'Technology Use and Primary Music Education: Examining Teacher Thinking And Practice'

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Abstract

This presentation will address the issues of technology use in primary music education with particular reference to a study set in Cyprus which looks at the issues of teachers' practices, thinking and concerns and their development as they become more engaged with technology. The presentation aims to identify ways in which teachers can be supported in introducing technology more effectively and the ways teachers can use technology to facilitate creative teaching and the development of students' creativity. Insights gained from the initial stages of this study, which uses interviews, questionnaires and teacher reflection, suggest that teachers if encouraged and provided with the technology, education and training they need, can overcome their hesitations and use technology in their lessons. Teachers' thoughts and suggestions and the study's findings will be used to raise questions about the implications of the introduction of technology in primary music lessons for music educators.

Keywords: music education, primary, technology, teachers' practices

Introduction

The technological developments and achievements are enormous nowadays. This can be a motivating and inspiring factor for the educators of our century and especially the music educators. Reese (2001) states that technology can change music teaching and learning significantly. He suggests that technology has the potential to "expand our current music programs into more comprehensive, imaginative experiences that ultimately develop active, independent music creators, listeners and performers" (p.53). This is one of the aims of most educational systems today, in relation to music, including the Cypriot one.

Cyprus is currently going through an educational reform and new curriculum documents have been developed for all levels of education and subjects. The process for the creation of the new documents started in 2008 with the establishment of a committee (EDAP Committee for the Formation of Curriculum Documents - E. Δ .A. Π . – Επιτροπή Διαμόρφωσης Αναλυτικών Προγραμμάτων). This committee was responsible for the formation of the document with the philosophy and principles of the new curriculum. 21 special committees were then created (one for each subject) consisting of Cypriot and Greek academics, in-service teachers and inspectors (Ministry of Education and Culture, 2010). The committees prepared the new curriculum documents for each subject for all levels from nursery to unified lyceum following the philosophy and principles suggested by EDAP (ΕΔΑΠ).

In the new music curriculum technology was included in the appendix of the document conducted by the special committee (at the first phase) and in the goals, objectives and main text (in the updated version, after the public and especially the in-service teachers commented on the first version of the documents). Another novelty suggested by the new music curriculum document is that the content is reorganised in themes (http://www.moec.gov.cy/analytika_programmata/index.html). Through these themes

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teachers will be teaching the various musical issues and topics (Ministry of Education and Culture, 2010). It has to be noted that the implementation of the new documents is gradual. Especially for the issues related to technology it is not expected that their implementation will be immediate. Cyprus is still at the first stages of the process of introducing technology, reeducating and training teachers and equipping schools.

Assumptions and Questions

One of the first things this study aims to examine is how primary teachers are introducing technology in music lessons and what technology they use. Then, teachers' concerns about this introduction are to be identified along with the ways teachers can be supported so that they introduce technology more effectively in their lessons. Finally the ways, if any, primary teachers use technology to facilitate creative teaching and develop students' creativity in their music lessons is investigated. The use of technology in music lessons has started in many countries. We need to study carefully why the use of technology in primary classroom music teaching should be a good thing to do. How is our assumption well-founded educationally, musically and creatively?

Methodology and methods

The *aim of the project* is to examine the introduction and use of technology in Cypriot primary music lessons. Also, the development in teachers' thinking and practice in primary music as they become more engaged with technology will be investigated along with the ways teachers can be supported in introducing technology more effectively and developing creativity at the same time.

The *methodology* of a project has been described as 'the plan of action' (Crotty, 1995; Wilson, 2009). It is based on the research questions and it informs the methods used to collect the data and provide answers to the questions (Wilson, 2009). When watching and reading the project's research design for the first time, it may give the impression that it follows the case study approach. However, the methodology followed is a combination of case study approach and action research. Aspects of both can be identified in the research design. Particularly, the cases of teachers who are following action research reflecting cycles are examined.

The study was conducted using a cyclical method which involved interviews, lesson planning and teaching, observations and keeping reflective diaries and trying to examine and improve their practice (Craig, 2009). Alasweski (2006) has stated that each study has its own purpose and the researcher has to find the methods which will serve the study's purpose more effectively.

The research design of this study comprises of three stages, and multiple methods are used (See Figure 1). The first stage's purpose is to gain an idea of the situation in the schools of the participating teachers and their views. Stage two is the main part of the study and consists of reflective cycles and interviews with key persons. The reflective cycles involve group meetings, reflective diaries and interviews and teaching and observing lessons. All of these methods are important and have their own roles, but supplement each other as well. The cycles are reflective because teachers' reflections on the introduction of technology and how they deal with it are the driving force. Stage three is the last stage of the design and has a mostly evaluative nature. The collected data will be used to examine teachers' perceived progress through the cycles and compare their final views and concerns to those recorded in

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the first stage. Therefore, the produced knowledge will not be useful only for the study but also for the participants themselves (Levin and Greenwood, 2001).

It is necessary to acknowledge the need for flexibility for this project. The duration of the cycles was defined in a way that puts the least possible pressure on the teachers and give them time to think, plan and reflect on their lessons and practices. It is important to be sensitive to their workload and to avoid pressurising them, yet at the same time ensuring that they do make progress (ethical issues are involved here as well).

At his point, the data collection methods of the study are described and discussed. Having various data collection methods helps documenting changes better by providing more evidence and increases the validity of the study. Triangulating the collected data through the different methods and ensuring that what is suggested by the data is reliable and accurate makes the study and findings more valid.

Questionnaires

Participants were given a questionnaire at the beginning and end of the study (See Figure 1) to examine their views, attitudes and concerns in relation to the introduction of technology in music lessons. Also, how these views and concerns have changed after introducing technology in their lessons will be examined. The questionnaires are based on the questionnaire developed for the Concerns-Based Adoption Model (CBAM) by Hall et al. (1979), which examines individuals' concerns when an innovation, i.e. the introduction of technology, is introduced.

Students, even though they are not the focus, were also given questionnaires at the beginning and end. The reason for this is to compare students' data to teachers' data for triangulation and error detection. For example, a teacher might indicate that he/she is concerned about the impact technology has on students, and students might state that they are excited about this approach and feel that it improves their learning. However, the questionnaire which was given to the students has a different format and contents to the teachers' questionnaire. This is to ensure that students will not face any problems filling in the questionnaire because of difficulties in expressing themselves efficiently on paper due to their young age.



Figure 1: Research design

Group meeting

The participating teachers formed groups in which they discussed their ideas, exchanged views and reflected on the practices and strategies they followed to introduce technology.

During each cycle a group meeting was held, if this was possible, where much planning and discussion took place. More specifically, the discussion was held around what the participants are doing or have done in their lessons, what they plan to teach next and how they can improve their lessons using technology, as well as the advantages or drawbacks technology might bring to a lesson, and exchange ideas and practices.

Observation

After the group meetings teachers were asked to teach a lesson as it was discussed and planned at the meeting which will was recorded and observed. In every cycle teachers had to teach at least one lesson. Flexibility about when the lesson was taught was given because so as not to put additional pressure on teachers by limiting their time. Lessons were recorded (if participants agree to this) and observed so that discussion and reflection during the interviews and meetings would be facilitated. Before the cycles started, 'acclimatisation' observation and visits to the schools were made to familiarise with the site and sort out any practical issues could occur.

Reflective interview

In this study interviews were conducted in two settings. As the research design figure shows (See Figure 1), there were interviews with key persons in Cypriot music education and with participants.

Semi-structured interviews were conducted with people highly involved in Cypriot music education, such as primary music inspectors and people involved in the creation of the new

music curriculum. These interviews were more like informal discussions where the interviewees talked about Cypriot music education, technology in music education, the new music curriculum and other topics relevant to this research.

Each teacher had a semi-structured interview at the beginning of stage two and soon after the lesson in which they introduced technology. Teachers were asked questions on the lesson they taught to help them express their thoughts and concerns and talk about the lesson's positive and negative elements and any improvements they would like to make. Parts of the recording were used in some cases to aid the discussion and the teacher's reflections on the lesson and the process. Video-stimulated reflective dialogue (VSRD) is a method used in other studies as well to help participants reflect and express themselves. Particularly, the study conducted by Hargreaves et al. (2001) on interactive teaching both followed the CBAM model and included VSRDs to engage participants more in the reflective process.

Reflective diaries

The last data collection method of this design is the reflective diaries teachers will be asked to keep throughout the study with entries after each lesson they teach. In this way they were able to document what they were doing by writing down the thoughts and concerns they had. Also, comments on what they want to do; how they felt and what went well or badly were always welcome.

These diaries acted as 'ideas banks' as well. Teachers were able to create an 'ideas bank' with their or other participants' ideas or with the ideas they gain from the internet or other sources. For this purpose, with their diary they will be given a list of resources (websites, software programs, links) that they can look at and study at any time. It would be useful to

look at videos for examples of what other people are doing with technology in their music classrooms.

Reflective diaries are valuable not only to the researcher but to the whole study as well (Rolfe, 2006). Greater insight into thoughts, views, reflections and feelings, which are the focus of the study, is provided (Alaszweski, 2006). At the end of the study the diaries are to be analysed but after the analysis they will be returned to the participants, to keep them as a reminder of the study and the experiences they had and for future reference.

The desired *number of participants* is 8-10. The reasons for this vary. To begin with, having more than 10 participants makes the feasibility and coordination of the study more difficult. What is more, each participant is a different case and is examined deeply and in detail.

Emergent Findings

The use of technology in Cyprus and other countries as various studies have shown including this one can be limited and the reasons for this vary. Among the reasons are feelings of inadequacy due to lack of knowledge and familiarization, limited time and deficiencies in software and hardware (Konstantinou, 2010; Mills and Murray, 2000; Economidou – Stavrou, 2006).

The need for constant, sufficient and efficient training of the teachers was also strongly highlighted by the teachers. Mills and Murray (2000) have also argued that introducing technology effectively is not just buying and installing the equipment but training teachers as well. Teachers have been discussing during the study how important training is for them and

the importance it has for the introduction of technology in primary music lessons. What is more, it was suggested that besides the training through educational seminars and lectures, other types of training and support are needed such as guidance by experts in the field and the inspectors and being offered material and ideas they can use in their lessons or can use to inspire and find new ideas.

Additionally to the above, when teachers are given the opportunity and support they need to use technology in their music lessons, in most cases are excited with the advantages it offers them. Their thinking and hesitations seem to change as they get more engaged with technology. When technology is introduced effectively not only teachers are excited but students as well. This was evident as well in the study which advised beforehand this one (which was my MPhil study, Konstantinou, 2010) where both teachers and students were thrilled with the opportunity they had to use technology for a composing activity. Studies conducted in other countries such as Cooper's (2007), Leong's (2007) and Mills and Murray's (2000) present similar findings with students bring excited when using technology in music lessons.

It has to be noted that this is a PhD project. The data collection will be completed by April 2012.

Conclusion

This study tells us a lot about the potential of technology to change teachers' practices and concerns. The participating teachers have used technology in their music lessons and have identified those ways and practices that can help them make the introduction more effective.

It has become clear that educating and training teachers is essential, especially in areas like technology which is developing and changing constantly. In Cyprus, especially now that technology was introduced in the music curriculum teachers ask for training and see it as a requirement to implement the new curriculum. What is more, technology seems to have a contribution to the development of students' creativity as they are more motivated to deal with music and especially compose and create their own melodies and rhythmic patterns.

As discussed, technology was included in the new music curriculum and investigating its introduction and ways it can be effective is necessary and can contribute to the implementation of the new curriculum. However, other music educators who may not be in the same position as Cypriot educators can be encouraged and inspired by the insights given by the participating teachers to introduce technology or might clear some of confusions and overcome the fears they might have.

References

- Alaszewski, A. (2006). Using diaries for social research. Sage Publications.
- Craig, D. V. (2009). Action Research Essentials. San Francisco: Jossey-Bass
- Crotty, M. (1998). The Foundations of Social Research: Meaning and Perspective in the research process. London: Sage Publications.
- Cooper, L. (2007). The Gender Factor: Teaching Composition in Music Technology Lessons to boys and Girls in Year 9. In J. Finney and P. Burnard (Eds.), *Music education with digital technology* (pp. 30-40). Continuum.
- Economidou-Stavrou, N. (2006). The music curriculum as "received" by children: Evidence from Cyprus primary schools. *British Journal of Music Education*, 23(2), 187-204.

- Hall, G. E., George, A. A. and Rutherford, W. L. (1979). Measuring stages of concern about the innovation: A manual for use of the SoC Questionnaire. Distributed by Southwest Educational Development Laboratory Austin, Texas.
- Hargreaves, L., Moyles, J., Merry, R., Paterson, F., Pell, A. and Esarte-Sarries, V. (2001).
 How do primary school teachers define and implement 'interactive teaching' in the National Literacy Strategy in England?. *Research Papers in Education*, 18(3), 217 236.
- Konstantinou, C. (2010). An exploratory study of Cypriot students' and teachers' perceptions of the role of technology in primary music education and its potential to enhance musical creativity. Unpublished master dissertation, University of Cambridge, Cambridge, UK.
- Leong, S. (2007). Strategies for Enabling Curriculum Reform: Lessons from Australia, Singapore and Hong Kong. In J. Finney and P. Burnard (Eds.), *Music education with Digital Technology* (p.181-196). Continuum.
- Levin, M. and Greenwood, D. (2001). Pragmatic action research and the struggle to transform universities into learning communities. In P. Reason and H. Bradbury (Eds.), *Handbook of Action Research: Participative Inquiry & Practice* (pp. 103-113). SAGE.
- Mills, J., and Murray, A. (2000). Music technology inspected: good teaching in Key Stage 3. *British Journal of music education*, 17(2), 129-156.
- Ministry of Education and Culture. (2010). Νεα αναλυτικά προγράμματα 2010-2011 Ενημερωτικό δελτίο [New curriculum documents 2010-2011 Newsletter]. Nicosia: Pedagogical Institute.
- Reese, S. (2001). Tools for Thinking in Sound. *Music Educators Journal*, 88(1), 42-46+53.
- Rolfe, L. (2006). Using learner journals in teacher education in the arts. In P. Burnard and S. Hennessy (Eds.), *Reflective Practices in Arts Education* (pp. 95-106). Springer.
- Wilson, E. (2009). *School-based research: a guide for education students*. London : Sage Publications.