

# Proceedings of the Sempre MET2018

*Researching Music, Education, Technology*

editors:

Evangelos Himonides

Andrew King

Francisco Cuadrado

Proceedings of the Sempre MET2018

Researching Music, Education, Technology

Sempre Conference, 26–27 March 2018  
University of London, Senate House

International Music Education Research Centre  
UCL Institute of Education

University College London

EDITORS:

Evangelos Himonides  
UCL

Andrew King  
University of Hull

Francisco Cuadrado  
Universidad Loyola Andalucía

*Researching Music, Education, Technology*

Proceedings of the Sempre MET2018

Researching Music, Education, Technology

ISBN: 978-1-905351-37-4

© 2018 Evangelos Himonides, Andrew King, Francisco Cuadrado

Published in Great Britain in 2018 on behalf of the  
Society for Education, Music and Psychology Research (Sempre)  
by the International Music Education Research Centre (iMerc)

Department of Culture, Communication and Media  
UCL Institute of Education  
University of London  
20, Bedford Way  
London, WC1H 0AL  
United Kingdom

design, typesetting, production: Sonustech Digital Solutions (sonustech.com)

copy requests <http://copyrequests.imerc.org>

British Library Cataloguing-in-Publication Data  
A CIP record is available from the British Library

## Contents

Contents	9
<i>Keynote address: Creative music technologies for enriching later-life.</i>	17
<i>Professor Andrea Creech</i>	
Empathy & Rhythmic Entrainment during Children's Musical Interaction: Cognitive & Motor-emotional Approaches.	19
<i>Persefoni Tzanaki</i>	
Investigating the role of social media in supporting parents and teachers of students with Down Syndrome: Focus on early intervention services in Saudi Arabia.	23
<i>Awatif ALShamare</i>	
Assessing reflective writing in Higher Music Education performance modules: Issues and Challenges.	25
<i>Monica Esslin-Peard</i> <i>Tony Shorrocks</i>	
Educamus. An online platform with integrated software for pre-service music training of non-music Chilean Primary teachers.	29
<i>Jesús Tejada</i> <i>Tomás Thayer</i> <i>Mario Arenas</i>	
Timbre perception by the initiatory five partials' (dB) .	33
<i>Xuefeng Zhou</i> <i>Qinhai Li</i> <i>Xian Cai</i>	
The role of reflective practice in learning a second instrument ab initio in adulthood: a pilot study with Chinese M Mus students in higher education.	35
<i>Monica Esslin-Peard</i> <i>Tony Shorrocks</i>	
Big data analytics in mobile practicing: using artificial intelligence (AI) music application to practice scales and arpeggios in a virtual learning environment.	39
<i>Jason Chen</i>	
Training effects of tempo stability and chord uniformity.	43
<i>Xuefeng Zhou</i> <i>Yifan Zhang</i>	



The Theory of Musical Equilibration and the Use of Stimulus Chords in Romantic Lieder. <i>Daniela Willimek Bernd Willimek</i>	45
Use of secondary data as a rich source of information on music education and the use of music internationally. <i>Arielle Bonneville-Roussy</i>	49
Performing Sicilianos: An Analytical and Interpretative Approach to the Concerto for Violin and Orchestra, Op. 51 by Yorgos Sicilianos. <i>Anastasios R. A. Mavroudis</i>	51
Learning narratives pave way to modify computer compositional strategies. <i>Julie Byrne</i>	53
An Exploration of Using Music in Religious Education Class for Values Education. <i>Yusuf Ziya Ogretici</i>	57
Implementing service-learning in higher education: a music education experience at a residence for the elderly. <i>Jose Luis Parejo Andrea Giraldez-Hayes Maria de la O Corton de las Heras</i>	61
Staff and student perceptions of, and experiences in, University Music modules being delivered in collaborative lecture theatres. <i>David Ireland</i>	65
Analysis of tempo variation in the 20th and 21st centuries recordings of Johannes Brahms's Sonata for pianoforte and violin op. 78. <i>Joanna Staruch-Smolec</i>	69
Touch the sound: tangible interface for children music learning and sound experimentation. <i>Francisco Cuadrado Isabel López-Cobo Beatriz Valverde David Varona</i>	75

Stretching time in audiovisual media: Influences of playback technology and music on perceived emotion and induced arousal. <i>Clemens Wöllner David Hammerschmidt</i>	79
Technology-enhanced assessment and feedback of drummers' tempo accuracy. <i>George Waddell Letizia Gionfrida Aaron Williamon</i>	83
T-Shaped Music Tech Curriculums: Preparing Music Technology Students for the 21st-century Creative and Technology Workforce <i>Jeremy Baguyos Seth Shafer</i>	91
The Role of Indian Music in Meditation and Spirituality. <i>Shalini Mittal Tushar Singh</i>	97
Impact of Indian classical music on depression: exploring the mechanisms. <i>Tushar Singh Shalini Mittal</i>	103
The mode models as a way to comprehend the non-European musical culture (the example of Azerbaijani modes). <i>Imina Aliyeva</i>	109
The 'gendered collegiate musicality' - Performance opportunities and musical training in the historically male-oriented Oxford collegiate choral tradition. <i>Sigrun Lilja Einarsdottir</i>	113
Hacking, disability, and music education. <i>Adam Patrick Bell Amanda Antwi-Nsiah</i>	117
Biomedical music protocols benefit children with special needs. <i>Martha Summa-Chadwick</i>	121
The use of technological tools in the design of interuniversity musical projects by students. <i>Noemy Berbel-Gómez Maria-Elena Riaño-Galan Cristina Arriaga-Sanz Iskandar Rementería Antoni Ripolles-Mansilla</i>	125

Alberto Cabedo-Mas

ICT competency: study about technological training with Sound-cool in the master of secondary music education in the Universitat de València. 131

Blanca Hervás-Zafra  
Adolf Murillo i Ribes

Remembering the forgetting curve: A simulation and new explanation of the inverted-U preference trajectory for exposure to music. 135

Anthony Chmiel  
Emery Schubert

Soundcool, music-visual creation through mobile devices for the development of multidisciplinary artistic creativity. 141

Adolf Murillo-Ribes  
María Elena Riaño-Galán  
Noemy Berbel-Gómez  
Jorge Sastre-Martínez

The Use of Online Software in Music Education. 145

Paulo Marins

Cart before the horse: Technology disruptions in group piano practices and curriculum. 147

Cynthia Stephens-Himonides  
Margaret Young

Does the cultural meaning of Erhu really have an influence in the communication of basic emotions in musical performance? 151

Xuanyi Ma  
Graham Welch

The Effects of Auditory Integration Training (AIT)-using Creative Music Technology to facilitate the intervention and wellbeing of children with Autism Spectrum Disorder (ASD). 159

Christos Ioannou

Silence... What's that? A study about silence in media and its implications for creativity. 161

Luz Gutierrez

Is there potential for using beatboxing in supporting laryngectomees? findings from a public engagement project. 165

Evangelos Himonides  
Thomas Moors

Donatella Maraschin  
Marv Radio

Can Software Engineering be Taught by Making (and) Music? a proposed empirical study. 169

Nicolas Gold  
Evangelos Himonides

## Educamus. An online platform with integrated software for pre-service music training of non-music Chilean Primary teachers.

Jesús Tejada

*University of Valencia, Spain*

Tomás Thayer

*Metropolitan U. of Education Sciences, Chile*

Mario Arenas

*University of La Serena, Chile*

### Abstract

This work in progress describes the construction of EducaMus and its components.

### Keywords

pre-service music training , music technology, massive open online courses

### Aims

Nowadays, music is a compulsory curricular subject in the Chilean educational system, to which it has been assigned two hours of classes per week. Approximately 102,000 teachers, 56% of the total, are working at Primary Schools. Of these, only 2.25% have formal music instruction (Ministry of Education of Chile, 2015). The rest of the teachers have to teach music at Primary Education level, but teachers lack both specialized music and music didactic competences. Formation to achieve these competences should occur during their pre-service teacher training in order to successfully offer music classes at the level of Primary Education, but few Chilean universities have implemented this subject and the corresponding training for this career. Furthermore, there are not enough institutional or private offers for in-service training music courses. Finally, full-time teachers engage in their profession for 42 hours per week, making it difficult for them to



attend extended in-service music courses. As a consequence of these facts, even when music is highly regarded, as in the Chilean Primary education curricular design, it remains unsystematically approached by teachers with neither music training nor an initial formation in music pedagogy. In order to cover this educational shortcoming, we have developed EducaMus, an online platform intended to host massive open courses (MOOC) devoted to pre-service music training of general teachers in the Chilean educational system. At this moment, EducaMus includes a software solution for this goal called Music Training for General Teachers (Formación Musical para Profesores de Ed. Básica), which has software embedded and associated for real-time music practice and assessment.

### Methods

Construction of EducaMus has followed the model of design science research methodology as a framework, with its corresponding process elements: 1) problem identification, which detects needs and constructs a theoretical framework; 2) construction, responsible for development, analysis, experimentation, and observation; and 3) evaluation, providing for testing and for designing the first public version (Peffer, Tuunanen, Rothenberger, & Chatterjee, 2007).

### Outcome(s)

This is a work in progress that describes EducaMus and its components. At the moment, it is in the validation process, so no results are shown.

### Characteristics

The novelty of this course consists in the integration of associated software – namely Cantus – software for real-time training of singing intonation – (Pérez-Gil, Tejada, Morant & Pérez, 2016), Tactus, – that facilitate tapping rhythm activities (Tejada, Pérez-Gil & Pérez, 2011) and Musipuzzles – software for the ordering of structural musical elements. These activities are assessed in real-time by the computer. This proves beneficial for the pupils, who get an immediate evaluation of their performing, and for music teachers, as well, because assessment is one of the most time-consuming and complicated tasks in music-education. Other software for training are some flash modules embedded in the platform.

### Acknowledgements

This research has been funded by Programa de Atracción de Capital Humano Avanzado Extranjero, Modalidad Estancias Cortas (CONICYT, Folio: PAI80160102). Government of Chile.

### References

1. Ministry of Education of Chile (2015). Base de Datos, Docentes y Cargos, 2015. Unidad de Estadísticas, Centro de Estudios, División de Planificación y Presupuesto, Ministry of Education of Chile. Retrieved from <https://goo.gl/JhU9mT>
2. Peffer, K., Tuunanen, T., Rothenberger, M. & Chatterjee, S. (2007). A Design Science Research Methodology for Information Systems Research. *Journal of Management Information Systems*, vol. 24, no. 3, pp. 45–77.
3. Pérez-Gil, M., Tejada, J., Morant, R. y Pérez, A. (2016). Cantus. Construction and evaluation of a software for real-time vocal music training and musical intonation assessment for music education. *Journal of Music, Technology and Education* vol.9, no. 2, pp. 125-144. DOI: 10.1386/jmte.9.2.125\_1