MULTIMEDIA IN PRIMARY AND SECONDARY SCHOOL CURRICULA IN ROMANIA

Liliana Ciascai, Iuliana Marchis

Abstract. Multimedia is present in our everyday life, thus its management is considered as a necessity by the specialists. The relation of multimedia with education is very complex: we speak about education with multimedia and multimedia education. In this paper we propose to characterize partially the above mentioned relations, analyzing the openness of primary and secondary school curricula for use of multimedia in the learning process. This openness is the first step toward multimedia education. In our investigation were analyzed 105 primary school programs and 157 secondary school programs for 39 disciplines. The obtained results underline the lack of interest of policy makers to promote multimedia in education. In the paper there are given some suggestions for directions of use of media in school practice.

Zusammenfassung. Multimedia ist ein wichtiger Bestandteil unseres Lebens, und dessen Management ist eine Notwendigkeit. Die Beziehung zwischen Multimedia und schulischer Erziehung ist komplex: wir sprechen über Erziehung durch Multimedia und Erziehung typisch Multimedia. In dieser Arbeit wird dieser Zusammenhang gezeigt. Analysiert wird die Öffnung des rumänischen Curriculums in Grundschulen und weiterführenden Schulen für eine Nutzung von Multimedia. Diese Öffnung ist einer der ersten Schritte für eine Multimedia-Erziehung. In unserer Arbeit wurden 105 schulische Programme aus der Grundschule und 157 in weiterfördernden Schulen absolviert – in 39 verschiedenen schulischen Fächern. Das Ergebnis zeigt, in der schulischen Erziehung ein großes Desinteresse für eine Multimedia-Nutzung in der Erziehung. In dieser Arbeit werden verschiedene Vorschläge für eine Nutzung von Multimedia in praktischen schulischen Aktivitäten gezeigt

Keywords: multimedia, curricula, educația multimedia, invatamant primar si gimnazial

I. Introduction

1. Multimedia. Precizări conceptuale

Mass-media, respectively *the classical forms of mass communication* refers to the social institutions that deal with production and distribution of knowledge/information and which is distinguished by the following characteristics (Coman 1999, Lăcudean 2006):

- The use of techniques (relatively) advanced to mass production and distribution of messages;
- Rigorous organization and regulation of their social activity;
- - Sending messages to large audiences, which are unknown to the communicator and which are free to take the messages or to refuse it.

Media is a collapse of the term communication ways. In the broad sense, the concept seeks the means used for the production, storage or transmission/(indirect) distribution of the messages, in general with the purpose to inform or recreate. Beyond its role and purpose media has the following characteristics:

- sustainability: the phone and chat environments are volatile while the book, poster, the PPT, photo, movie, CD, etc.. are sustainable.
- use of a communication channel: individual media (Intenet, portable devices) or the mass media (press, radio, TV)
- timig in communicating a message: synchronous and asynchronous media
- the way of accessing the message: video and/or audio.

Media messages are composed of different elements. They addressed the eyes by texts, symbols, patterns and schemes and the ears by noise and music. The technology integrates audio and video elements and the human creativity diversifies them serving the technology.

Decoding the media message assumes symbolic knowledge systems mentioned above and it is necessary because the media not only provides a picture of reality but also an interpretation of reality and intentions of communication. The interpretation is based on knowledge in the fields of media powers, cultural context and our own interests.

In conclusion, *media* is a concept with different meanings. Thus, as has shown by Coman (Coman 1999, Lăcudean 2006, p. 38), the media may be "either support or technique or the institutions, or are all of these in one place, to ensure the rapid movement of messages to increasingly large geographical to reach many people."

The relatively recently introduced term *multimedia* has occurred as a result of technological innovation: telecommunications, broadcasting and IT. Multimedia (multi - more; media – media means) refers to the ability of a system to communicate information simultaneously through multiple media: text, still images (graphics, photos) or animated images (animation, movies), sound, etc. Usually, when we talk about multimedia products we talk about integrating some of the media referred above in a document.

Multimedia technologies could be defined as the totality of arrangements for the creation, storage, retrieval, dissemination and use of documents consisting of multiple media: computer, video, MP3 MP4, software.

2. Multimedia and education

Specialists (Bates, 1993, 1995 in Rahman) indicate five important media in education:

(1) direct human contact (face to face);
(2) text (including still graphics);
(3) audio;
(4) television
(5) computing.

In particular, education based on digital multimedia integrates graphics, text, audio and video software into a single training unit with the support of the computer.

Regardless of their nature (traditional media or digital) international recommendations suggest the use of media tools and products in order to achieve the following objectives:

- *Individualization of learning*, especially through the possible use of digital media tailored to particular student;

- *Deepening learning*, for example by different ways of illustration/simulation of phenomena otherwise inaccessible for student;

- - *Facilitate learning* through the use of all records of work: symbolic, figurative and practical (spatial representation) and the possibility of integrating them into a product. Also, the media may make it possible, for example, to make steps in the learning process.

- *Increase motivation for learning* because of the attractiveness of media products, such as, for example, the audio-visual products for children;

- *Developing cross skills and competencies:*

  o Efficient communication,
  o Solving problems;
  o Critical thinking;
  o Collaboration;
  o Using technologies;

- *Developing attitudes*:

  o Intellectual curiosity;
  o Responsibility;

- Giving a background for a *global perspective* on the world.

Practically, specify Rahman, it is better to use a limited range of technologies in order to reduce redundancy and wasteful expenditure; provided all the main media are covered. One medium may serve a teaching

function better than another in a particular area. There are a number of factors that need to be taken into consideration before deciding on the appropriate use of media and technology: specific learning objectives of the unit, the nature of subject matter, learner's, background and experiences and the characteristics of the target group, learning styles, resources etc.

3. Primary school curricula

The Romanian educational system is organized on 5 curricular cycles:

- o fundamental acquisitions (I-II grades);
- o development (III- IV-V-VI grades);
- o observation and orientation (VII-VIII-IX grades);
- o deepening (X-XI grades)
- o specialization (XII-XIII grades).

In Romania grades I-IV belongs to primary school and grades V-VIII to secondary school. The distribution of the curricula levels berween primary and secondary school is shown in the following table:

Table 1. *Distribution of the curricula levels between primary and secondary school*

Curicular cycle	Grade	Level
Fundamental acquisitions	I	Primary school
	II	
Development	III	
	IV	
	V	Secondary school
	VI	
Observation and orientation	VII	
	VIII	

The National Council for Curriculum specifies the objectives of each major curricular cycle:

a) The cycle of the fundamental acquisitions (grades I and II) has as major objectives accommodation with the school requirements and initial literacy. This curricular cycle concerns on:

- assimilation of the basic elements of the main conventional languages (writing, reading, arithmetic calculation);
- stimulation of the child in order to have perception and knowledge about his/her environment;
- stimulation of the creativity of the child, his/her intuition and imagination;
- formation of the motivation for learning.

b) The development cycle (grads III - VI) aims to formation of basic skills necessary for continuing further studies. The cycle of development concerns:

- development of the linguistic acquisitions and encouraging the use of Romanian language, mother language and foreign languages in various communication situations;
- development of a structured thinking and competence to apply problem solving in practice;
- familiarization with a multidisciplinary approach;
- establishment of a set of values consonant with a democratic and pluralistic society;
- encouraging talent, experience and expression in different forms of art;

- training of the responsibility for their own development and health;
– formation of a responsible attitude towards the environment.

c) curricular cycle of observation and orientation (grades VII - IX) has the major objective orientation for maximizing school choice and professional future:

- to discover by the student of their affinity, aspirations and values in order to build a positive image of itself;
- to train their capacity for analysis the set of skills acquired through learning in order focusing on a specific career;
- to develop an ability to communicate, including using different language;
- to develop of an autonomous thinking and responsibility towards integration into the social environment.

In classes I-IV 39 school subjects are studied, grouped in 7 curricular areas:

Table 2. *Curicular areas and number of disciplines for each one in primary and secondary school*

Curricular areas	Number of disciplines for each curricular area	
	Primary school	Secondary school
Languages and communication	25	28
Mathematics and Sciences	3	4
Man and society	4	22
Arts	2	2
Physical education and sports	1	1
Tehnologies	2	1
Advice and orientation	1	1
Optional disciplines	2	4

For the 40 school subjects at primary level correspond 105 subject programs, and for those 63 school subjects at secondary school correspond 157 programs.

Distribution of the school programs to the curricular areas is presented in Figure 1 and Figure 2.
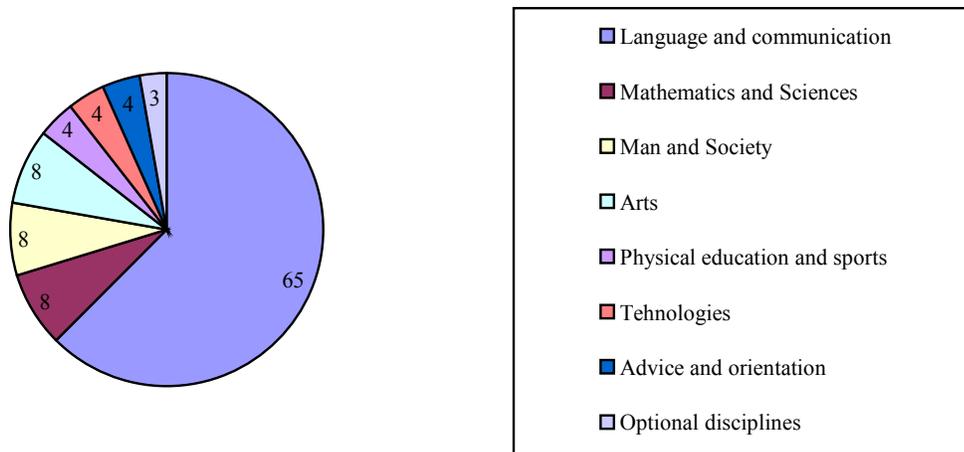
Figure 1. Curricular areas and number of school programs in primary school\

As can be seen in the above picture (Figure 1) the *Language and communication* curricular area has the largest share of total school-level education programs. The same situation is at the secondary school level (Figure 2).
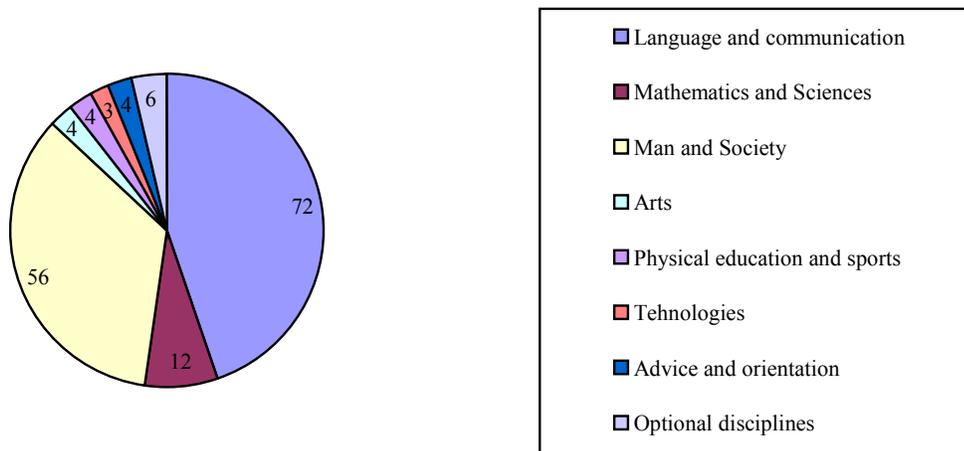

Figure 2. *Curricular areas and number of shool programs in secondary school*

II. The investigated problem and used research methods

1. The characteristics of the realized investigation

The scope of our investigation was to identify the existing referees in school programs to use of multimedia in the learning process. For this purpose the school programs from each curricular areas were analyzed on the primary and secondary school level.

2. Instruments used in the research

There were developed two working instruments. The first one is a form, which was utilized for analyzing the school programs. The structure of it is presented in the following:

Grid for analyzing the presents of multimedia in school programs

School program: ....

Grade: ....

Curricular area: ....

Specialization ....

1. In the school program there are mentioned the following media aids:

Media aids	Frequency of references	Context
Computer		
Office software		
Web		
Chat		
Video projector		
Digital camera		
Video camra		
MP3, MP4, CD player		
Interactive board		
TV, Radio		
Others		

2. The *Objectives* in the school program refer to use of media materials in the learning process:

Material	Frequency of references	Context
Audio		
Still images (graphics, illustrations, photos, etc.)		
Films		
Animation		
Multimedia presentations (PPS, poster, collage)		
Web pages		
Sofware		
Others:		

3. In the school programs the *Learning activities* refer to different use of media materials in the learning process:

Material	Frequency of references	Context
Audio		
Still images (graphics, illustrations, photos, etc.)		
Films		
Animation		
Multimedia presentations (PPS, poster, collage)		
Web pages		
Sofware		
Others:		

We must mention that the list of media materials investigated were excluded texts, reference to this as a media is difficult to discriminate.

3. Collection and analysis of data

Data collection was done in the first instance through investigation of 105 primary school programs. With the help of the grid described above the multimedia tools and materials referred in school curricula were inventoried.

III. Results

In the 105 programs at the primary school level there are few references to media, which can be used in classroom.

Figure 3. *Curricular areas and the frequency of references to media aids in primary school curricula*

Most of the referec to media aids are to computer, video and photocamera. There is no reference to office software, chat, web, video projector, CD player, MP3 player, interactive board, etc.

On secondary school level the situation is presented in Figure 4. In secondary school the biggest number of references o media aids (25) can be found in Technology curricular area, as i was expected, and these references are about using the computer (3), software (7), web (4), video and photo camera (4), radio and TV (4).
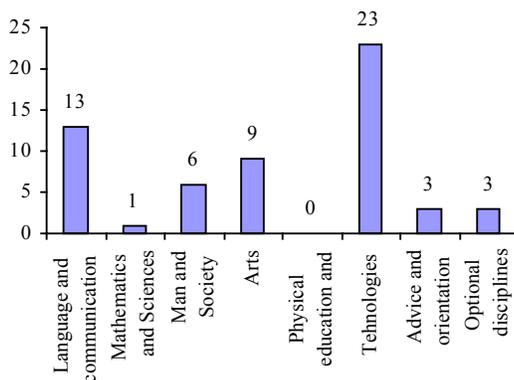
Figure 4. *Curricular areas and the frequency of references to media aids in secondary school curricula*

In Figure 5 the frequency of references to media materials through objectives and learning activities in primary school curricula is presented, while in Figure 6 in case of secondary school.
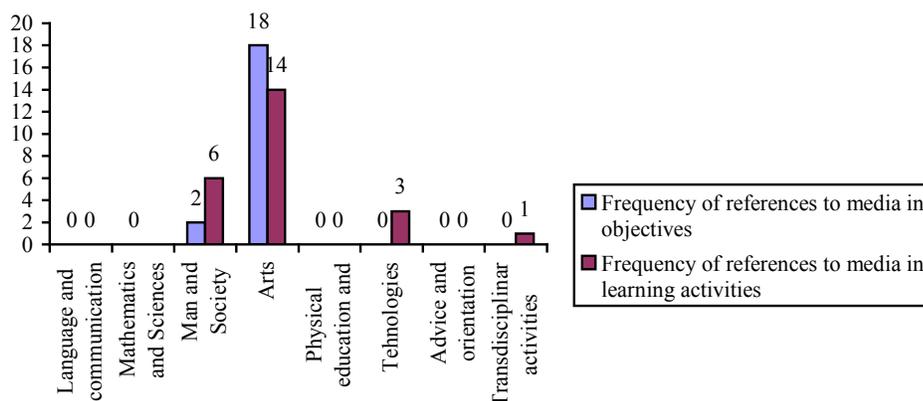

Figure 5. *Curricular areas and the frequency of references to media materials through objectives and learning activities in primary school curricula*
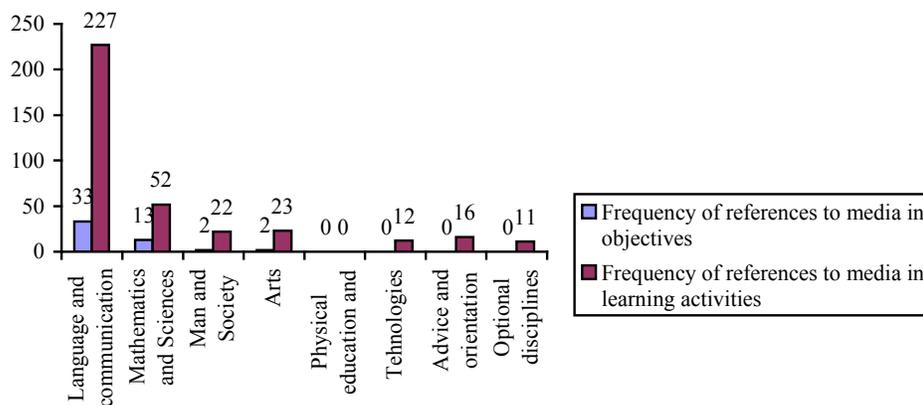

Figure 6. *Curricular areas and the frequency of references to media materials through objectives and learning activities in secondary school curricula*

The frequency of references to different media materials through objectives and learning activities in primary school curricula is presented in Figure 7, while in Figure 8 in case of secondary school.
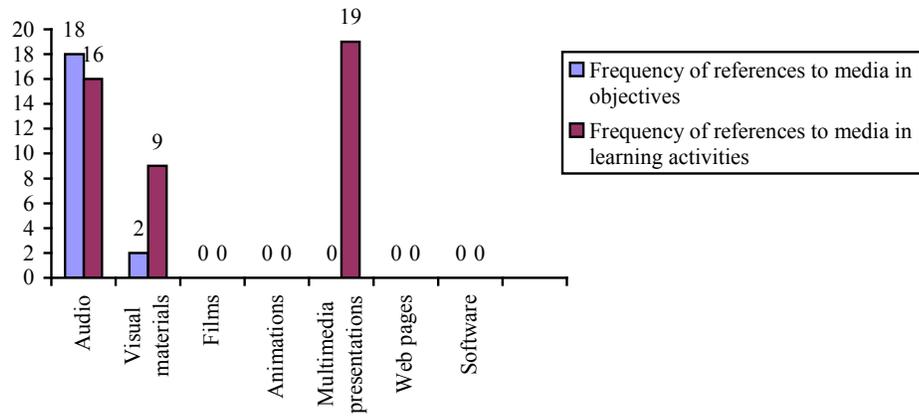
Figure 7. *Media typology specified through objectives and learning activities in school programs at primary school level*
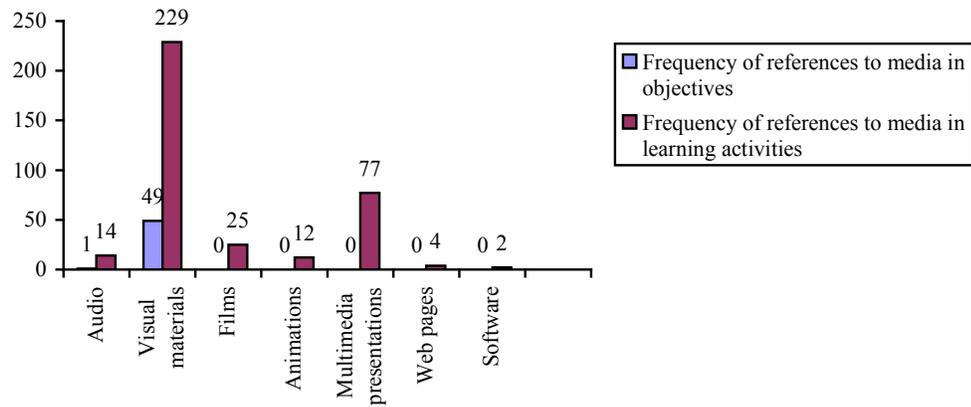

Figure 8. *Media typology specified through objectives and learning activities in school programs at secondary school level*

A comparative presentation of the frequency of references to use media products in primary respecively secondary school is presented in Figure 9.
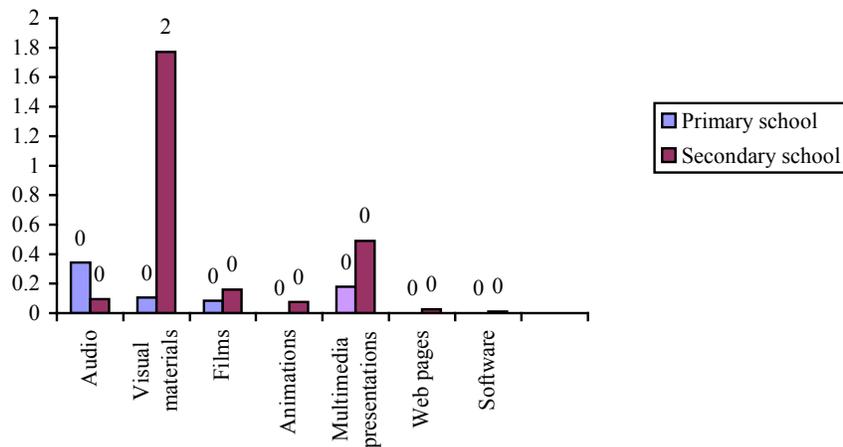

Figure 9. *Media typology – comparative presentation*

IV. The discussion of the results

The results obtained after analyzing school curricula show a marked unconcern of school program elaborators for the media use at primary and secondary school level. Most references to media instruments exist technology curricular area. This is a normal situation, imposed by the specifics of these disciplines.

Regarding media materials, on both level of education the formulation of the objectives doesn't include use of media materials, as one some suggested learning activities teachers are advised to use them, especially in Language and communication curricular area.

Most of the references to media are to traditional media, as collages, posters, drawings.

The limits of the research com from the fact, that we didn't include the texts in the investigation. To decide that a text is media material or not involves special knowledge, in other words, a look inside, a specialist capable to decide if a text is only a learning material or is a media material.

V. Conclusion and recommendations

The concepts of "media education", "multimedia education", "education in the field of media", "education in the field of multimedia education" or "media competence" can't be found in primary or secondary school curricula issued by the Ministry of Education and Research in Romania.

Education for the use of media in school practice is a necessity today. It requires the creation of a coherent approach to train teachers through courses. This training must be carried out alongside the review of school programs that require teachers to integrate media into their lessons. Also, the Ministry of Education and Research of Romania must be involved in this approach by targeting funds to provide schools with the tools necessary to use of media.

References

Bates, A., W. (1995). *Technology, Open Learning and Distance Education,* London: Routledge, 29-31

Bates, A., W. (1993). *Theory and Practice in the use of technology. In:* Keegan, D. (Eds), *Theoretical Principles of Distance Education*, Routledge: London, pp.213-33.

Coman, M. (1999). *Introducere in sistemul mass-media*. Iaşi: Editura Polirom,

Lăcudean, A. M. (2006). *Tehnologia informaţiei cu aplicaţii în sistemul educaţional*. PhD thesis. Bucureşti: ASE

Rahman, M., H. *Use of Media and Technologies in Open and Distance Education: A Case of Bangladesh Open Universit*y. http://www.wikieducator.org/images/4/48/PID_648.pdf

Siddique A., S. (1987). Role of Radio and TV in Distance Education System of Allama Iqbal OpenUniversity, *Pakistan Journal of Distance Education Vol. 5 No.2*

UNESCO (1999). *Recomandations addressed to the United Nations Educational Scientific and Cultural Organisation UNESCO*. Adopted by the Vienna Conference, "Educating for the Media and the Digital Age" 18-20 April 1999, http://www.mediamanual.at/en/pdf/recommendations.pdf

*** Primary and secondary school curricula. www.edu.ro

Authors

Liliana Ciascai, Department of Psychology and Educational Sciences, Babes-Bolyai University, Cluj-Napoca (Romania), e-mail: lciascai@teaching.ro

Iuliana Marchis, Department of Psychology and Educational Sciences, Babes-Bolyai University, Cluj-Napoca (Romania), e-mail: marchis_julianna@yahoo.com