

HIGH-QUALITY EDUCATION AS KEY FACTOR FOR SUCCESS IN A KNOWLEDGE-BASED SOCIETY

Dear Readers,

This is the third edition of a new scientific collection *Problems of Education in the 21st Century*. The articles included in the publication discuss the issues of modern education. It is a great responsibility for writing such an editorial, because it should correspond to the ideas and conclusions expressed by the authors and highlight them from some other points of view of potential readers. On the other hand, it is very important to express the view of editorial board, try to discern certain research trends of modern education and its spheres. The purpose of this publication is unique, that is, try not only to convey, but also synthesize educational experience of East and West. This is a complex and ambitious task, but necessary, trying to perceive similarities as well as differences and also expectable development perspectives.

The advance of IT has never been as rapid as nowadays. The influence of globalization on ICT expansion is incontestable. However, it is a tremendous challenge to education. The implementation of technologies in education does not mean that they will have only positive influence. For that purpose consistent educational, ergonomic, valeological and other research is necessary, constantly giving information not only to users, but also to ICT producers. We can assert that in Lithuania, as well as in other Central and East European countries, observation of ICT application in education is still carried out episodically. As it was already mentioned, the process of ICT development is so rapid and so socially important that monitoring technologies, having earlier been created in other countries (especially West European), eventually occur to be not full and not compatible with ever changing realities. Thus, as a matter of fact, it is impossible to prepare standard, constant methodology.

In Lisbon strategy 2000, it was foreseen to seek that Europe would become the most competitive knowledge-based economics in the world. No doubt, to achieve this aim, ICT influence really should be great. Such international organizations as IEA (International Association for the Evaluation of Educational Achievement), UNESCO, OECD (Organization for Economic Cooperation and Development) organized fairly comprehensive research in the application of ICT in educational system. Organizations such as: IOSTE (International organization for Science and Technology Education), ICASE (International Council of Association for Science Education) and other so called professional different sphere scientist organizations are interested in the above –mentioned problems.

The application of ICT in comprehensive schools as well as in higher educational establishments is, undoubtedly, a positive thing. According to I. Mažulienė (2002), the usage of ICT makes the pedagogues change their settled style of work, raise qualification, develop skills and plan differently their and children's activities. On the other hand, the aims of creating information society change inner and outer surroundings of schools, therefore information processes and technologies acquire greater and greater significance in modern educational organizations. In addition, interesting research was carried out by specialists from Information Institute in Germany (Munich University). (Woessmann, 2005). The research showed that computers can harm the learning process. It is claimed, that the number of computers at school and the time spent at the computer at home don't confirm the fact that children learn much more by using IT. The importance of IT in the process of learning is not denied, however, it is stated that those who are using IT at home and at school moderately, besides, the time of its usage is limited, achieve better results than those who spend too much time at the computer.

However, not only in comprehensive schools some or the other of the ICT application problems arise. One of the biggest problems the majority of universities face is passing from ICT integration and e-learning in the project level onto strategic level when all technologies are implemented all over the institution. The research shows that in EU universities general level of ICT integration into teaching process has increased over the last few years. Nevertheless, application of ICT is still perceived as the usage of computer in traditional pedagogy and didactics. Not many universities use ICT equipment according to principles of innovative didactics and pedagogy. The same can also be said about Lithuanian universities.

Speaking about general education sector it is necessary to acknowledge that application of ICT depends not only on teacher's qualification and his preparation to use ICT in the teaching and learning process. The essential questions are as follows: how much does the school administration support the implementation and usage of ICT at school?; What ICT infrastructure (equipment, software, Internet connection and so on) is available at school?; What services connected with ICT do exist for the staff improvement and support?; How much do the schools

apply the aims and the way of work emphasizing independent learning, and so on.

Thus, it is obvious that vast, comprehensive, detailed research in the appliance of ICT in education process is necessary. In the Software & Information Industry Association report of the year 2000 it is stated that so far more than 3500 research studies of ICT application in education process have been carried out, the majority of which are devoted to analysis of infrastructure and computer literacy situation. However, statistics of the latest research studies doesn't allow to discern some ICT application aspects. Not only strict statistic data analysis is necessary discussing specific questions of ICT application in education, but also a deeper qualitative approach to this phenomenon in order to perceive present situation, its advantages and disadvantages and also further perspective not only on Lithuanian but also on EU scale.

As a matter of fact, harmonious ICT integration into the teaching process is placed in the centre of all European country strategies, in this way trying to significantly improve teaching and learning in order to correspond to children's demands. The secondary becomes earlier dominated task of computer equipment supply and teaching about technologies. (Simonson, Thomson, 1990; Plomp, 1996; Sendova, 1994). ICT service development in different education spheres prevails in the European Union and other country strategic directions. .

A very special attention is devoted to natural sciences and to technological children and youth education. About the concern in this sphere tells one of the newest prepared documents (Science Education Now..., 2007). Constantly going down natural science and technological literacy of our society is noticed in many countries (Lamanauskas, 2003). Opposite and significant tendencies in this sphere were discovered by ROSE research. (<http://www.ils.uio.no/english/rose/>). In this publication the reader will find urgent articles on this subject. Up-to-date ICT application in natural sciences and technological education is developed most rapidly.

It is obvious that the implementation of new technologies in the educational process raises new possibilities for both teacher and learner, enhances education quality and makes the educational process itself more versatile. However, education quality still remains insufficient as the content of education and studies is poorly oriented towards developing the new abilities and competencies necessary for people living in an open public society and market conditions. The economy based on information becomes a priority in the European countries. It should be noticed that the reality of an open public society and market conditions is not and cannot be ideal and that qualitative education has to help people not only to accept this reality but also to critically evaluate and advance it. In this case, the most important point is that human must preserve his/her identity, self-sufficiency and to strive for a purport of life. Any action such as the improvement of the education system or implementation of new technologies must be carefully studied and firmly fixed. All possible outcomes, results and impact not only on a further but also on individual development of a young personality must be evaluated (Lamanauskas, Vilkonis, Klanguaskas, 2007).

Thus, on behalf of the editorial board I would like to thank all this volume article authors for their contribution to the development of educational research studies, their ambition to get acquainted with very complicated education, teaching and learning phenomena, ability to develop interdisciplinary, methodological thinking and action. Only such thinking and action approach has decisive significance towards education quality.

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