

Chapter 7

Euterpe: An Experimental Multimedia Database System Designed to Dynamically Support Music Teaching Scenarios

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ABSTRACT

This work focuses on the application of experimental multimedia in the field of music education. The end-system produced is a multimedia service designed to support music teachers who wish to generate and implement teaching scenarios, during their singing teaching session, as this progresses and evolves dynamically. The system allows them to adjust on the fly their educational content, in order to cover their classroom needs that evolve continuously during practice. The end-system combines a fully searchable multimedia database complemented by an access process designed to serve constantly changing content requirements. Most importantly, the system is designed to provide meaningful teaching-learning scenarios with the appropriate content on demand, through the implementation of a task-specific system-as-a-service access method. This chapter provides a walk through the most important characteristics of the process from the content expert perspective. This information was actively employed by developers enabling the system parameterization to cover the functional requirements of the teaching-learning process.

INTRODUCTION

The 2012 *International ISME-Gibson Award* was granted to the Greek Society for Music Education (G.S.M.E.) and the Music Library of Greece “Lilian Voudouri” (MLG), supporting the development of *Euterpe: Digital Music Anthology*. The project was designed having in mind the ISME-Gibson Award call “to reach out through, and in, music to people who are at the margins of society, at risk of social exclusion and for whom involvement in music will make a positive and enriching difference to their

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lives” (ISME, 2012). In the technological forefront the project involves the design, development, and delivery of a digital song database supporting the task in hand through dynamic and adaptive content delivery. The song database consists of Greek and non-Greek songs suitable for use in school music lessons at all educational levels. The *Euterpe* project began its life in 2012. On behalf of the Greek Society for Music Education a scientific team undertook the task to develop the parameters and criteria for appropriate material selection and presentation. The team of the Greek Society for Music Education (GSME) consists of Zoe Dionyssiou, May Kokkidou, Nikos Theodoridis, and Sofia Aggelidou. A second team, organized by the Music Library of Greece “Lillian Voudouri” with Stephania Merakou, Vera Kriezi, George Mpoupous, and Valia Vraha, undertook the technical support of the project. Finally the database was transferred in the repositories of the National Documentation Centre, using the SaaS Repository Service. During the project development, a group of content experts and system designers were involved in order to manage the data and to organize their presentation. The content experts through comprehensive procedures defined and agreed on their goals, and planned the way they would perform the tasks. They were engaged in a fruitful dialogue about how they could organize the instructional material and what type of information they had to collect and present for each database item (song).

Euterpe was not meant to be a digital music curriculum. Instead it may be viewed as a new ICT tool for music teaching-learning. It encapsulates complementary material, which can be used by teachers to enrich their teaching methodologies and song repertoire as to help their students learn new songs in challenging and enjoyable ways. It is a set of guidelines, practical classroom activities, ideas, and suggestions about how to educate children through music (social-emotional skills, critical thinking, creativity, self-esteem, etc.), for music (musical skills, musical thinking, aesthetic appreciation and experience), and about music (e.g., music as art, music history, musical genres, music and society). *Euterpe* is designed to appeal to both specialized music educators and to general teachers as well. By the very beginning of the project we specified a set of axioms. These are listed below:

- All children have the potential to express themselves through music.
- Students have to “experience” music (to sing, to play in classroom instruments, to dance), before being introduced to music theory. Performance is at the heart of the music classroom.
- The teaching-learning of music ought to emphasize the true understanding of concepts and avoid the traditional process of information transmission.
- When teaching-learning is experiential-centered, students can make sense of more complex content.
- In music lessons students ought to be provided with opportunities that allow them to become able to recognize their own music preferences, values, and interests, and accept/respect those of others.

Euterpe’s design axioms are complemented with task-specific and focused aims. These target to offer music teachers and general school teachers music material for educational use, and specialized help including music scores, instructional ideas and recommendations for classroom music teaching. In other words, the system is designed to help teachers present the content in a way that engages and activates students. This process will be implemented via the use of a multimedia end-system featuring a song database of a rich digital anthology of Greek songs and songs from other music cultures for educational use. This system is designed in order to enrich the school music repertoire with new songs and provide free access to material and guidelines to everyone who wants to expand his/her view for music teaching-learning. In addition the end-system is designed to support and promote modern and innovative music

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