Abstract:

Electronical Web-based classroom is an evident example how much modern technical devices can help in intensifying, rationalization and generally speaking in better teaching conduction. It is specially important here that teaching material is programmed; use of teaching aids and basic pupils activity is also programmed and synchronized with the relevant contents; in the teaching process successive solving of given tasks and feedback information are provided; maximum efficiency and attractiveness of frontal and other forms of work are achieved; there is constant communication teacher-pupil-teacher; possibility of teaching individualization is made as well as independent pupil’s work and his advancement at his own speed; evident intensity of pupils activity in teaching is realized, conditions for his bigger contribution to teaching and his development; faster and more qualitative informing of pupils in various fields of teaching curriculum are provided, and therewith acquiring of knowledge is fastened; more possibility is given to teacher to study teaching material, pupils, modern achievements in pedagogy and to introduce innovations in organization and conducting of educational work faster and more successfully. Electronic classroom offers possibilities for carrying out traditional, semiprogrammed and programmed teaching, for testing and making conditions for research work. Educational software should be well prepared according to individual possibilities of each student. if it is strongly connected with other aspects of organization and carrying out teaching and if its programme work is adjusted to needs and interests of young people to a maximum.

Key-Words Web-based education, educational software, multimedia classroom

1. Introduction

There are numerous possibilities in our time to apply in teaching work results of fast development of automatization and electronics and to raise it to a higher level referring to organization and quality. We have seen it in the chapter where we talked about programmed learning. Here we shall go a step further and, before we speak about computer teaching, we shall work out, briefly, pedagogical values of electronic classrooms for programmed teaching, because they are technically perfect, they are very flexible and have great educational power. Electronic classroom is a modern teaching aid as well as a form of conducting teaching and learning. It makes possible organizational, methodic and content improvement of educational activity in primary and secondary schools and at universities.
This class room helps in giving necessary information to pupils by means of picture and sound; to achieve needed quality of teaching material presentation; to attain motivation and maximal activity of pupils; to provide constant connection teacher-pupil and pupil-teacher and so help pupils in their work in due time; to provide, in the work process, receiving of information, doing exercises and evaluation of pupils work; to give teacher more possibilities for preparing, directing and following teaching, easier communications with pupils, more efficient and prompt giving needed help and fuller objectivity in the process of pupils evaluation; to make conditions for more efficient application of audio visual aids in teaching, for their adjustment to the essence of certain subjects, age and other characteristics of young people for whom teaching is organized and conducted, fri this way educational work in schools and at universities is rationalized, intensifies and modernized. Most advocates for introduction of electronic classroom for programmed teaching think that it contributes to individualization of teaching, pupils motivation, quality of their reproductive being informed, more economical use of time and aids. For that reason programmed contents, use of teaching aids and basic activities of pupils themselves made possibilities for teacher to analyse teaching more than before, as well as pupils work and other important elements that determine quality of his educational activity.[4].

2. Composing parts and functioning of electronic classroom

In this short work it would be impossible to describe all kinds of electronic classrooms, from the older ones which were operated manually to those up-to-date which work automatically, as well as it was impossible to describe and showings drawings all parts of electronic classroom and its function. Therefore, we shall point out to essential parts of electronic classroom and their pedagogical function as much as it is studied so far with us and worldwide, because in this work we are primarily interested in what modern educational technology means in the organization and conducting of teaching.

Teacher’s desk has all necessary electronic devices which make possible managing of teaching process, turning on programmes, teaching aids, measuring time in which some parts of the programme are realized, giving tasks to pupils, measuring time they use for solving the tasks, scoring replies, individual contacts with pupils, following and evaluation of pupils work, recording programme and pupils reactions, turning off programme and automatic carrying out and, following of the complete work. Teacher can, for instance, looking at platen, which are designating pupils seats at command desk, always know how many pupils have given correct replies to a certain question, how many of them understand definite information, he can see who knows and who does not know it. He can communicate with a pupil, not disturbing others, give him feedback information, i.e. encouragements via screen and via lighting plate at pupils seats. [5]

Fig. 1. Command desk in electronic classroom

We have already indicated that electronic classroom makes possible automatic functioning of the complete system, from giving information to evaluating of what pupil has achieved during his work. Now we are going to show, briefly, functioning of electronic classrooms of the kind that are usually used in today’s teaching, starting from turning on the command device. „When it is turned on, it sends „orders“ to audio visual aids for their work. Audio visual aids send information to display and loudspeaker. Pupils perceive information from display and loudspeaker. They receive information and give information about their knowledge and understanding through responder. Their replies come to command device for further processing. In this way one circle of communications is realized.
Then process of encouragement is continued realizing again two way communication. Command device sends feedback information to display, loudspeaker: or plastic panel of the seat. [1] Pupils, receive feedback information, are being motivated for further work and give their replies to the command device. In that way constant communication between „teacher“ and pupils is carried out with constant encouragement of their learning.

Fig. 2. Educational software

2. Possibilities for introduction of electronic classrooms

Probably in our conditions the biggest problem is personnel who would be capable to select teaching material in an expert way, to model it for programmed teaching pedagogically and methodically, classify it in articles and sequences, and then fit into programme entity which requires to be precise to details. Besides, selection and programming of teaching aids is requested. This can not be done only by teachers of some subjects, but they need assistance of psychologist pedagogue and technical persons. Since the programme requires film-photographic and artistic modelling of certain content recording, mounting and technical adjustment, it is necessary to have camermen, photographers, painters, draftsmen, engineers and lectors, which should not be, as a rule, full time school employees, but who would cooperate with it all the time (17, pp. 76-77). Some teachers, managers of educational intitutions and authorized educational boards are of opinion that in our conditions it is not possible to introduce such innovations which require increased investments, specially training of teachers and bringing to schools new kinds of experts. However, it should be said frankly that, in our time, school which has only principal, assistant principal, teachers and pupils, is anachronous: anachronous is such institution where dominant teaching aids are blackboard, chalk and book; where, in the process of conducting teaching, dominating methods are lecturing, conversation, work with textbook and other printed material; where pedagogical-methodic, psychological and technical culture of average teacher is on an unsatisfactory level and where there is no firm programme for permanent training of teaching personnel. Therefore, we can say that, no matter how and at what speed our educational institutions will introduce some innovations we have spoken about, the orientation of schools in future will be to become completely independent in organizing, realizing and evaluating of their work, without unnecessary outside control. In order to realize it successfully, they must raise quality of their work by introducing innovations which will justify it, by constant development of pedagogical-methodic and psychological culture of teachers and introduction to schools pedagogical-psychological service, which will, together with teachers, be able to work on independent realization of essencal tasks which are facing school as an institution of exceptional social importance. It must be admitted that we are, specially in some surroundings, in this respect evidently lagging behind it what is going on in the world and if we continue to lag then the resulting omissions and mistakes will be irreparable. [2] Finally we can say that introduction of innovations is expensive, that modern teaching is expensive, but it is required by our time, that it justifies investments and efforts with its effects, because in up-to-date development human factor has an important role.

3. Pedagogical value and disadvantages of electronic classroom

Electronical classroom is an evident example how much modern technical devices can help in intensifying, rationalization and generally speaking in better teaching conduction. It is specially important here that teaching material is programmed; use of teaching aids and basic pupils
activity is also programmed and synchronized with the relevant contents; in the teaching process successive solving of given tasks and feedback information are provided; maximum efficiency and attractiveness of frontal and other forms of work are achieved; there is constant communication teacher-pupil-teacher; possibility of teaching individual visualization is made as well as independent pupil’s work and his advancement at his own speed; evident intensity of pupils activity in teaching is realized, conditions for his bigger contribution to teaching and his development; faster and more qualitative informing of pupils in various fields of teaching curriculum are provided, and therewith acquiring of knowledge is fastened; more possibility is given to teacher to study teaching material, pupils, modern achievements in pedagogy and to introduce innovations in organization and conducting of educational work faster and more successfully. [3] Electronic classroom offers possibilities for carrying out traditional, semiprogrammed and programmed teaching, for testing and making conditions for research work. By use of electronic classroom better conditions for maximal visuality in teaching are made, rational usage of resources, time, staff, permanent testing and verification of pupils knowledge, naturally, electronic classroom for programmed learning contributes more to solving the above mentioned problems in case its advantages have been used to a maximum, if it is strongly connected with other aspects of organization and carrying out teaching and if its programme work is adjusted to needs and interests of young people to a maximum.

If electronic classroom for programmed teaching is imposed to teacher, to all other forms of carrying out teaching and possible pupils activities, it can reduce to a stereotype teaching work too much, develop reproductive abilities of pupils instead of other valuable abilities, formalize relationships in teaching too much, develop more evident individualistic tendencies with individuals, and less influence processes of his socialization, support technical and technocratic tendencies of our time. Therefore we shall not be wrong to say that electronic classroom for programmed teaching, as a perfect and automatized device, offers new possibilities and facilities in acquiring knowledge, and on the programme quality, way of its use, degree of motivation and pupils way of work, depends what kind and how much educational effects it will give. We shall measure its effects same as with other innovations, with how much it contributes to realization of our educational aim in schools, at universi-ties and other institutions for education of young and adult people.

Fig.4. On-line testing

It is certain that in future electronic classrooms will find their place in our schools, as one of the modern teaching aids, forms of teaching; and learning, but they will not expel teacher from school, same as other teaching aids, but it will have influence on change of his pedagogical function, modification, enrichment and fitting into up-to-date courses. [5]
4. Conclusion

Mass production and use of computers, development of telecommunications, robotics and microelectronics, caused less interest for production, programming and use of electronic classrooms and that is considered as understandable. However, question is raised in connection therewith whether computerization of teaching should mean excluding all other means in teaching, forms of teaching and educational technology, whether computer can completely and successfully replace, in all teaching subjects and all forms of teaching and learning, electronic classroom and other modern teaching devices. John Pula (1982) asserts that use of computer in teaching does not exclude other teaching aids and forms of teaching and learning conduction, but forces its producers and programmers to improve them and in the process of improvement to use achievements of information technology. It seems that there is a great number of pedagogues who have similar opinion, specially those who think that pupil’s function in teaching must not be reduced on what he receives through monitor. This is also argued as follows: as many teaching aids are used in the teaching process, that much are different forms of work, as many methods are used by teacher and the contents he presents are more different, that much the teaching is more qualitative and learning more successful.

References: