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MULTIMEDIA PRESENTATIONS IN DIDACTIC PROCESS

Modern information technologies play more and more role in contemporary education. Computers and educational software find wider and wider application in the process of teaching – learning. Accessible informatic tools let to make in short time complex multimedia presentations which may constitute an universal didactic medium at all phases of education.

A multimedia presentation may be defined as qualitatively new medium which integrates features of all till now used media of communications and moreover offering possibility of interactive work. In practice it lets to proceed constructive dialog with a computer. Interactive multimedia presentations are not products made by means of applications such as Microsoft PowerPoint, Lotus Freelance Graphics, etc. Prepared in proper way WWW window worked into the global Internet network or rendered accessible locally has all features of multimedia presentation and as such may be used in didactic process.

Multimedia presentations assume various forms depending on type of a receiver and a goal for which they are to be used. A presentation may assume a shape of didactic film in which all frames are switched over automatically. A lecturer and receivers remain inactive. In case of a presentation with traditional, line structure a lecturer activates following frames. There is indeed possibility to go to any frame of the presentation but each of them is an independent object without hyper-text connections which collect all contents and make the systematic structure. Most complicated form of presentations occurs in interactive presentations, including presentations for an individual and mass receiver. In both cases the structure of a presentation is similar but a presentation for an individual receiver requires considerably wider polishing up of technical details and provision with the detailed methodical instruction. An interactive presentation offers from the begin many possibilities of review. It attributes to one text concrete contents by means of suitable hyper-connections or widens the scope of information concerning defined topics. Rate, intensity and selection and arrangement of presented information depends only on interests and essential preparation of a receiver. A presentation of this type has not line arrangement. It is series of parallel presentations with common

begin but ending not necessarily in the same point. Stream of these presentations may divide in any way and again connect themselves [1].

In education and practically in all fields of economy arises a need of continuous transfer of great quantities of complicated information. Often because of character of transferred data visualisation of them is made, visualisation in a shape of diagrams, tables, maps, photos, acoustic records, etc. Presentation of all above mentioned elements requires using many didactic means, beginning from a billboard and chalk, through very labour-consuming preparation large-scale illustrations and illustrations made on foil ending on complicated audio-video sets.

Replacement of above mentioned means with multimedia presentations influences on widening the scope of pedagogical effect, it let to integrate various elements of transfer, to introduce interaction, to create a new style of narration which is not only a component of used in a presentation elements. By possibility of individualisation (for example by hyper-text), animation, simulation of phenomena and processes, in other words using of elements characteristic for a multimedia presentation it is possible to imitate personal experience what in great measure is decisive for such processes as memorisation and learning [2].

Multimedia presentations are usually utilised as tools facilitating conducting various meetings, lectures and lessons. For these cases planning and utilisation of multimedia transfers must be based on assumptions of basic teaching principles. A teaching principle is such the standard of didactic proceeding that observance of it lets a lecturer (for a lecture) or a chairman (for a meeting) to acknowledge effectively all present with prepared contents [3]. Principles of teaching shows methods of teaching such that assumed objectives of education are achieved so they are general standards obligatory in didactic process independently of type of education institution in which occurs a need of its application. The scope and methods of implementation of teaching principles both in the case of preparation and application of multimedia presentations depend on essential preparation of a receiver and peculiarity of transferred contents [4].

Multimedia messages influencing on a receiver with entire range of impulses implement the principle of a visual method already as a result of their form. Its requirements mean necessity of basing education on cognition of reality by means of direct cognition or using models. During a multimedia presentation occurs association of processes, things and phenomena with their description, a model and an explanation. Success in implementation of this principle is possible if directed perception of receivers is motivated by proper selection of multimedia components of a presentation. Possibility of using multimedia presentations for

simulation of various physical, technological processes and natural phenomena seems to be extraordinarily valuable. Richness of visualisation's forms of data offered by this type of a presentation is an opposition to verbalism and it makes that a multimedia presentation is a tool which proper utilisation meets basic assumptions of visualisation.

The principle of graduation of difficulties in a presentation directed to mass receiver is implemented by activities of a person conducting a presentation which should introduce receivers step by step into an essence of described topic. It is important to acknowledge with obvious and clear contents and then on this ground to formulate new thesis and conclusions. A presentation for an individual receiver may be provided with many hyper-text references which enable to utilisation of it for persons with very different essential preparation. It means possibility of selection of topics in such sequence which ensures proper understanding of a message with omitting known and obvious matters.

Possibility of interactive work with a multimedia presentation for an individual receiver is the example of implementation of the principle of conscious and active participation in the process of teaching – learning. A receiver of a presentation adapts rate of transfer by himself, selects materials and defines time in what he wants to utilise it. The condition of success of proceeded in this way self-education is provision of the presentation with suitable methodical instruction which clarifies between others the objective of presentation's utilisation and methods of utilisation of contended in it information.

In case if multimedia presentations are an illustration of related thematically cycle of meetings it is necessary to observe the principle of regularity. It means the necessity of uniform division of planned contents for all meetings. This condition concerns also individual presentations in which should be maintained the same rate in all meetings. It is necessary to take into consideration time for remind and fixation information from previous meetings. All presentations should be constructed in such the way that transferred systematically contents are included into an uniform structure. In practice it means necessity of construction of ideas, principles and rules' system which are connected to themselves with various relations.

Software for creation of multimedia presentations enables to proceed various computer simulations during a presentation. It means possibility of verification of many working hypothesis directly during a presentation. Currently obtained calculations, diagrams or schemes let to analyse in short time many of arising in discussion ideas. A presentation utilised in such the way meets assumptions of the principle of connecting practice and theory.

Application of modern multimedia techniques enforces active participation in the process of their influence, especially in case of a presentation assigned for individual receiv-

ers. Contended in the presentation mechanisms let for multiple access to the same information presented frequently in various forms what evidently improves the process of fixation. Utilisation of a presentation is conducive for individualisation and differentiation of the scope of teaching, arrangement of content, rate of teaching and the process of teaching what meets demands of adaptation of teaching – learning for individual cognitive style of each student. These possibilities in great measure decide about success and implementation of assumptions of influence persistency's principle.

It is possible to say that a presentation is effective if transferred contents will be remembered and gathered knowledge may be used in non typical situations and after any time as from the date of completion of a course.

The essential factor conditioning more persistence of didactic results is understanding of information yet at first touch with it of presentation's receivers. It is supported by utilisation of described principles of education. This condition would be fulfilled if contended in a presentation hyper-text connections let to adapt the level of a transfer for needs and possibilities of each receiver.

Multimedia presentations may support process of teaching - learning contributing to achievement of immediate and long-term results.

It is obvious that not all contents require multimedia presentations. Problem of utilisation of this means regards first of all to topics with high degree of complication where quantity of essential information needs additional preparation, best in a graphic form.

The condition to begin work on a presentation is finding such a situation in which exists needs of its utilisation. On the ground of this demand it is possible to define an objective for which the presentation will serve.

Before beginning preparation of the presentation's draft it is necessary to define the receiver. All information, knowledge and attitudes which he should acquire may be defined as working objectives of a multimedia presentation. Detailed explicitness of working objectives is important from a point of view of formulating general objectives of education regarding, for example the whole cycle of presentation. It is important in case of evaluation of the whole educational process and lets to verify assumptions with actual state after completion of a course.

Optimisation of a form of multimedia presentations used in the process of teaching – learning is currently the subject of carried on by me researches. There are analysed personal preferences of students regarding hyper-text, distribution of graphic elements, tables and their size and colour. The essential problem is also definition of proportions between static and

dynamic elements and also methods of their presentation. On the ground of gathered data are prepared presentations which effectiveness of influence will be compared to currently used solutions.

Measurement of education's results of multimedia presentations will be carried on the ground of mechanisms of holistic evaluation proposed by Prof. Bolesław Niemierko. This evaluation consists in production of entire picture of students' achievements and utilisation of it in description and appraisal of achievements. This picture is made under influence of programme's requirements having reflection in content and form of a multimedia presentation. Utilisation of so complex research method seems to have justification in case of presentation because it use the whole spectrum of impulses which influence can not be examined separately, without connection to the whole integrated structure of transfer.

Control and appraisal of achievements in wider range is identified with recognition of cognitive styles and talents of students and in narrower range with enforcing of accordance of captured activities with a ready pattern. Therefore holistic evaluation uses not detailed patterns of proper performance of activities but criteria of appraisal, i.e. scales of process' quality and result of activities used parallel in evaluation. Criteria of appraisal are contractual "dimensions" of evaluated objects, comparable with physical dimensions (length, width and depth, volume and density, intensity and time of existence of a phenomenon) as relatively independent aspects of these objects. Holistic evaluation has therefore multi-criteria aspects. It is in the same time its main value and difficulty. It is used in industry (in quality control of products) in sport (e.g. in figure skating) and in art (e.g. piano competitions). In each of above fields are made efforts regarding high technical quality of each element but there are emphasised style and functionality of the whole, so it is needed the proper holistic overall appraisal. It is used also in case of complex thinking process, a practical activity, a longer written study, a product or a show. In multi-criteria appraisal attention of evaluators is transferred from unit scales to selection and meanings of criteria. From the point of view of a student there is no division for objectives, material and requirements. Performed activities and degree of their capture have essential meaning [5, 6].

Peculiarities of the process of teaching – learning based on utilisation of multimedia presentation consists in use of a didactic mean which is a package of tasks oriented operationally and functionally, selected in such the way that they reflect three dimensions of educational content: objectives, material and requirements. Fulfilling these requirements causes that it is possible to make holistic evaluation of achievement of students who under the process of teaching – learning used multimedia presentations.

Dissemination and more and more easy access to multimedia informatic technologies make that they are used more and more in education both children and adults. Therefore it is essential to use them effectively in the process of teaching - ;learning. Definition of their position in that process is possible yet in formulation of education's objectives. Designed in this phase individual didactic units, thanks using multimedia presentations let to differentiate the scope of education's content, arrangement of content, rate of learning and a process of learning. Achieved in this way individualisation of education let to implement general assumptions of education's objectives in more effective way.

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