modern understanding of child development, the courses need to be structured in consultation with experts both in the field of classical music as well as cognitive development specialists.

As per the make a note foundation survey in US school education, the average number of music courses offered at elementary schools was 2.67 ± 0.28 . By far, a course called or like a

course called “General Music” was the most common music offering at elementary schools – fully 98% of elementary schools offered curricular music that music teachers identified as “General Music.” The next most common offerings were concert band (43% of elementary schools), choir or chorus (39%), and orchestra or string ensemble (25% of elementary schools). Less common offerings included individual instrument lessons (8%), guitar ensemble (7%), guitar as an individual instrument (5%), piano (5%), marching band (6%), percussion ensemble (5%), show choir (2%), jazz choir (2%), music technology (2%), and individual voice lessons (2%). Middle schools offered an average of 3.68 distinct music courses (± 0.37). At the middle school level, band (91%) and choir or chorus (83%) were, by far, the most common music courses offered at schools that employed at least one music teacher. General music is available at 56% of middle schools and orchestra or string ensemble is offered at 41% of middle schools. Less common middle school music offerings include jazz band (19%), individual instrument lessons (18%), music appreciation (9%), guitar ensemble (7%), piano (6%), music theory (5%), and show choir (4%). While designing the syllabus/curriculum, it is important to note, that all the people including parents, students, teachers and management views were considered in these schools. Music in India is treated as a recreational activity rather than developing sensibilities to consider them as a professional subject.

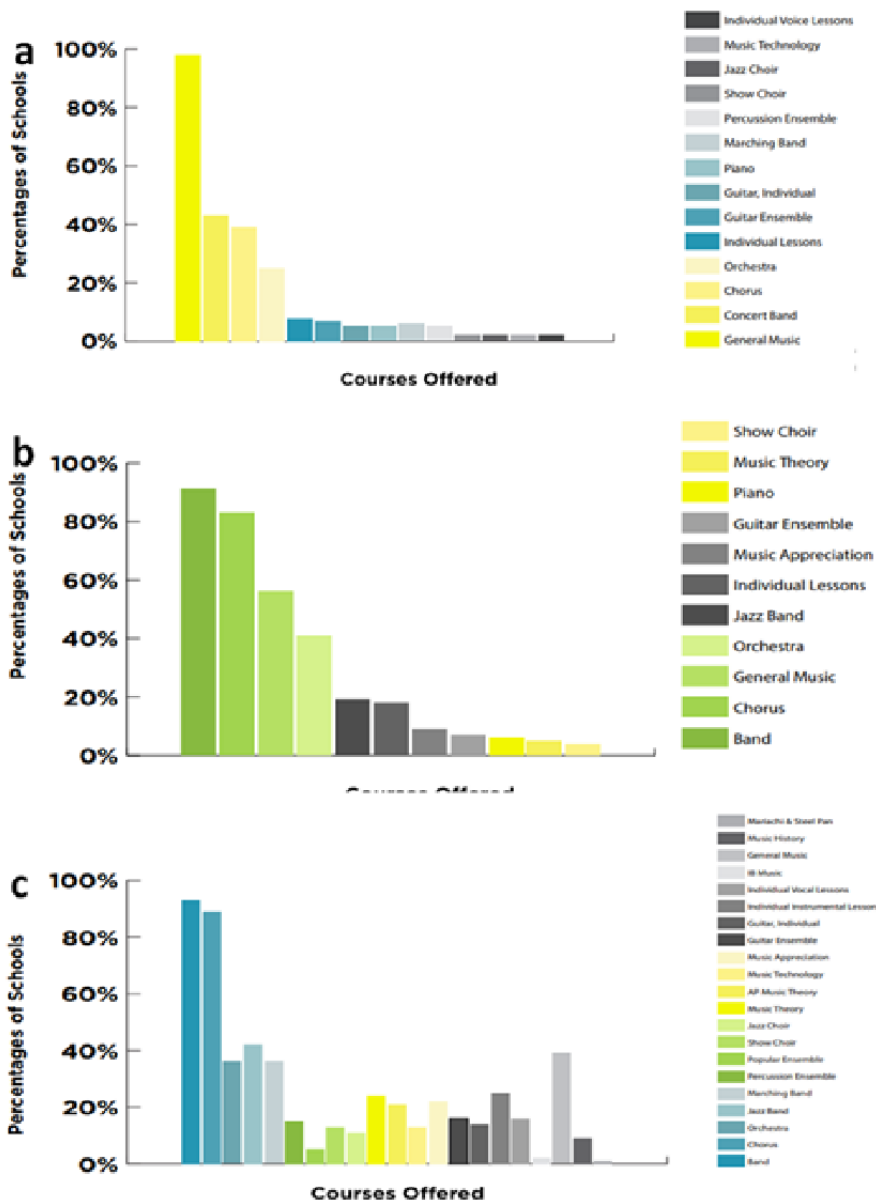


Figure 1 Histograms showing the percentage of schools that offer diverse musical courses to the students (a) in the primary (b) middle schools and (c) high schools in the USA (Vasudevan, 2019).

Selection of teachers:

According to our survey, about 84% said that they have expert teachers' specialists in the areas including strings, wind and voice in foreign schools. Majority of the foreign schools take specialized music teachers for wind/voice/strings. So, of the total number of music teachers, there is a fraction that represents specialization. Among vocal and instrumental music, both seem to be compulsory in majority of the schools. The organization of musical educational courses is suggested to the student based on the maturity level of the kid towards that art form. On the contrary, there is only one dedicated music teacher per school present in the Indian system. Although Indian schools follow strict guidelines for selection of teachers, there is no specialized teacher to teach voice or string or wind instruments. This is a very serious issue with the Indian schools as the need of specialist teacher would lead to deprivation of the art form.

In addition, school-level descriptive survey results in USA by the make a note foundation obtained information from 392 unique schools representing the full spectrum of American public schools in terms of urbanicity and school grade levels. It was estimated that 90.91% of schools with any music teacher employ at least one full-time music teacher, while 9.08% of schools offering music employ only part-time music teachers. Overall, the average number of full-time music teachers per school was 1.67 ± 0.15 . In elementary schools, the average number of full-time music teachers was 1.29 ± 0.16 ; in middle schools, the average number of full-time music teachers was 2.11 ± 0.32 , and in high schools the average number of full-time music teachers was 2.22 ± 0.34 . As might be expected, the number of full-time music teachers employed in schools was related to total school enrollment; each additional 1,000 students enrolled at a school was associated with an average of 1.30 more full-time music teachers ($p < .001$). The association between school enrollment and the number of full-time teachers remained statistically significant even when controlling for school urbanicity and school level $F(7,385) = 8.02, p < .001$.

MUSIC TEACHERS IN SCHOOLS

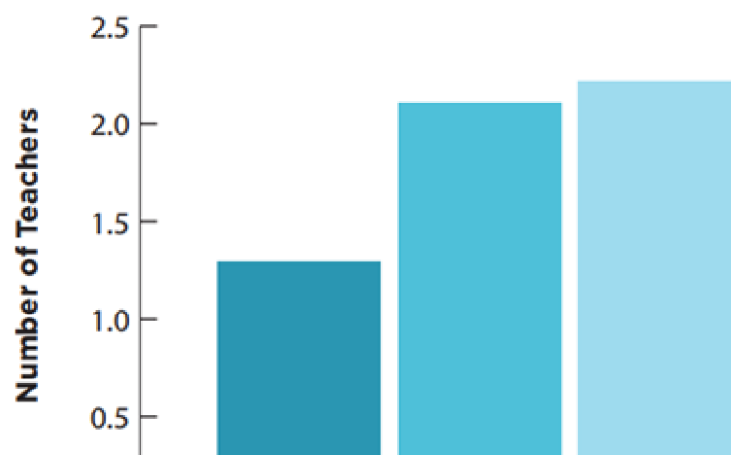
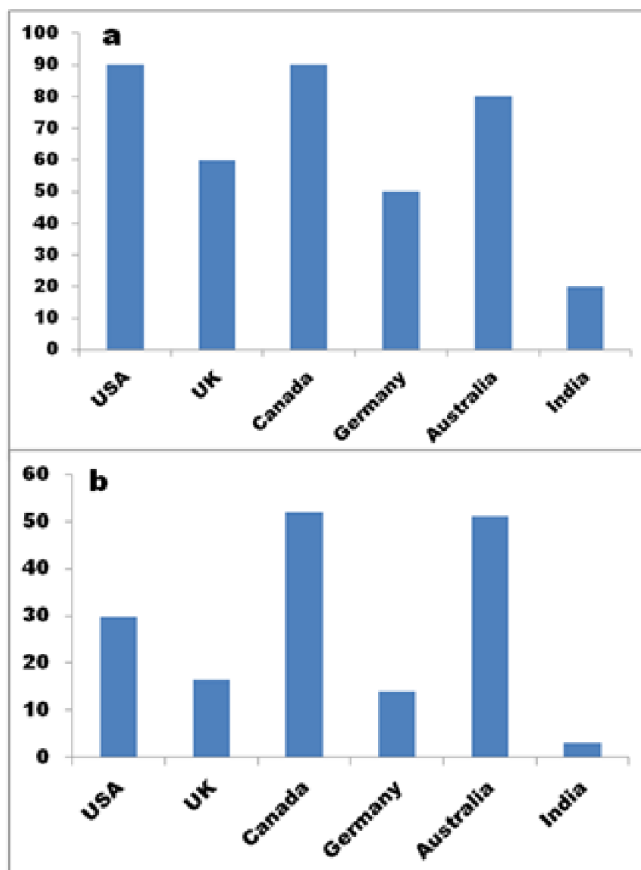


Figure 2 Plot showing the average number of music teachers in high school, middle school and elementary schools in USA as analyzed in the study (Vasudevan, 2019).

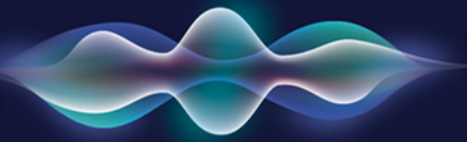
Brief comparison of university level music education systems

Indian universities in technical education are among the highly ranked places in the world. On the other hand, the scenario of music education in these institutes is far disconnected from the technical education. We compared in our recent paper (Vasudevan, 2019) the percentage of top ten universities having music departments in first world countries including USA, UK, Canada, Germany, Australia (Thurow, 2017) to that of India, as shown in figure 3a. Here in, USA and



Canada with 90% of the universities offering direct music courses in the campus ranked number 1, Australia, UK and Germany followed by more than 50% of music departments. India was lagging back with mere 20% of universities offering music courses in specified departments. Furthermore, the percentage of universities offering musical courses among the total number of universities in each country was evaluated (figure 3b), which is again high in first world countries compared to India. Australia (51.16 %) and Canada (52.04 %) with more than 50% of music departments in their total universities stand high followed by USA (30%), UK and Germany (20%). With a mere 3.1% of music departments, India again stands low in this list, which implies requirement of a mass reformation in the higher education system towards development of music education in India. The university system in India was formed with a vision to host all

streams of education and provide a holistic education, an analogue of liberal arts Figure 3 (a) Percentage of top ten universities having music departments (b) Percentage of universities education in the USA. However, what has come having music departments of the total number of it is an open story where the boundaries of universities in the county (Vasudevan, 2019). politics have all been breached and these universities have become mundane, lackadaisical and precipice of breakdown.



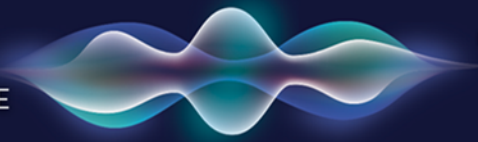
UNESCO conference of 1953

The report of United Nations Educational, Scientific and Cultural Organization (UNESCO) of its International Conference on the “Role of Music in the Education of Youth and Adults: MUSIC IN EDUCATION” (UNESCO, 1953) that was held in Brussels between 29 June to 9 July 1953 has some very important comments that has significance to all countries, specially India. The conference also had a representative from India, Prof. V. Raghavan from the Music Academy, Chennai. His talk was on “Music education in the Asiatic continent:”. The talk has some very important points which are relevant even today for the music education of India. We quote some parts of the speech which reinforces some of our findings.

2. *The expansion of education in the recent past has but touched a fraction of the masses, for most of whom this age-old music tradition, either in pure recital form or in the still more effective form of the musical discourse called the harikatha or kiRtan has been the regular medium. Such is the role that music has played in India in the sphere of higher personal evolution and in the sphere of social and popular adult education; and such are the springs of its inspiration and the forces that have sustained it down the ages. As a fine art, music has been, from remote times, included in the scheme of studies which contributes to one's accomplishments and status as a man of culture. The traditional list of the 64 arts in which men and women were expected to become proficient is headed by music and dance.*
3. *The role of the professional musician in music education. Without recruiting his services, as I shall show again presently, music education in schools, colleges and universities becomes a queer, lean, lopsided phenomenon. It is therefore necessary even in the interests of music at the educational level, to safeguard the professional and build up for him a secure and authentic foundation.*
4. *In the past, our non-professional music interest was cultivated by private or self-instruction. When the new educational set-up came, and schools and colleges were started. The curricula of studies neglected for a longtime the arts. A few separate art schools were established but these dealt with only painting and sculpture.*
5. *Musical research represents the high watermark of the study of music in colleges and universities; unfortunately, however, the results so far achieved have not shown high worth; the same set themes are tackled with the angle on the title changed every time; obvious aspects are dealt with at length; there is no sense of the problems either on the technical or the historical side. The contributions to higher musical research continue to come more from amateur scholars and the sum total of the annual output of this research is so limited that, I, conducting the only music research journal in all India or that part of Asia, am not able to collect sufficient material for a consolidated annual issue of that journal.*

Recommendations

India is a country that defines diversity like no other does. Of many aspects that represents its diversity, music is really the shimmering cornerstone. It is the onus on every individual to not protect this art form but to practice it. In order to do that, the first thing that needs to be done is a discussion on the topic. In the popular media, the discussion is really driven by news that can provide target point rating. This clearly eliminates topics such as music education. Growing body of research shows that teaching music and other art curriculum enhances and contributes to student's cognitive performance on standardized tests, such as in reading and math (Jenny Nam Yoon, 2000). In addition, the study of fine arts curriculum enhances motivation and discipline, which are intrinsic ingredients necessary to succeed in the academic arena. Furthermore, as per Riley et. al, “Just as we're tuning out choirs and



orchestras, some new studies suggest that music is a valuable learning tool” (Jenny Nam Yoon, 2000). While the importance of fine arts is being neglected, all recent research points that curriculum in music and art can help with brain development. So, proper care is to be taken for the transformation of the music education to the next generations, to be able to preserve the heritage and culture. School education system is the root of Indian future. If we are cutting the root, there is no reason to expect the future to flourish. This also implies that we need simultaneous revival at higher secondary, bachelors, masters and research levels, if we want the current population to not be left behind.

Among the Indian schools, an ecosystem that can care and nurture music is missing, as proper care is not taken to transform music education system to the next generation school kids. This can be driven by creating incentives schools which emphasize music which simultaneously generates employment as well as solves the issue at hand. Educational bodies, apart from merely preparing the syllabus must come up with mechanisms to check the implementation, progress and safety of the art forms. The incentives provided can be extended beyond school education to higher education as well. Ministry of HRD can provide credits to students with music background in their higher education. IITs, IIITs, NITs, IIMs and top universities must strive to develop music departments where courses and research on music are inculcated.

