

MULTIMEDIA: ‘THE WORLD OF MAGIC?!’

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Abstract

The multimedia is a renewing, developing occurrence that is more and more influential in the last years of the 20th century. The draft described by the author introduces its pedagogical, professional utilization and its connections to the reader. The school equipment’s fifth generation’s concept is: system adoption. This compilation can show well the process, which could produce the possibility of the actual multimedia’s presence and adoption. It searches the answer for the question drawing up in the title and drafts the possible future new questions.

Keywords: multimedia, system application, interactive, navigation, paradigm change, qualitative features, usable, virtually.

“If we want digital school equipment to become wide-spread in schools, first we have to make users believe it is good.”

(Yamada – Andrea Kárpáti)

1. Introduction

Its wording could be a bit high-flown for an impartial observer. On the other hand the fact is indisputable that in the last years of the 20th century an excellent software development result named multimedia is present in our weekdays. Its pedagogical, professional and artistic adoption is more and more indispensable. I hope I can show you during the explanation of this topic that the effective educational and pedagogical managing of the 21 century’s challenges are backing significantly this digital school equipment that supposes the high technology’s development and function and applicates the microelectronics, the informatics and the high technics possibilities. Its successful adoption cannot be without the essential knowledge for users of multimedia. The topic explanation seems not to deal with educational, ethical and moral questions connected to the problem. The reader can get a kind of summary of the exact and the possible compilation from the views of distance education and mediapedagogy.

The questions concerned in the topic:

- Notion and reality.
- The multimedia as system application.
- Pedagogical, methodological and other questions of the application and the handling.
- Paradigm change.
- Research experiences.

2. The Notion and Reality

By way of introduction it is expedient to clear up the question: 'What is multimedia?'

- a new panacea?
- a fetish phenomenon again?
- some fanatic developers' game?
- a new technicality mean of spreading visual culture?
- just new information ? (several media together?)
- or something else?

Interestingly enough the question above generalises several possible answers.

One of the possible answers can be found in the title of the presentation. Let us accept it at the outset that in literature it is defined as the following: *multimedia is a kind of information bearer and information transmitter which displays sounds, pictures and texts with the help of interactive boards*. Its characteristic features are:

- it should contain at least two media:
 - one which depends on time (it can be sound and/or a movie) and one which is independent of time (it can be a text and/or a picture),*
- it should provide navigation possibilities (the link between the connections of meanings).(see [11])

For its knowledge the multimedia's story started with the film. The film can be the first, tutoring used material as a software, which disposes the features of multimedia. Its only deficiency is *interactivity*. This problem is solved later on by the interactive video on a given level of technical development. (For example, the original slashing succession instead of other compilation succession, or instead of stabilized termination the insertion of different termination possibilities). It has an important function for example in the cuttings', the dramaturgy's and the filmdirector's education. At the same time the *navigation limit* determined necessarily by the director (dramaturgy, composition, montage), cannot be handled technically by the user.

The real question, however, is that together with the technological, art and creator evolution the media-using and the media-user work, disport set and change cannot be felt parallelly. The *everything for everybody* and the *full existent fetish*

alternating each other, their periodical appearance and vanishing are part of the technical, pedagogical, art, creator and receptive happenings of the past few decades.

The question arises necessarily. Why is important the dealing with the multimedia right now? The response is among the challenges and possible solutions of the 21st century. These can be:

the challenges

- value generating society
- informational society
- society based on knowledge
- economy based on knowledge

the solutions:

- lifelong learning
- go-as-you-please studying
- ICT – the utilization of independent learning and the multimedia

within the framework of globalization

Some decades ago the only notion was used. In reality we only presumed what kind of possibilities the multimedia hides in itself. The mechanism, the technological conditions have not yet made its creation and application possible. The fifth generation meant to be a qualitative break-through in the school equipment system. The current place of development is said to be placed chronologically by Pál Szűcs.

The story is not without antecedents. Educational technics, the educational technology, computer technique and informatics, gradual and continuous spreading in the tutoring- studying process, the school equipment operating as a subsystem function as parts of the paradigm change in which the scholar's efficient studying is the most important, the fiducial. As the result of high technology, the technological based learning and tutorial methods made it possible to provide the state of the students in which they were able to learn, the forming and continuous maintenance of the pedagogical function of adjustment. As the result of the development the question today is not the one which asks which equipment can substitute for the teacher, but the one which asks which is the best equipement, information technique or method for the solution of the given didactic exercise, or for the reaching of the target.

The continuation: the stronger appearance of digitalization, the use of the Internet in the tutoring process, the unbound learning based on multimedia, the appearance of virtuality. The possibilities are boundless. The question is whether we are ready to use them.

3. Multimedia as System Application

The multimedia seems to be only an up-to-date microelectronic product. Naturally the tools and information bearing material belonging to the previous generations were important and up-to-date in their own days. They knew everything which was possible on the level of the given technics and technology. The conspicuous

difference between the fourth and the fifth generations was *in system application*. The developmental transition is well demonstrated by the technologies bringing into existence the traditional didactic functions and the educational technology functions. Naturally media knowledge and user knowledge were indispensable both for development and application in this case.

The multimedia knows everything in the fields of presentation, visualization and auditive utilization and system operation which the previous generations knew one by one. It is coupled with interactivity and navigation possibilities. The quality is provided by user friendly software characteristics. It presupposes a kind of intelligent media consumption and a new kind of conscious media use on behalf of the developer, the seller and the user. It is worthwhile to learn and it can be done.

According to this sketch above there is a possibility of a multimedia backed independent learning and the real communication culture using the possibilities of an information and communication technology. Naturally, it is provided within the framework of certain conditions. These can be:

- the presence and continuous development of high technics and high technology
- the professional character of development
- the consideration of after, not only didactic points (psychological, ergonomic, aesthetic, structural, navigation)
- the operation as a system (development, using logistics, etc.)

The first generation of multimedia was the ‘magazine-type’ choices. In the case of their development the most important features were the technical and technological solutions. Their utilization in teaching is random especially due to drawbacks of utilization conditions.

Among the ones which helped teaching the new breakthrough was brought by the solutions helping foreign language learning. The continuation is well-known: biology, history informatics etc. And these are user friendly softwares.

The application of multimedia in teaching and tutoring is a possibility without the ‘fetish-syndrome’, which was present formerly. Some application points have vital roles in it. These are:

- the learning socialization, knowledge transfer are important,
- the media knowledge of the user and his media pedagogical preparation are vital,
- the operation and the quality of developmental and preparation background,
- if the multimedia used is good for the given exercise.

In this context, examining the multimedia it is indispensable to touch upon some quality features of software products.

- functionality,
- reliability,
- usability,

- efficiency,
- maintainability,
- portability (see [3])

and the usability points of software products. These can be:

- content (structure, system – like building)
- understand,
- learnability,
- usability,
- compatibility. (See [4])

4. Paradigm Change

The paradigm change in pedagogy necessarily touches upon the system, the players of the process, the tools applied, materials, the content and methodological questions of learning and teaching. Their examination, the summary of the experience called our attention to several important factors. These can be:

- the ability to provide a state for the learner in which they are able to learn,
in the case of a traditional material it is preparation for source search,
in the case of multimedia, it is navigation preparation,
in the case of distance education, it is the preparation for both of them,
- the preparation level of multimedia teaching material (not only didactic)
- the presence and absence of conditions for independent learning,
- ICT can be used only as a system.

Top questions are:

- the learning of the learner is fruitful
the condition to be able to learn,
independent learning
unbound learning elements in traditional (face to face) education,
- the teacher as a model
preparation level of the technological based learning and tutoring methods (absence, fear, closing-up, shifting etc.)

Let us keep in mind the possibilities of traditional teacher roles:

- the source of information,
- the governed of the teaching process,
- 'actor'
- 'world explanatory'
- communicator,

and the realism of the changing, ‘new’ roles! These can be:

- ‘director’
- ‘technologist’
- learning leader,
- curriculum developer,
- expert;
- teaching organizer,
- ‘virtual’ teacher.

Even the notions suggest that stress has shifted from teaching. to learning in the case of exercises, teacher dominance is gradually being changed by the dominance of learner activity. In this process it is important to use consciously the multimedia.

It comes from the facts above that in the case of multimedia it is not the custom to put the former information bearers side by side and use them according to a certain logic for certain didactic exercises. Multimedia is much more than the softwares known and used before. The multimedia is the representative of the fifth generation of teaching aids: *system application*.

5. Research Experiences

The questions arise necessarily:

- can the knowledge for the adoption and the media pedagogical, the knowledge of media and method be acquired?
- how can the contact of people and (multi)media change during the developing digitalization (when digitalization becomes stronger)?

The answer is relatively very simple: To create is a very difficult job considering the time factor. We had to prepare for the fruitful application of the teaching aids which had appeared in the pedagogical practice of the former decades. In teacher education there was a possibility for that within the framework of professional methodology, educational technique and educational technology. For those with a diploma there was a possibility in further teaching education. This learning process formed necessarily the connection between man and media.

In professional education the tutors (who originally were not teachers) had to be trained which was a challenge to prepare them and realize this job (the period examined is 1980–1986). Our research clearly certified our hypothesis:

- is it possible to get the teacher know his own. professional – pedagogical – manager activity? yes
- can his pedagogical activity be developed? yes
- can a proper method be developed for that? yes
- is professional further training suitable for that? yes

The aim of the research: the display and development of those activity-elements without which the role of the teacher does not function well. These can be:

- connection relation and maintenance,
- utterance,
- role taking,
- planning and foreseeing (pedagogical fantasy),
- analysis and decision,
- organization, leadership, regulation,
- checking, evaluation, value creation,
- the learning and teaching of working,
- empathy and pedagogical tact,
- co-operation.

The basis for the development was provided by the present professional activity system of the teachers. The video and its bound interactivity and its flexible, many-sided usage provided its realization. (See [6])

The experience showed that the learnable activity elements of the roles (teacher, student) working within the frameworks of traditional education can be learnt and developed. The teaching equipment, the usage of the media are part of the activity of the teacher. Their functions are:

- traditional didactic: complementary, helping, display
- teaching technology:
 - simulation,
 - placing into a new dimension,
 - making the system connections visible.

These back the activity of the student and the teacher side by side and strengthen each other. So the connection formed between the human being and the media is still on a human scale, it can be learnt, developed and handled.

The real challenge is the physical appearance of the multimedia and the possibility of its pedagogical utilization on all levels of education and learning direction. The system is changing. The roles are modifying. We witness the spreading of new media technology with the appearance of high technics. It is a new situation for the teachers and the students both in professional training and in higher education as well.

Development and practical work allowed examining the implementation and the research of this subject area. The examined areas are the following:

- Learning socialization.
- Methodological question of attendance (face to face) and distance education.
- Tutorial work with educational package, multimedia.
- Learning activities of the controllers working in distance education.
- College students' learning with distance educational material.

- Learning process.
- The events of the learning control, direction.
- The role of the teacher (its substance, transformation, changing).
- Elements of activity.
- Students' working (attitude, learning, approach).
- Key qualification (these are not profession specific activity elements).
- What to teach? What to learn?

The time examined was between the November of nineteen-ninety eight (1998) and December of two thousand (2000).

Target groups taking part in the training were: tutors, teachers and college students.

An important experience is the student's attitude towards learning. Tutors took part in their own preparation as students.

A Piece of the Processed Forms

Target groups:

- higher educational teachers working in distance education:

Hungary 120 people

Transylvania 20 people

- other teachers working in distance education:

higher education 40 people

- college students:

full time 385 people

correspondent 150 people

A Piece of the Processed Forms

- Association of school with the definition and practice of learning (about 89%).
- Dominance of verbal learning, accompanied by the habit 'I learn from only one book' (about 90%).
- Determining role of the teacher's personal presence in the process of preparation (about 92%).
- Immediate appearance of the difficulties in connection with individual learning in the training of 'tutors' acquiring distance education in an autodidactic way (about 76%).
- Immediate operation of the student's role even in adulthood (about 83%).

The given answers and experiences mean a very important feedback for us.

The role of schools was determinant in the traditional teaching (face to face) and learning. Distance education is the history of individual learning. In forming this, it is essential to balance verbal learning. Sole schoolbooks are replaced by different materials supporting the learning process. The quality of the distance education material (multimedia) and the endurance of interactivity can ease the lack of the personal presence of the teacher.

The student is a student in every situation.

A Piece of Experience in Preparation

- Problems of learning socialization and the use of distance education.
- The learning form preferred by students:

distance education	15%,
presence education (face to face)	75%,
other	10%.
- Distance education as a subject, a method and transmitting technology is still a new and specific element in the examined areas of higher education.

A Passage from Preparation Experience

- Ensuring the students to be able to learn: traditional subject – source researching, multimedia – navigation problem, distance educational material – mixed.
- It is not enough to prepare the distance educational materials only didactically.
- The lack of required conditions for individual learning (technical, personal, other).
- The ICT and distance education can be operated only as a system.

Those who participate in the training prefer presence teaching (face to face). It is not a surprise. Learning socialization is determinant in using the distance educational materials; multimedia: It depends on a lot of conditions for distance education to come into general use:

Supporting individual learning is a complex task. There are different problems waiting for solution, for example: the determinant character of traditional training, the novelty of distance educational materials, the challenge of multimedia, information-technology, the preparation of the tutors and so on.

The learning material must be usable; easy to learn, technically proper and quality-ensured.

A student gets into a new situation when starting distance education. It is important for him or her to be prepared for this (using softwares, learning individually, handling different tools and so on). The achievement is influenced by the lack of the necessary conditions.

The experience which have been shown, the feedback of the students and the teachers seem to certify our presupposition put up in the questions. The multimedia, the possibility offered pedagogical application, which is different from the former practice. With the change of the system the elements which set it up the connection between the human being and the (multi)media has also changed/is also changing. Together with the acquisition of the activity elements of the role development of key qualifications is also advisable.

It is a question: *what kind of accent the student and teacher preparation on gets for the technology based learning and learning direction exercises and the ICT and the media-pedagogy centred multimedia usage in the professional training and further training programmes of universities and colleges dealing with teacher training.*

6. Summary

With the help of the development programmes today it is possible to generate several types of different multimedia. Its usage in the learning process is unavoidable. It simply means that the new generation is in the primary school in the lives of whom the multimedia is a natural (learning)-aid. The technical, developmental results of the past few years, the mass appearance of the teaching multimedia certifying point of view this new and wonderful software, system application, which backs the new possibilities of independent learning, distance education, distance learning; E-learning, the different versions of Internet preparation. The maintenance of teaching ruling on a government level (Sulinet, Irisz ect.) and the different application possibilities (Erasmus, Socrates, Minerva ect.) also serve this aim.

One of the favourite versions of multimedia applications is the usage of presentations made with the help of Power Point programmes. This developmental programme for the beginner user is a helpful aid in an independent learning process:

- it backs the preparation of presentation,
- it provides the independent learning of multimedia development,
- it gives a prompt view of the realization of ideas,
- the result speaks for oneself, which has
- many sided teaching, learning usage.

The artistic, pedagogical, and professional utilization of multimedia can provide a new kind of student backing in the 21st century, a new kind of learning direction quality and a new view of media usage.

I undertook to show: the multimedia is not only new school equipment and not a one more software that can be used in learning indication process but something else and different from them and a bit more. I hope it was discovered that the multimedia is:

- a part and fact of the paradigm change place in pedagogy

- the catalyst of the media and student centred educational and learning processes' development and operation
- helping the developer, the professional field and the users approaching and working together
- transmitting the syllabus with up-to-date technical solutions while giving exercises to the student, the learning indicator, the developer and the expert
- but never substitutes for the educator
- a renewing and developing phenomenon with a wider influence from the last years of the 20th century.

The Multimedia is Really the World of Magic.

In this presentation I was looking for an answer for one question, and several new questions turned up:

- the Internet – the multimedia – the prose learning: as part of the ICT based new communication culture a possible reality and/or a virtual possibility.

We started with the film and with the help of the multimedia we arrived at the virtual reality or the reality of virtuality? Well, the answer to all the questions has to be looked for and found by ourselves. But it is another story.

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