

INTEGRATION OF MULTIMEDIA TECHNOLOGIES IN THE TEACHING-LEARNING-ASSESSMENT PROCESS

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Abstract

In the field of education, in recent years, the use of multimedia technology has experienced a phenomenal development, a number of factors influencing their adoption in the teaching-learning-assessment process. The use of these means in education has led from a teacher-centred to a student-centred learning environment, in which teachers are no longer the key source of information and knowledge transmission, but they are students' collaborators and students are no longer passive information recipients but are actively involved in their own training. The purpose of this paper is to raise consciousness about the use of multimedia technology in the teaching-learning-assessment process among students. Our research has as a starting point the Erasmus MOVIE Project in which we are partners with other educational and media institutions in Europe. The purpose of this study is to highlight the attitudes of students (N = 120) enrolled in the specialization Pedagogy of primary and preschool education, both undergraduate and master's studies, regarding the opinions and advantages they have if the teacher uses multimedia technology and of films in the educational process. Our study is an investigative one, and the research tool we used was the questionnaire consisting of 15 items. The questions capture aspects both regarding the teaching-learning process and aspects related to the anxiety during evaluation. The results we obtained by applying the questionnaire on the importance of using multimedia and films in the educational process, are in line with the aspects related to the transformation of this classic educational process into one that promises to adapt to current technology requirements.

Keywords: Education, multimedia, pedagogy, technology, learning

1 INTRODUCTION

In the instructive-educational process, multimedia technologies are an important tool for creating modern instructional courses, virtual libraries and even virtual classrooms, thus forming a new space, the virtual instructive space. The word virtual has its origin in the Latin *virtus*, which means "power", "force" (Cucoş, 2006, p. 13).

The use of modern technologies requires more and more knowledge and information. Modern learning techniques, in order to be effective, must have a certain degree of interactivity with the human subject and transmit information through several channels (text, sound and images) in an associated manner. „ The impact of information and communication technology on school education is remarkable and it seems that this development will lead to positive effects, but also to additional problems. The process of replacing real life with the components / aspects brought by computer-media means can be called virtualization ” (Cucoş, 2006, p.26). In education, this phenomenon is manifested when computers are used to replace learning

experiences that were previously made in contact with the teacher or to give the chance to learn what in the past would not have been available, available to anyone "(Cucuș, 2006, p. 26).

Computer-assisted training is an organically integrated way of working in the usual teaching / learning system. Its specificity consists in the fact that it offers sequence inserts, lessons / courses, demonstration fragments, etc. by computer, designed in various presentation styles, from text-type materials to read to simulation and visualization materials integrated organically in the regular work schedule of the school "(Cerghit, 2006, p. 301). So, the teacher is no longer the one who teaches someone a certain thing in a given context, but a person who also learns new things, along with (and) someone else (his students, his colleagues), in a saturated context more and more new information and communication tools "(Cucuș, 2006, p. 131).

Technology makes our lives easier. Pre-teens and teenagers today have great opportunities to learn and connect using it. But each advantage has its possible disadvantages. When we understand these disadvantages and learn to minimize them, we can keep the use of technology at a positive level.

1.1 What is Multimedia for Education?

According to Stay (1993), multimedia is a combination of text, graphic, animation, audio, and video which are everything we can see and hear in our daily life, In the first edition of *Multimedia: Making It Work*, Tay Vaughan defined multimedia as "any combination of text, graphic art, sound, animation, and video that is delivered by computer. When you allow the user – the viewer of the project – to control what and when these elements are delivered, it is interactive multimedia and also when you provide a structure of linked elements through which the user can navigate, interactive multimedia becomes hypermedia" (Stay, 1993, p. 3).

Information and communication technologies change the perspective on educational practice. The use of these multimedia technologies in the field of education and training aims to adapt to the needs of today's society, and on the other hand by increasing the quality and efficiency of training.

Multimedia technology is used in the educational environment to facilitate the learning process, by increasing the receptivity and the degree of assimilation of knowledge, monitoring the training process and the results obtained by pupils or students. An important aspect of national practices towards the formation of new generations is the use of the computer as a support for learning. It is considered to be a didactic means (integrated in the teaching of different disciplines), with an important role in improving the quality of teaching and improving the instructive-educational process.

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The impact of the use of multimedia tools on teachers and their students, the changes in the intellectual, emotional, social behaviors of students are translated and materialized in aspects such as:

- Increasing interest in learning;
- Increasing the frequency per hour;
- Obtaining a better concentration;
- Stimulating teamwork;
- Improving school results;
- Development of communication skills;
- Optimizing project management;
- Developing the ability to solve problems.

1.2 Film Education

The concept of film education was introduced to science in the mid-20th century by Alexander, Hall and Pettice, (1994). Cinema education is defined as one of the forms of creative educational technologies that shape new ways of social interrelation. According to Anderson, M., & Jefferson, M. (2020, p. 5) digital video and film technologies are transforming classrooms across the world. Teaching the Screen looks beyond the buttons and knobs to explore ways of teaching video and film effectively in secondary classrooms.

When refers to the utility in the classroom, Albulescu states that the use of audio-visual media, and, more

recently, computer networks, have undeniable advantages in school. Television films (documentaries, reportages, interviews, debates, dramatizations, etc.) often prove to be useful as a complementary, supplementary and supplementary or illustrating content of teaching (Albulescu, 2003, p. 56).

Barth and Ciobanu (2017, p. 23) states that mass media is a factor of education that leaves deep traces in the memory of the individual. It can increase or diminish a person's experiences. In a computerized society, education must not be lagging behind.

"The source of a teacher's competence derives from his vocation, but also from his specialty training and the passion for the discipline he teaches. Those features that a teacher has to have can be added to others, and contemporary society highly computerized and assaulted by new technologies brings new challenges for the teacher" Cuc (2018, p. 52). The research conducted by Robert Gill in 1970 found that students who used cartoon characters had learned more than students who used the same material without animated performance. Research indicates that using cartoons as classroom material stimulates the child's motivation, learning and social development (Gill, 1970, p. 198). Ciobanu (2019) states that repeated use of the same cartoon characters helps children feel comfortable expressing their feelings and desires and wishes, improving their social skills (Ciobanu, 2019, p. 901).

Regarding stress and anxiety among student, Bochiş and Florescu observe that the results they obtained „capture a relation of negative association between educational attainment and the anxiety to test and a positive association between school performance and personality traits such as emotional stability, extraversion, and conscientiousness.” (Bochiş&Florescu, 2018, p. 6715)

2 METHODOLOGY

The research method used in this study is the survey method based on the questionnaire, having as working tools the questionnaire addressed to the students enrolled in the specialization Pedagogy of primary and preschool education, both undergraduate and master's studies from the Faculty of Humanistic and Social Sciences, Bihor County, Romania. The questionnaire had been applied to a number of 120 students and comprises a total of 15 items regarding the opinions and advantages they have if the teacher uses multimedia technology and of films in the educational process. These items are in accordance with the present research and also with the way in which the students faced multimedia learning while studying at our university.

The first 4 items refer to the age and type of schooling of the subjects, and the 11 items are those that refer to the multimedia means in education and their use, both in the teaching-learning process and in the evaluation process.

The research objectives were the following:

- ◆ Highlighting a possible correlation between school success among students and the use of multimedia in the teaching-learning-assessment process.
- ◆ Highlighting a possible correlation between reducing anxiety about testing - assessment among students and the use of multimedia in this process.

The hypotheses from which we started in this scientific endeavour were:

- The possibility of the success of the students if the teacher uses multimedia technology during courses.
- Using multimedia techniques in evaluation process will reduce the anxiety of students.

The students who participated in this study (N = 120), are students enrolled at the faculty where we carry out our activity, in year I, II, respectively III for undergraduate studies and year I and II for master studies. They belong to various age groups, namely 17.5% are under 20 years old, 69.2% are between 20-30 years old, 8.3% are between 31 and 40 years old, and the rest of the respondents (5%) are between 41 and 50 years old.

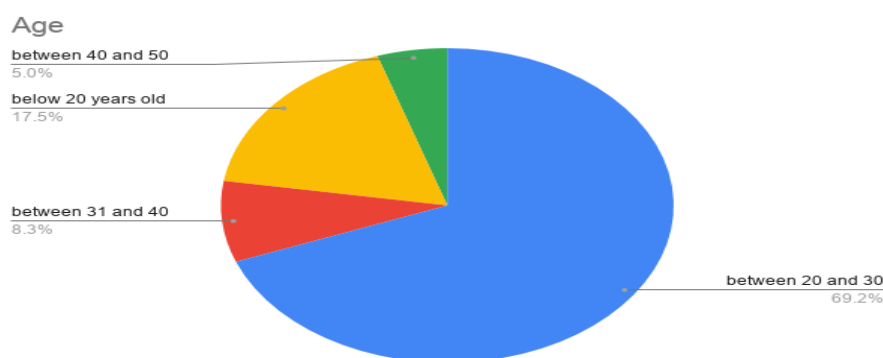


Fig. 1 Subjects age range

The study programs in which they are enrolled are *Pedagogy of primary and preschool education*, *Preschool psycho pedagogy* and master of *Integrated education for primary and preschool education*.

3 RESULTS

The results obtained after completing the questionnaire and after interpreting the data are conclusive in terms of the objectives we set. More than 75% of the subjects agreed that the use of films in courses and seminars makes it easier for them to understand the notions taught and helps them to retain new information more easily.

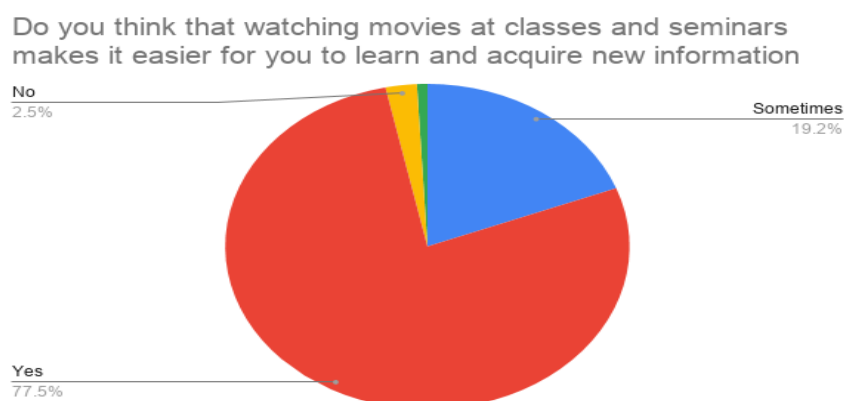


Fig.2 Diagram on understanding new information if movies and images are used

From the diagram below we find that more than 80% of those surveyed consider that they are more interested in participating in class discussions if the teacher is using multimedia means, films and images as didactic support. This can be explained by the fact that it is easier for students to follow the aspects that the teacher teaches, using multimedia support. All this means that students are more cooperative and more willing to participate in compulsory activities.

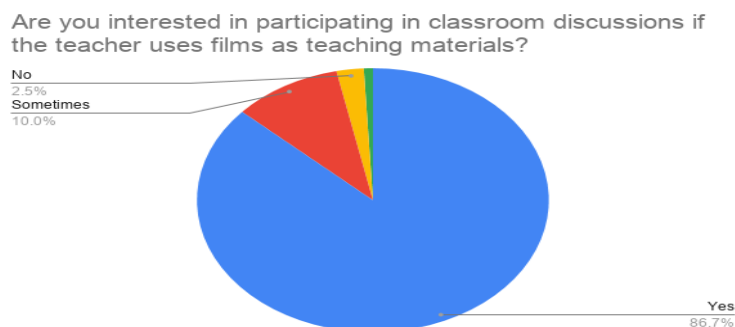


Fig. 3 Diagram of interest in participating in discussions if films and images are used as teaching aids

Regarding the stress and anxiety that students may feel in courses and seminars, we found that the use of teaching materials mainly multimedia, make these negative aspects that students feel to diminish. A very high percentage of respondents (over 70%) believe that the use of means other than traditional ones reduces learning anxiety and stress.

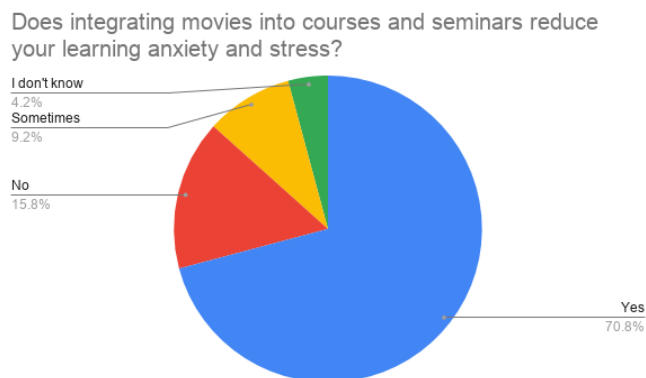


Fig. 4 Diagram on reducing stress and anxiety that student may feel in courses and seminars

56% of the interviewed students answered that they do better and manage to cope with the exams brilliantly if the materials based on films and images are used in the evaluation process, to the detriment of the traditional evaluation methods. This reveals that self-esteem is high when students are subjected to an assessment situation and manage to overcome the emotional threshold more easily than they would if they were assessed through written tests and examinations.

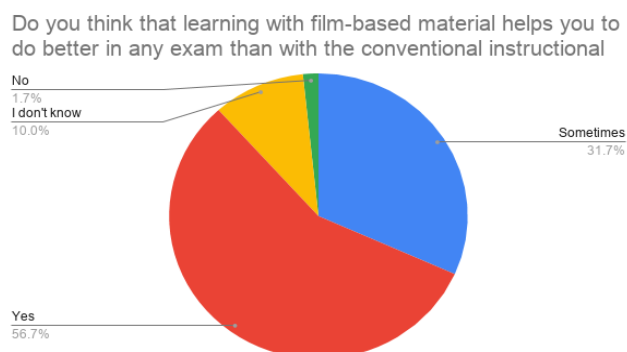


Fig. 5 Diagram representing the degree of confidence in an assessment based on filmed material, in accordance with traditional examination methods.

4 CONCLUSIONS

All the data we have interpreted confirm the hypotheses from which we started, showing that those educated in the age of the Internet and various multimedia learn much easier and faster, if the teacher chooses interactive methods, methods based on movies, if he uses photos support in courses and seminars.

Nowadays we consider that it is mandatory for teachers to make the transition from traditional to modern at all stages of the instructional process and at all age levels. These multimedia tools, movies, applications, photos are a real teaching support, which used carefully and passionately can streamline the teaching process.

The technology does not take into account age or level of education, either bachelor's or master's degree. Our investigation included age levels ranging from under 20 to 50, which shows us that technology is beneficial in the instructional-educational process, regardless of the age of the subjects. Even though we thought that those over 40 will have a different opinion about the use of multimedia, we noticed that they have kept up with modern technology and want to have courses and seminars in which the teacher exposes the information based on materials filming, images, and applications.

The abundance of multimedia means available to a teacher is beneficial in both the teaching and evaluation

process. Reducing test anxiety and stress related to this process is important for an exceptional educational process. We must recognize that the stress and anxiety we encounter among students in the assessment process makes our assessment task more difficult. Using these modern means, this evaluation process can be streamlined.

All in all, the skilful use of these materials based on film, images or multimedia applications is beneficial, both for students and for teachers who have the task of teaching them, of evaluating them according to the acquired knowledge. That is why our task is to find the materials and means that we believe facilitate their access to information and help students in the tasks they have to perform. A teacher who is in step with technology will never be caught off guard when it comes to choosing materials for courses and seminars.

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