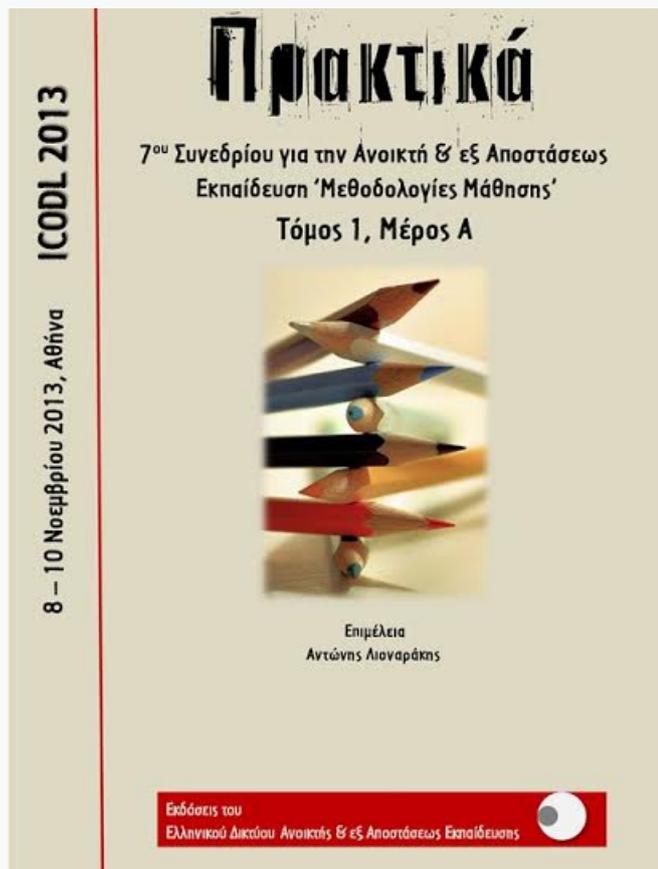


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Online Distance Learning and Music Training: Benefits, drawbacks and challenges

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Abstract

Online music courses develop rapidly in the higher education scene with technology and internet supplementing face-to-face learning. There are currently a number of online, distance learning undergraduate and master degrees offered worldwide and many universities also offer online opportunities for continuing professional development. Individual online lessons are another option of music training in real time communication. This paper examines online distance learning as applied in music and music education programmes of different educational levels from the teachers' (e.g. instructors', tutors', lectures') perspective. It aims to provide an up-to-date and representative view of the different online courses on offer via distance learning today focusing on potential benefits and drawbacks of online distance learning based on opinions and experiences of teachers involved in such courses. The study consisted of two phases, a self-completion questionnaire survey and individual interviews with selected cases. The present paper reports on the findings of the qualitative data analysis. Analysis demonstrated that there are different routes for an adult to be involved in online music training and hence, there are different requirements as for the nature of online communication and interaction between the teacher and the learner. For courses based on practice and performance, practical issues may occur, such as poor-quality audio and time delay. Online learning has strong potential to suit a larger proportion of the population, offering flexibility and internationality. Moreover, it offers convenience to the teachers in terms of practicalities such as time, transportation and payment. The paper sets some challenges for education specialists and for information and communication technology (ICT). In the years to follow online technological progress for online instruction might include higher internet speed connections -and therefore higher accuracy in lessons that require musical performance- as well as virtual environments that will diminish the socio-psychological gaps that distance learning may cause. More educational initiatives are also required for the promotion of online distance learning in music.

Keywords: *online distance learning, music training, teacher-learner interaction*

1. Introduction

Distance learning has become a vividly developing area of research and practice in the past two decades. After the first online class was launched in 1994 (Levy, 2003), rapid developments took place towards the implementation of distance learning

courses at all levels of education. In music training, technology, being a generic tool of distance learning, can become valuable for teachers and can raise their confidence replacing other forms of teaching that require a certain level of music skills and knowledge (Koutsoupidou, 2008). Internet allows easy access to information, ideas and people (NACCCE, 1999), while the interaction between children and fresh learning approaches can facilitate their music and creative development (Folkestad, 2005; Burnard, 2007; Young, 2008).

Different routes can be followed in order for a programme to be considered as a distance learning one. At school level, distance learning serves as a supplement to enrich traditional methods of teaching and learning, while in higher education there are a wide variety of programmes on offer. Universities nowadays run distance learning programmes of study via mixed modes of attendance, that is both online and on campus delivery of modules, or online modules and on campus meetings. The most recent development though for higher education is the formation of exclusively online degrees, both at undergraduate and postgraduate level, and continuing professional development (CPD) courses.

Research on distance learning emerged in the 90s with a series of studies investigating work emerging technologies (Dede, 1996), cyberspace based learning communities (Palloff & Pratt, 1999) and instructors support (Clay, 1999). These initial studies focused on potential problems of the transmission from the traditional setting to online based learning, such as instructors' reluctance to alternate their courses (Clay, 1999) and institutions' inadequate planning of online courses content and support (Daniel, 1997). A series of subsequent studies focused on different elements that lead to an efficient online programme such as the design of the programme (McNaught, 2002), instructor's training to deliver online programmes (White & Weight, 2000) and distance learning students' support (Buchanan, 2000). Levy (2003) suggests that 'knowing what makes ODL [online distance learning] successful and having considered ODL when developing a strategic plan is essential in order to avoid unnecessary costs, wasted time, confusion, frustration, and stress for those who are involved with ODL' (p. 2).

Although distance learning is faced as a separate field of study there are some principles taken from traditional teaching and learning theories that need to be taken into account in order to design and deliver a quality course. Prosser & Trigwell (1999) discuss good teaching, which could also apply to good online teaching:

'We believe that good teaching is about three things. First, it is about teachers developing a coherent and well-articulated view of what they are trying to achieve and how they are planning to achieve that outcome. Second, it is about teachers discovering the variation in the ways students perceive that planned learning context. And third, it is about working towards bringing their students into relation with, and understanding of that articulated view'. (Prosser & Trigwell, 1999, p.11)

2. Distance Learning for Music Training

Music training at all levels of education is traditionally noted as people's serious engagement into practical -hands on- activities such as learning how to play a musical instrument, singing, performing solo or in groups, improvising and composing music. Music training, however, can be examined from different perspectives: the age of people involved, the level of education, the nature of learning (formal, informal), specific fields of music instruction, mode of instruction. The latter refers to the distinction between the traditional on site based method of instruction (full time or

part time), the mixed mode of attendance and distance support, and the distance learning mode exclusively based online. Each of the above require a different mode of interaction between the teachers and the learner, with the latter requiring the highest need of interaction.

Research on distance music education and learning is still in its infancy and relevant studies only appeared after 2000. A series of studies explored the graduate music programmes experience. Groulx & Hernly (2010) after studying nine online graduate music education programmes offered by universities in the US came to the conclusion that 'these online degrees are neither inferior nor superior to traditional coursework but rather represent an additional tool a university may employ to reach and educate its ever-expanding community' (p.60). Walls (2008) found that graduate distance learning programmes in music enhance students' satisfaction and contributed to their professional development. Kos & Goodrich (2012) investigated how an online master's degree programme might affect music teachers' philosophies and practices (p.21). They concluded that although an online programme might not suite everyone online programmes 'can provide accessible, rigorous, and transformative professional development'. Kruse et al. (2013) investigate instrumental courses, in particular piano lessons delivered via Skype. Although they report several benefits of such lessons they argue that some practical issues related to technological complications might arise in such courses.

An essential tool for the realisation of a distance learning course is technology. In recent decades, technology contributed to adult music training mainly through software packages that facilitate music notation and composition. Interactive platforms designed for small children are becoming popular offering play like and integrative activities that enable children to experiment with different aspects of music. Technology has broadened the horizons of improvisation and composition providing music material that children or adults can work with creatively (Koutsoupidou, 2009). Online music courses develop rapidly in the higher education scene with technology and internet substituting face-to-face learning. There are currently a number of online distance learning undergraduate and master degrees offered worldwide, while the first doctoral degree was launched in 2005. Many universities also offer online opportunities for short CPD courses.

A basic undergraduate degree in Music offered online usually involves different modules related to music theory, music history, instrumental performance, music pedagogy. At postgraduate level there is a wider variety of topics, such as Music Education, Music Psychology and Music Technology. Distance learning courses are designed online and offer the opportunity to the candidate to complete the course with no physical presence. In some cases a few annual meetings are required for the completion of a course. The requisite for a distance learning programme is, according to Sherbon & Kish (2005), that 'the purest form of distance learning provides students with opportunities to fulfill their degree requirements anywhere that they can assess appropriate technical facilities and equipment' (p. 36).

3. Aims and objectives

The general scope of this research study was to provide an up-to-date and representative view of the different online music and music education courses that are offered via distance learning today and to explore teachers' and learners' attitudes towards distance learning. This would essentially lead to a better understanding of the teaching and learning process in such courses and to the formation of a general picture

of distance learning in music training in terms of the upsides and downsides of this mode of instruction. The following research questions were addressed:

- What music programmes are offered via online distance learning?
- What are the advantages and the disadvantages of online distance learning according to the *instructors* engaged in such programmes?

The purpose of the study was not to evaluate the distance learning programmes of any level based on specific set of criteria as formed by national curricula or academic assessment and validity procedures. The data analysis and results are solely based on personal views of the participants. The paper examines distance learning as applied in adult music and music education programmes from both the instructors' and the learners' perspectives and focuses on the advantages and disadvantages of distance learning based on opinions and experiences of people involved in such courses. The present paper will present findings related to the first two questions addressed: i) a general view of the programmes on offer and ii) the instructors' perspective.

4. Methodology and design

Although technology for education is a constantly developing field of research inquiry, distance learning in music training has been inadequately investigated so far. The present study was developed to fill this gap exploring current distance learning music courses in terms of their teaching and learning constraints, efficacy and accordance to the expectations of both teachers and learners. Therefore, the study consisted of two phases. Phase A involved participants in the role of *teachers* (tutors, instructors, lectures, etc.) and aimed to investigate distance learning through their personal perceptions, experiences and practices. Phase B involved participants in the role of *learners* (students, adults on CPD or continuing education) and aimed to investigate their learning experience and impressions in relation to the distance learning programme they attended.

A questionnaire survey was carried out for the needs of the study and two self-completion questionnaires were developed to cover aspects of teachers' and students' perceptions and practices towards distance learning. The questionnaires were sent to people involved in a variety of distance learning programmes, from short training courses to postgraduate university degrees. The study covered a worldwide geographical area and most participants were contacted via internet. An important limitation that applied to the study was the restricted number of people that have attended an online distance learning course in music since this is a recent trend in music education; therefore, the final sample of participants would essentially be restricted.

The questionnaires were divided into two parts: (i) personal information and (ii) opinions, observations, comments related to the application of distance learning music courses. Questionnaire items of the first part were mostly multiple choice questions, while the second part included six open ended questions to allow teachers and learners to elaborate on different issues and experiences related to distance learning, such as teaching methods, equipment, time scheduling, possible difficulties, personal opinions about the advantages and disadvantages of distance learning courses

Follow up interviews were conducted with ten selected participants, five instructors and five students in order to collect deep and more informative qualitative data and to give space to elaborate on issues that arose from the questionnaires. Eight interviews were conducted online and two in person. The participants represented a variety of geographical backgrounds.

Both quantitative and qualitative data were collected from the questionnaire study and therefore the analysis was carried out accordingly. Quantitative data were coded and analysed through descriptive statistics and statistical tests. Responses to questionnaire items of Part B (opinions and experiences) as well as the interview transcripts were analysed adopting qualitative content analysis.

5. Results and discussion

This paper reports the finding of the qualitative data analysis. It focuses on the teachers' perspective about online music instruction and discusses some themes that emerged from the analysis: the different contexts in which music instruction may develop, the practical issues that online training may involve, the emerging internationality, the benefits and drawbacks of online programmes. The findings are based on questionnaire qualitative data analysis and analysis of the five interviews that were conducted with the following instructors:

1. Janet: Kodály¹ approach instructor, UK
2. Yuki: Violin teacher, Hong Kong
3. Susan: Visiting lecturer (MA courses), UK
4. Gary: Harp teacher, UK
5. Simon: Adjunct lecturer (CPD courses), Greece

5.1. Teaching and learning contexts

According to the participants' responses, there are different routes for an adult to be involved in online music training. The different routes of music instruction develop around different teaching and learning contexts and lead to a variety of professional or academic qualifications that are not necessarily linked to university degrees. There is an important distinction between the different courses as for the level of practical aspects they include and their different needs in terms of interaction and real time communication between the teacher and the learner. Practical lessons, such as piano, violin or harp, require continuous interaction in order for the student to observe and assimilate various aspects of instrumental performance.

Gary describes how a typical online (Skype) harp lesson develops between him and the student covering the distance between the US and the UK:

We normally have a lesson every two weeks, at 13:30 my time (08:30 her time). Typically the student will initiate the content of the lesson depending on her needs, but once underway the lesson content is negotiated moment-to-moment. The content will vary from technique, interpretation of music, performance and memory / analysis skills. Sometimes we will focus on a piece the student is going to perform, and sometimes I ask the student to post a video (public or private) on YouTube.

Similarly, teacher training related to specific music education methods, such as the Kodály approach, require different kinds of verbal or musical conversation between the teachers and the learner via practical exercises, imitation and improvisation activities –playing, singing, clapping, etc.

Theoretical courses in the field of Education and Psychology are mostly based on reading and submission of lesson material for review by the instructor; therefore, they rely less on real time communication and interaction. Susan, a lecturer based in the UK, provides a brief description of the content of a Master's degree in Psychology for Musicians delivered online:

At summer school we teach two three-hour lectures on each module topic. The students then study specially prepared material which includes questions for them to

consider individually and as a group via the discussion board. At the end of each module -six to eight weeks- they have two assignments, one based on the literature they have studied and the other based more on relating their own experiences to what they have read about.

5.2. Practical issues

Online courses based on performance, such as instrumental lessons, or moving, clapping and singing activities, are not based on reading material. They include one to one instruction, which relies on image. The student needs to observe the teacher as for the way she must hold a musical instrument, the correct method to produce sound, the body movement that is sometimes required for musical expression. Similarly, in performing activities such as singing and clapping (e.g. Kodály method), the student and the teacher follow a series of different activities: they have to synchronise their movement, to imitate each other, to create musical dialogues, to improvise music.

Practical aspects of music lessons not only need image in order to achieve some results but also need real time verbal and image communication. The basic tool for the realisation of all the above activities, according to the participants' response, is Skype. Google hangout is preferred by one interviewee. YouTube is also employed when the teacher wants to evaluate a student's progress by watching the student performing a piece of music. However, this is something that takes place at delayed time and not during the actual lesson. Skype, Google hangout and video conferencing are the main tools to satisfy the needs of a music lesson, yet there are some practical issues that may arise through such sessions.

Many instructors agree that the use of Skype is not always ideal. This notion recalls the findings of Kruse et al. (2013) about online courses' problems often related to technology. The most usual difficulties teachers have to face are 'poor-quality audio' and 'time delay'. Janet, a specialist Kodály instructor from the UK, runs junior and adult online music sessions for an international audience and also employs the Kodály approach for online teacher training programmes. She comments on the use of Skype for her sessions:

The main problem is that the student and I cannot sing in parts together. Part-singing is a major feature of the Kodály approach as it develops good intonation, rhythm, ensemble etc. Because of the time delay on Skype this isn't possible. Another activity I cannot do is when I sing or clap and the student has to listen and follow in canon, two or four beats behind – also important for the development of part-hearing.

Gary adds a funny incident that took place during his Skype harp lessons:

We had one issue where US time changed to summer time before the UK did, so we missed a lesson by 1 hour!

5.3. Benefits of online training

All teachers that participated to the study support online distance learning programmes and report many benefits of this teaching approach. These benefits are related to teaching and learning issues as well as to practicalities involved in such programmes. Online instructors discuss these issues from two different perspectives: the teacher's and the learner's.

Although some problems related to technology exist when it comes to online training, internet at the same time solves many people's issues of disability to attend traditional courses. Factors such as distance, travel expenses or work commitment often prevent students from attending a certain course. Online training gives the opportunity to

people of different countries and life routines to be educated by following a route that they desire and not what is available-accessible to them in the strict limits of their home place.

There are not very many Kodály practitioners in the UK who are experienced in teaching solfège (i.e. musicianship through singing and use of relative sol-fa). Therefore there are many parts of the country where students cannot find a teacher. They may come on one of our residential courses and be inspired to learn more, but then cannot find a teacher. I have a student in France and sometimes I speak to students in the Far East (where I have taught in person). I have a regular student who lives in the Outer Hebrides (remote Scottish islands). (Janet)

Online courses achieve *internationality* and facilitate the exchange of ideas and practices among people of different cultural backgrounds; this is a positive practical issue related to online instruction that should not be omitted. Susan, reports similar conclusions having experience from theoretical online courses:

A wide range of students from all over the world makes for an interesting group to teach – new perspectives for us as teachers.

Internationality of the audience seems to be the most important advantage of online courses for students according to the instructors. Students may choose to work together with an online instructor due to the lack of in-person tutors in a certain geographical area. They may, however, choose an online instructor even when they are just not satisfied enough by the options they have in their area or when they are searching for an *innovative approach*. Gary describes an example of the latter:

Geography is not an issue for her [his harp student]...She had a choice of teachers, and chose me because of the online videos I've posted [on YouTube] and my approach as a performer suited her style very well.

Online tuition, according to Gary, can be more interesting and enjoyable for the student due to its multimodal nature. This could certainly be the case for instrumental online lessons. Using a range of techniques, documents, discussions, emails, YouTube recordings, students gain a variety of experiences and it is more likely for them to sustain interest in learning comparing to a traditional instrumental lesson.

Moreover, online course suit larger proportion of the population in terms of *age range* and educational or working backgrounds.

The age range is more heterogeneous than on most onsite taught MA courses, so we get people who have a huge variety of experiences, musical and otherwise. (Susan)

Age is a factor that was also reported by another participant but in a different context. Yuki believes that online learning needs a certain level of *maturity and discipline* in order to work out and lead to good results:

It's [Skype lessons] a one dimensional experience that I feel somehow incomplete. It works for people who are independent minded and who have self discipline. I would not recommend it for younger students.

Online instructors express themselves in a very positive way as for the benefits of distance learning with regard to their own needs. They emphasize the *convenience* of an online lesson or course in terms of time schedule, time saving, concentration, transportation and payment.

I can complete my work at times that are convenient to me, as most of it is done by email. (Susan)

I don't have to leave the house, so one hour is really one hour and not two hours (allowing for travel). (Gary)

Online teaching allows me to concentrate better. I used to teach in the classroom in the past and I had noticed that various environmental factors interrupted the lesson or even my thinking process. (Simon)

I don't have to fly anywhere to take lessons, and I can share ideas with other teachers this way. (Yuki)

I get paid by PayPal which is very quick and means I don't have to physically bank a cheque. (Gary)

Another benefit of online instruction that was revealed was the issue of *objectivity* that is better achieved via an online course comparing to a traditional course. In theoretical courses, such as education and psychology degrees, there is no image involved in the teacher-learner communication. Simon, having experience in delivering online CPD modules in Music Education, reports:

When it comes to assessment, lecturers of traditional classes might be influenced by different factors, such as a student's looks, facial expressions, and body gestures. In online instruction none of these apply. I never get the chance to see my students. We only contact each other via email or online forums. I think this makes me more objective when it's time to assess them... I don't know if this is the case for all online courses; it certainly works for theoretical ones.

5.4. Drawbacks of online training

Some practical issues were reported in previous sections as for the implementation of live lessons via Skype or other technology, e.g. Google hangout. These issues, however, may not apply to theoretical course, such as CPD or university postgraduate degrees. The main drawbacks of online distance learning, according to the interviewees, are not linked to the actual teaching and learning process and outcomes; they are mainly related to psychological conditions involved in an online course both for the student and the instructor.

Susan reports her experience with postgraduate students attending an online Master's degree based on reading materials and essays. The course offers an option for online discussion, which though is not always adopted by the students.

Some students feel a bit isolated and if they are shy they may not like to write on the discussion board. We have never made it compulsory for them to do so, but of course they miss out if they don't join in. Some students get into difficulties and because they are not nearby, it can be difficult for them to ask for help.

Isolation may become a prohibitive factor for students in order to enjoy their course. However, this could be partially solved by the design of online programmes that would include real time communication via video conferencing. Students' involvement in online social network might also help them develop personal relationships with their fellow students and tutors and therefore diminish any negative feelings.

Gary, based on his own experience as a harp teacher, offers some tips that may create a friendlier atmosphere:

I think it's very important that you have either met in person, or you are willing to work with the technology and try things out. For example, we tried Skype then Google hangout. It's also important to keep the conversation going in between, otherwise you can suddenly 'cut off' the student – a bit difficult to explain, but when you are teaching face-to-face, you always have a 'meet and greet' at the start of a lesson and a 'goodbye' at the end, so it's really important to consciously include this and not just 'switch off' the connection – otherwise it's really strange, as if the person has suddenly ceased to exist!

6. Conclusions

Online distance education can be considered as an *inclusive* form of instruction since it offers opportunities to a wide range of the population to be educated. It can be the ideal option for people who are older and not keen to go back to on campus university life. It can suit people who are on full time jobs and have busy day schedules, or for people who run a busy family life. It offers flexibility, which is essential for a person who cannot engage entirely in a course.

In advance, *flexibility*, as a main aspect of online learning, offers a wide range of opportunities for professional development. It aids people to improve their knowledge and skills or to acquire new ones. It opens new perspectives that can be related to more job opportunities or just personal satisfaction. Flexibility as a synonym of convenience is also a major factor for teachers to choose online teaching instead of the traditional classroom based lesson. It potentially saves time, money and effort without reducing the quality of the transmitted knowledge and skills.

Participants of the study who are involved in theoretical course as instructors express themselves enthusiastically about online distance learning and they definitely recommend it to perspective students. Tutors in practical sessions, e.g. instrumental lessons, are more skeptical since they frequently face practical issues based on technology and technical equipment. What is important though is that although they face difficulties they do support online lessons as equal to in person ones in terms of academic quality.

Online distance learning is constantly developing and expanding in many different educational fields. Since the very first online course was launched until now big progress has been made and many of their elements have improved taking into account educational, social and psychological factors. So, what is the challenge for music online learning in the years to follow? Online learning relies on technology. Technological progress for online instruction means higher internet speed and therefore higher accuracy in lessons that require musical performance. It also means better constructed virtual environments that will diminish the socio-psychological gaps that distance learning may cause.

More educational initiatives are required for the promotion of online distance learning in music. In Greece, there is currently no online music course offered by any higher education college or university, which puts the country out of competition for academic excellence in music distance learning and drives Greek perspective students towards online learning options abroad. Research has to continue on music online education in order for online programmes to increase, to achieve high standards of instruction and to inform more disciplines in the performing arts.

Notes

1. Zoltán Kodály (1882-1967) developed a music education method that focused on the use of improvisation through different kind of activities, especially singing. Aspects of the Kodály method have influenced the national curriculums for music as well as many teachers' practices, especially concerning the use of improvisation. The Kodály method has been fundamental for the development of music education in Europe and in most western countries there are opportunities for teachers to receive special Kodály training.

References

- Buchanan, E. A. (2000). Going the extra mile: Serving the distance education student with resources and services. *Syllabus: New Directions in Education Technology*, 13 (9), 44-47.
- Burnard, P. (2007). Reframing creativity and technology: promoting pedagogic change in music. *Journal of Music, Technology and Education*, 1 (1), 37-55.
- Clay, M. (1999). Development of training and support programs for distance education instructors. *Online Journal of Distance Learning Administration*, 2 (3).
- Daniel, J. S. (1997). Why universities need technological strategies. *Change*, 29 (4), 11-17.
- Dede, C. (1996). The evolution of distance education: Emerging technologies and distributed learning. *American Journal of Distance Education*, 10 (2), 4-36.
- Folkestad, G. (2005). Here, there and everywhere: music education research in a globalised world. *Music Education Research*, 7 (3), 279-287.
- Gordon, D. G., Rees, F. & Leong, S. (2000). An Evolving Technology: Interactive Televised Instruction's Challenge to Music Education [online]. *Australian Journal of Music Education*, 1, 40-51.
- Groulx, T. J., & Hernly, P. (2010). Online Master's Degrees in Music Education: The Growing Pains of a Tool to Reach a Larger Community. *Update: Applications of research in music education*, 28 (2), 60-70.
- Kos, R. P., Jr., & Goodrich, A. (2012). Music teachers' professional growth: Experiences of graduates from an online graduate degree program. *Visions of Research in Music Education*, 22. Retrieved from <http://www.rider.edu/~vrme>
- Koutsoupidou, T. (2008). Effects of different teaching styles on the development of musical creativity: Insights from interviews with music specialists. *Musicae Scientiae*, XII (2), 311-335.
- Koutsoupidou, T. (2009). The digital world of children: Integrating music and maths in preschool education. In A.R. Addressi & S. Young (eds.) *Proceedings of the 4th Conference of the EuNet of Music Educators and Researchers of Young Children* (pp. 375-384), University of Bologna, Italy.
- Kruse, N. B., Harlos, S. C., Callahan, R. M., & Herring, M. L. (2013). Skype music lessons in the academy: Intersections of music education, applied music and technology. *Journal of Music, Technology & Education*, 6 (1), 43-60.
- Levy, S. (2003). Six factors to consider when planning online distance learning programs in higher education. *Online Journal of Distance Learning Administration*, VI (1).
- MacNaught, C. (2002). Quality assurance for online courses: Implementing policy at RMIT. *The Technology Source*.
- Palloff, R. M., & Pratt, K. (1999). *Building learning communities in cyberspace*. San Francisco: Jossey-Bass Publishers.
- Prosser, M. & Trigwell, K. (1999). *Understanding Learning and Teaching*. Buckingham, UK: SRHE & Open University Press.
- Sherbon, J. W., & Kish, D. L. (2005). Distance learning and the music teacher. *Music Educators Journal*, 92 (2), 36-41.
- Walls, K. C. (2008). Distance Learning in Graduate Music Teacher Education Promoting Professional Development and Satisfaction of Music Teachers. *Journal of Music Teacher Education*, 18 (1), 55-66.
- Webster, P. R. (2007). Computer-based technology and music teaching and learning: 2000–2005. In *International handbook of research in arts education* (pp. 1311-1330). Springer Netherlands.
- White, K. W. & Weight, B. H. (2000). *The online teaching guide*. Boston: Allyn & Bacon.
- Young, S. (2008). Musical childhoods: Diversity, disparity and digital technologies. Keynote presentation at the 13th Early Childhood Music Education Seminar (ECME-ISME), Centro Giovanni XXIII, Frascati, Italy, July 14-19.