DYNAMIC DEVELOPMENT OF DIGITAL TRAINING IN EDUCATIONAL FIELD

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Abstract

In this digital age, we are surrounded and truly immersed in technology. Also, the speed of technological change shows no signs of slowing down. Technology lead to tremendous changes in the economy, industry, and in the way we communicate and our attitude towards each other, and increasingly in the way we learn. Educational institutions were built largely for another world based on the provision of knowledge in classrooms, auditoriums, but in the digital era widely enters a new kind of training called digital. Currently, lecturers and instructors are facing a huge challenge for change.

The aim of the scientific report is to answer questions that are posed by the development of new IT and their application in education. What needs to change in the courses and programs so that they are more effective in the new technological society? How to change the ways of teaching? In order to answer the questions, the author of the scientific material has the following tasks:

- identify different knowledge and teaching methods related to new educational models;
- analysis of key features of the technology in relation to teaching and learning
- suggest strategy for high quality teaching in the digital age.

The rise of digital skills and competencies of students are important for higher education providing a large range of individuals from the population, which directly affects the productivity of labor both nationally and globally.

Keywords: digital age, information technologies, net generation, education, interactive lessons.

1 INTRODUCTION

Nowadays ITs provide the easiest way for information access and knowledge on the education process. ITs represent a group of technologies for collecting, processing, storing and dissemination of audio, graphic, text and digital information and the means used on the purpose, means based on microelectronics in a combination with computer and telecommunication equipment. Fast developing of ITs and their economic significance increase is due to fast growth in availability of the technical means they are based on. For the period 1986-2007 in world scale, the basic indicators of the technical infrastructure as calculated performance and capacity of the communication networks and the means for information storing have grown exponentially, and doubled for a period of 1-3 years. Fast IT development assists easier dissemination and procession of any type of information. In this manner text, graphic, sound electronic or complex types of documents could be used and regarded by all consumers as the document will be preserved at the same time.

Rapid development of IT as in national so in global scale has its inevitable effect on the educational process. It could be observed multiple changes from digital education to digital evaluation of obtained results.

2 SCIENTIFIC PROBLEM

The object of the scientific report is the innovative education as an improving process resulting from rapid development of information technologies in the digital era. Educational methods shall be prepared in a way that they could help for developing and obtaining specific skills that assist as in achievement of the set goals on development of knowledge and its dissemination to prepare the graduates for the job in a society based on the knowledge.
3 METHODOLOGY & RESULTS

We are witnesses of the generation gaps on the information education between the individual generations that are part of our reality. Elderly users of information technologies and their affiliation with the new digital era is slower than young users (NET-generation) that show higher results in this aspect. This problematic core is shaped by factors generated in the postmodern world of the present days where we look for the cross point between biased or unbiased to ITs.

The report makes clear how the programs shall be prepared by the trainer’s team to both types of the trainees. Teaching models and methods shall be modernised with new information approaches. A typical model on teaching is teaching by the means of presentation resources provided by the trainer to the trainees. Then the process of submitting information to both types of trainees shall be effective and this shall lead to a successful communication between both types of trainees and the trainer. After the lectures the trainees are provided with presentation resources for obtaining the information. This teaching method is suitable in cases where so called lecture courses are performed. In this type of education a direct contact between the trainer and the trainees shall be held. [1]

Another very interesting and innovative approach is the interactive education. Interactive education models implementation require modelling of life situation use of role playing as well as modern solution of a specific problem. The domination of any participant or idea [2] in learning process is excluded. So the base on trainees’ integration in the learning process is set.

Interactive technologies in education provide process organization where there is no option for the trainee not to participate in the team orientated method that mutually benefits and that is based on collaboration.

Within the last decade of 20th century it was given a start of implementation of modern interactive educational methods that could raise the interest of the trainees to the classes and their active participation in the education process itself. By implementing interactive models, so called interactive education environment is formed. Interactive education environment defines provision of ready to use educational resources towards their self-education by new knowledge. Interactive methods require partnership relations, dialogue type of communication (on the base of stipulated procedures) between the trainees, between trainees and the interactive multimedia, between the participants and the trainer. As a result of collaboration, it's possible the initial opinion and views to be influenced or supplemented by the both parties that take part in the collaboration (trainers and trainees) [3,5,6].

Interactive methods could be applied very easily in the education process of both types of trainees in consideration. They provide the trainees with interesting and entertaining manner of acquiring knowledge.

Interactive educational environment is a premise for removal of blockage in thinking and creativity encouragement. So called associations techniques are well known worldwide. In the middle of the last century the researcher Bernd Rohrbach published in the German marketing magazine Absatzwirtschaft an article on the innovation process on creativity stimulation as offers the method 6-3-5 structured as Brainwriting technique, known as group creation. This technique is similar to Brainstorming and Trigger Session (Impulse session) technique. There are many types but in general this technique has the following concept – all ideas are recorded by the individual that thinks about them. Then ideas are transferred to the next person who uses them for accelerating its own ideas, etc. [7,8].
Another type of training that has influenced on the education process is the use of so called heuristic techniques- i.e. searching for the best solutions via interactive method based on the experience acquired. At this point the approach LearningbyDoing is successfully added as this type of training is very attractive for the trainees as after obtaining information via extracurricular educational initiatives, they could very effectively include in the problem solvation. In this manner the trainees are encouraged to take part in the classic and online workshops, practical courses, classes, etc. [4]

“Education is not the learning of facts, but the training of minds to think.” Einstein.

All regarded innovative educational models have its place in the education process as each of them brings its own advantages and disadvantages. The Cone of Learning also known as Edgar Dale Cone or the Cone of Experience visualises the significance of learning by doing the context of the process efficiency depending on the different ways for approaches to the learning. This model clearly shows the difference between passive and active learning. Better memorising and understanding of the matter is in the environment of active learning. The passive learning also leads to memorising and understanding already learned but the efficiency here is not so high – after few weeks everything is forgotten. Then when the trainee is an active participant in the different types of active knowledge activity, the process efficiency shows highest results [9].

The most efficient approach is learning by doing for centuries. Each person has become aware that the application of each new beginning is accompanied by lots of practice. To become a good sportsman, one has to train hard; for becoming a good musician, one has to practice hard; for becoming an excellent pilot, one has to have many fly hours in the air; for becoming a good
programmer one has to write lots of program codes, and etc. The examples are numerous and that give a reason to be stated that the most effective model of learning is learning by doing.

4 CONCLUSION

Performed theory and practical analysis show how development of information technologies in the education process has been changing as well as the entire education system. The original approach of Learning by doing enlarges the practical application by making them more flexible and universal in preparation of the trainees and provides allows the trainer show its full capacity. This approach provides the establishment of an effective educational system that combines quality, quantity and personal achievements of each one of the trainees.

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REFERENCES