# Chapter 3 Families and Multimedia Exhibits: The Example of an Exhibition about Greek Mathematics

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# ABSTRACT

The purpose of the current article is to present the results of a survey conducted in 2010 in an exhibition at "Hellenic Cosmos", the Cultural Centre of the Foundation of the Hellenic World in Athens, Greece. The title of the exhibition was "Is There an Answer to Everything? A journey to the world of Greek mathematics". The survey was a part of the writer's dissertation at Panteion University at the MA Program "Cultural Management", Department of Communication, Media and Culture. The survey focuses only in families and it gives insight about important aspects regarding exhibition spaces such as the use of multimedia before entering the exhibition space, the relation of visitors towards multimedia exhibits and the role of the museum as an alternative place for learning, especially with the use of innovative interactive multimedia.

# INTRODUCTION

Museums<sup>1</sup> nowadays are very different, in relation to their approach towards visitors, than 2 or 3 decades back. Many surveys have been conducted (and still are) in respect of the visitors' relationship to museums, the reasons why some people are frequent museum visitors and some never go there, even if learning could be accomplished in a museum's environment. Visiting a museum is considered (Falk & Dierking, 2000) a characteristic social activity, chosen by the visitor on his free time, to spend it together with other people. Whilst families have been a target group for many surveys in countries like the US and the UK (since they represent a large part of the museum audience there), in Greece there has not been such an extensive research especially in relation to exhibitions that are using new media, like multimedia exhibits.

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Resent research worldwide deals with the experience of the user in relation to multimedia applications like virtual reality for cultural heritage interpretation (Economou & Pujol Tost, 2011) and interactive new media exhibits (Meyer, 2013) especially in relation to children (Rhee & Kim, 2013). Those researches aim at showing how a museum visit could become memorable and appeal to the entire user's senses. From the simplest to the most complex application, technology has become a part of many exhibitions today, mainly with the form of complementary exhibits. The discussion is whether new media is required for the experience or lower tech technologies could be used, even if interactivity requires new media or just hands- on exhibits.

The present chapter's goal is to contribute to the general discussion considering a varied audience, constituted of different ages, different levels of knowledge, whose members are connected with relational and emotional bonds: families. They are a significant percentage in museums worldwide, between 50-60% of the total of visitors. There is a strong belief that the future of museums relies on the impact museum have on families today; from the families would come the future museum visitors (Wood<sup>2</sup> 1996). And in order to attract such a unique audience, like children, multimedia play a crucial role; it could create a friendly environment for them, an environment close to their everyday life.

## METHODOLOGY

The methodological approach followed on the survey was the qualitative<sup>3</sup>. This specific approach was chosen for two reasons. The main one was that qualitative research gives the opportunity to examine a wide range of subjects, which relate to families and new technologies, like how they described their experience, how they compare the exhibitions with virtual reality, if parents think that multimedia facilitate learning or even if multimedia could be a part of school education etc.

The grounded theory was used as a base for the present research, which relies on creating codes for comparison and grouping the data. The approach of the theory was based on Glaser (1992), who thinks that first we should start from the research and the forming of a hypothesis and then continue to the collection of the data. On this specific theory there is a triangular connection between the collection of data, the codification and the notes, where the collection of data and the analysis integrate during the research in combination with the theoretical background. The process begins deductively, to go to the second phase, the inductive, where the initial hypothesis is part of a typological form. This theory includes examination of the data been collected, creation of meanings and connecting them one to the other, additional collection of data and their codification.

For this purpose the method of naturalistic observation<sup>4</sup> on the exhibition environment was used, with the visitors' verbal agreement. All the members of the family were part of the observation, from the exhibition entrance, till the exhibition exit. A non- participant observation was preferred, as well as a discreet presence of the researcher. It was not to the knowledge of the visitor that the researcher (and writer of this chapter) worked as a museum educator at Hellenic Cosmos. An important goal was to prevent the visitors from asking questions about the exhibits and solving their queries, because, by doing that, it was not going to be clear which parts of the exhibition were most difficult to them, or if the exhibits were visitor- friendly and understandable by them.

Combining the observation with the interviews, especially on the part where the visitors described their experience, reduced the danger of the possible subjectivity of relying only in the observation. During the visit in the exhibition the notes were kept handwriting. Observations like, which exhibits

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