

# Chapter 11

## Interactive Multimedia: Increasing the Study in Primary Education

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### ABSTRACT

*One of the important characteristics to be considered when developing multimedia educational materials is interactivity. The purpose of this study was to check whether the proposed multimedia's interactivity influenced the performance of 5th graders in a controlled environment and using Portuguese questions from the Brazil Test (Prova Brasil) as inputs. Those assignments were given to two groups of students, where one group had access to activities implemented via software featuring different interactive resources and a second group carried out the same activity in a plain environment, without the aid of multimedia resources. As a result, this chapter compares the performance of each group of students and relates them to the levels of interactivity, thereby demonstrating the latter's influence over the number of correct answers in the activities. Additionally, this chapter provides elements for the preparation of a second study phase.*

### INTRODUCTION

It is widely known that education is one of the cornerstones in the construction of a society. Based on such assertion, it is plausible to take a more in-depth look into the activities involved in our educational context. The evolution of technology has enabled significant progress in teaching practices, as well as

DOI: 10.4018/978-1-5225-3822-6.ch011

influenced the development of teaching materials, which have moved on from linear printed media to digital ones with the introduction of computers in school environments.

An increasingly more popular trend is the use of multimedia resources as a tool to support the teaching and learning process. Several movements in Brazil have been encouraging teachers to get training so they may have theoretical subsidies and tacit knowledge to reframe their teaching practices following this line of action, and take digital materials and resources to the classroom.

Institutions of higher education have a relevant role in the formation and development of skills and abilities of professionals to interact in a multicultural market, also marked by globalization and information technology and communication (ICT). These professionals, in turn, may also prepare other professionals to work in the various levels of education.

As examples of such movements we have the creation of UAB (Open University of Brazil - <http://uab.capes.gov.br/index.php>), an education system comprising a group of public universities that takes higher education to people who might otherwise not have access to a university education.

The system UAB was created to answer to the local high education requirements. Once a need is detected this system works as a linking agent among the high educations institutions, the estate and county governments. Establishing which qualified institution will be responsible for a defined seminar at any certain county or micro region through the support of remote educational presential centers. Following are some of the different types of courses and seminars offered by the Brazilian UAB:

1. **Bachelors, Graduate Degrees, Technical and Specialization Seminars:** These courses are intended for initial and continued formation for teachers of public education network or general public (social needs).
2. **Specialization Courses in Program of Media in Education:** Courses offered for the purpose of providing continuing education focused on the pedagogical use in distance education, different technologies of information and communication.
3. **Librarian Degree:** Bachelor's program for the training of staff to support the implementation of the courses at the attending supporting poles supporting attendance of the UAB system.
4. **Specialization Courses for Teachers, in Partnership with the Department of Continuing Education, Literacy and Diversity (SECAD/MEC):** Courses offered at post-graduation courses, lasting 360 hours and certification for graduates. Given the current legislation, this program is intended to prepare teachers for cross-cutting themes of the basic education curriculum.
5. **National Training Program in Public Administration - (PNAP in Portuguese):** Courses offered at the undergraduate level - Bachelor's degree, and post-graduation courses - expertise for the creation of a national profile of the public administrator, providing management training to use a common language and understand the specifics of each public sphere: local, state and federal.

In the context of this discussion, UAB contributes to the offer of specialization programs such as Media in Education and Specialization in Information and Communication Technologies, both dedicated to training basic education teachers in the use of media and different technologies in the classroom.

In the on-site or virtual classroom, the multimedia educational materials (MM) provided may comprise a combined variety of media, such as: text, images, audio, animations etc. We believe the sensible use of various media, when combined with different forms of interactivity, may positively contribute to learning (Schwier & Misanchuk, 1993; Mayer, 2002). In this context, the multimedia proposed must be part of a teaching plan that considers the particularities of the student group.

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