Place of the interactive whiteboard in higher education of the Polish educational system

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Abstract
The reform of the educational system creates new challenges for the teachers and defines the rules of forming, adaptation and realization of the educational programmes including interdisciplinary programmes at all stages of education. It requires enormous knowledge, creative attitudes towards the educational activities, moreover, the belief concerning the need to modify approaches. The requirements referring to the effects of the didactic and educational work have been constantly increasing, and contents, methods as well as, the organisation of education have been constantly changing. Well prepared teachers play significant role in creation of new quality of education. They need new active methods and techniques on lessons. In Poland one of these is the interactive whiteboard. They are a modern educational tool in creation and realization of the teaching-learning process and increasing their effectiveness.

Key words: education, interactive whiteboard, activation

Introduction

The world constantly undergoes sudden and deep changes that influence life both of individuals as well as society as a whole. The development of technology and science results in numerous new problems that may often make a modern man feel lost and helpless (Kossobucka, 2007).

Schools constantly present new challenges to teachers. Teaching requires vast knowledge, creative approaches to educational tasks and, above all, conviction about the need to develop new methods of work. Currently another feature of this profession is that the knowledge gained during studies quickly becomes outdated. Thus a great emphasis is put both on education and on continuous professional development (Buchcic, 2007). To be a professional means to maintain standards, norms of theoretical and practical knowledge. Thus there is a need for continuous development, which is included in the scope of teacher's duties (ibid).

A teacher is a fundamental component of the educational system, at every level. The quality of education significantly, or even decisively, depends also on teacher's personality and his/her good professional preparation. Constant changes that currently take place in the education require increasingly improved substantial and methodological preparation. Constantly creative and innovative work is requested and required from a pedagogue.

Training of a contemporary teacher requires preparing him/her to fulfil simultaneously a role of a guide, manager, diagnostician and creator when passing ready knowledge. Adequate preparation of pedagogues and their continuous multi-directional development is one of many factors, as well as the most important one deciding about quality and effectiveness of education.

Interactive Whiteboards

One of the fundamental assumptions of the educational reform that has been implemented in Poland for several years, is increasing effectiveness of teaching through methods activating a pupil. Each teacher has to realise that traditional methods of teaching, based mainly on a word, do not always find recipients and listeners (Pyłka-Gutowska, 2007). In the opinion of experts, by using new techniques and technologies to present information, the process of learning may be facilitated and its results multiplied. Thus use of those tools in education should be the first condition for implementing pedagogical innovations (Strykowski, 2003). Interactive learning becomes an important part of a modern school. To become successful, it requires adequate preparation of teachers and furnishing schools with equipment and didactical materials.

One of these new, multi-functional didactical means is the use of an interactive whiteboard. It is new-generation equipment using wireless technologies. It is characterised by the high quality image and very functional software. As a result of it is considered to offer a breakthrough in use of informative technologies in teaching in many European counties (Nocny, 2006).

The whiteboard is not only a device used to present information in form of text, graphics, sound or animation. This is done by a computer connected to a multimedia projector. Its most important advantage is its interactive software adjusted to efficient communication between a computer and its applications and persons using it. It allows them to freely enter, manage, process and present data in a clear and effective way.

Widespread introduction of the interactive whiteboard into the set of equipment of subject classrooms seems only to be a question of time. Obviously, it is associated with significant financial costs. In Poland, where the role of education as a factor facilitating development is not yet fully understood, means finances allocated to education are still insufficient even for fundamental requirements of a school. Without financial help from the Ministry of National Education, the introduction of interactive whiteboards to schools will probably take a long time. The interactive whiteboard has already found its place in schools of Western Europe. The number of schools in Poland with the interactive whiteboard is still small, but constantly increasing. It is important for methodological centres and universities that train teachers to see a need to introduce into their training programs also issues related to use of the interactive whiteboard. Actions of that type will help to increase the effectiveness of that device and to avoid unnecessary methodological mistakes that can result in decrease in effectiveness of a lesson.

Introduction of widespread use of the interactive whiteboard in schools is related primarily to modification of a teacher's technique, what was observed in Western Europe. Also at several universities in Poland, including Nicholas Copernicus University in Torun, obligatory classes on use of the interactive whiteboard have been included in teacher training courses. During classes on didactics or information technologies, future teachers get acquainted with the whiteboard software, use of its menu and basic parameters. Then they learn how to use the interactive whiteboard effectively in their lessons and work with applications such as PowerPoint, Word, Excel, without a computer network.

With the interactive whiteboard the students use *GIS* programs that are still not widely known in Poland, for example to analyse selected elements of the environment, to run simulations and measurements. This way these programs can become an indispensable tool in creation of

maps combined with teaching elements of cartography. The students prepare simple presentations, develop their skills and try to integrate use of multimedia resources. Using the Internet resources they search for materials useful in preparing lessons and for websites with ready publications on a given subject. However, the review of Polish educational portals with didactic materials shown that only a few of them can be used by teachers as a source to prepare lessons with the interactive whiteboard. The most useful are *Scholaris, Interkl@sa, WSiP* and *Wiking*.

In the 20th century the *Internet* has became one of the fundamental sources of information. The whiteboard and computer enables a teacher to use the unlimited educational resources of the *Internet*. By downloading the free application *Google Earth* a pupil and teacher can reach the farthest areas of our planet. When analysing satellite photos of the settlement network of cities, relief of a volcano, the Mississippi delta or viewing the highest peak of the world from every side, during a geography lesson a pupil becomes an eye-witness of changes taking place on the Earth and thus becomes more interested in the world around.

Computers, interactive whiteboards and related technology attracts the interest of pupils and teachers. This helps to increase effectiveness of teaching through their activation and active participation in the process of teaching and learning of geography. Despite the insufficient base of information and materials for work with the interactive whiteboard, many teachers cannot now imagine their work during their lessons without it.

Information Sources

Information about the whiteboard and possibilities of its use in education is scarce, main sources in this area are educational portals, such as *www.scholaris.pl, www.wsip.com.pl*. Valuable resources are materials of the *British Educational Communications and Technology Agency* (*BECTA*), supporting the British Ministry of Education in implementation of modern technologies in schools. It has published guidelines for teachers, explaining how to use the interactive whiteboard technology for each subject and level of education. The examples of such publications include *Use of interactive whiteboards in geography* (2004) or *Getting the most from your interactive. A guide for secondary school* (2004).

The general information on functioning of the interactive whiteboard can be found in the websites of every whiteboard distributor and producer, f.e., *www.ipboard.pl* or *www2.smarttech.com*.

In Poland, educational effectiveness of the whiteboard to visualise selected chemical problems was a subject of the Ph.D dissertation of M. Bartoszewicz (2006), supervised by UAM prof. H. Gulińska, Ph.D (hab.).

Another group of papers and publications concerns results of a number of research projects, aiming at determining how the interactive whiteboard was used by teachers, what was its educational effectiveness and what changes to teaching were introduced with that technology. Those issues were discussed by: G. Bartosiewicz (2006), M. Nocny (2006, 2007) and T. Sojka (2008).

Although much remains to be done in creation of a platform for cooperation and exchange of experience to collect and make available exemplary materials, yet meeting the expectations of future teachers we bear in mind that their training is one of the most important factors

influencing development of school. The profession of a teacher is special because it directly includes shaping the most important social value – the human being.

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