

THE ROLE OF MODERN EDUCATIONAL TOOLS IN MANAGING THE WORK OF UNIVERSITY TEACHERS

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Summary: Academic teacher plays an important role in the knowledge generation process. Students as beneficiaries of educational services, participants of the education process, are interested in, among others, innovative actions, reliability, current knowledge of their academic teachers. Only academic teachers, which effectively and efficiently are managing of their own work and the work of their charges, can be a role model for the last ones. The huge importance, in this context, has applying of modern teaching aids. Their role is facilitating the process of teaching and the learning.

Keywords: academic teachers, university management, teaching aids, management of work, student

1. Introduction

The constant changes taking place in recent decades, in the civilization and cultural dimension, resulted in creation of a new social structure in which information has become a commodity perceived as a particular intangible property (Haber, 2010, p. 22). Scientists, researchers, describing these changes implemented many notions that describe and characterize in best way a new type of the society. In popular science journalism and scientific literature common are such concepts, as the era of information, knowledge society, global society, media society, the third wave, technologic society, post-industrial society, cybernetic society and the information society (Michalkiewicz, 2015, p. 1) However, at the forefront is term „Information Society”. It is believed that it indicates the role of information and communication systems in a given society and representing about its characteristics compared to other types of society (Markowski, 2010, p. 89). Knowledge-oriented, in higher education, are academic staff and students. Today, the qualifications ensuring good practice and achieving success are referred to as „competencies”. In contemporary literature, only people who have determined and high competencies can be professionals (Strykowski, 2003, p. 32). The university teacher has the task of fulfilling a few basic responsibilities and functions: education, upbringing, welfare, environmental, enforcement and evaluation achievements and organizational skills, both in the organization of their own work and work of their students (Banach, 2009, p. 7).

2. The essence of teaching aids in the management of teacher and student work

In the literature can find different classifications of teaching aids. Teaching aids are divided depending on what senses are involved in the learning process and learning. R. Więckowski divided teaching aids on (Więckowski, 1998, p. 121-122):

- visual, e.g. slides, computer programs, schemes, symbols, diagrams, models, tools, preparations;
- aural, e.g. audio recordings along with devices enabling to use them, musical instruments, etc.;

- visually - aural, e.g. films.

There is also a division of teaching aids according to the criterion of their complexity, by this classification distinguishes (www.edukator.org.pl):

- straight aids, e.g. models, graphs, maps, images;
- complex aids, of e.g. mechanical, electrical, electronics equipment (computers, projectors, transparencies, etc.).

To modern teaching aids, which university teachers can use in the management of their and the students' work, include (PHU GERD-Madex Sp. J., p.1-83):

- projectors;
- screens;
- interactive, copying, dry-removable, information boards;
- tablets;
- tests systems;
- visualizes;
- slide projectors;
- equipment for the videoconference;
- flipcharts;
- planners.

Projectors, especially those with focal lengths, are beginning to displace conventional devices from the market, through the fact that projectors do not shine into the eyes of teachers, protecting their eyes perfectly are suitable for using together with the interactive board. Today, modern projectors have a high resolution and high brightness. Screens for displaying multimedia presentations can take different forms, i.e. electrically or manually pull-down screens, floor screens, on the tripod, are comfortable to use and can have different shapes. To conduct classes using interactive board is enough that academic teacher will use a finger or an ordinary pen, board surface is magnetic, dry-wipe, resistant to damage and this teaching aid can function with wireless tablets, systems to tests, visualizes, speakers. The modern software to interactive boards enables among others:

- control the computer using the interactive board;
- storing material formed on the board during classes in such formats as: an image file, web page or PDF document;
- change the language of software;
- recognizing the handwriting.

Applying systems to tests by academic teachers during classes has only advantages:

- instant check the level of mastering material - interactive tests of the knowledge;
- quick and objective assessment of results of the teaching;
- conducting surveys, the opinion poll;
- game shows, quizzes, interactive games, etc.;
- saving time during classes - immediate and opposite reaction;
- saving of the work of the university teacher;
- saving of paper.

The role of the visualizes is to enable display any objects or documents enlarged using the projector or TV sets.

Examples of applications this teaching aid are:

- General issues on all subjects, showing on the screen: books, homework of students, 3D objects (e.g. globe, a variety of teaching accessories, tissue samples, etc.);

- Live-recording classes, experiments, operations, techniques can be recorded and played back in later time;
- Medical schools, showing X-ray images, 3D objects (e.g. bones, tissue samples);
- Law and Administration, the presentation of evidence and documentation, comparing documents and objects on the „one to one” principle presentation of maps, diagrams, plans;
- e - learning, transmission of images live through the Internet (to participants in the videoconference) including viewing prototypes, samples, training materials and documents.

The most commonly used, by academic teachers, aids include overhead projectors which are divided into stationary and portable.

Applying copying boards by academic staff brings many benefits:

- ideal for use during scientific meetings or classes at higher language schools;
- effective use of working time;
- larger workspace - two scrollable panels for taking notes;
- possibility of return to the notes on the previous page;
- possibility of handing out notes from classes without the need to copy them by students;
- no more problems with spending on paper and used blocks to flipchart.

The electronic copying flipchart used on the market of university education services is used because of:

- The effective use of working time, students focus on the discussed issue instead of preparing notes;
- Two scrollable panels for taking notes, no unnecessary waste in the form of written sheets of paper;
- the ability to send meeting notes by e-mail, without necessity of their rewrite by the participants;
- ability to restore a complete history of notes from classes, each of participants receives the same version of notes;
- economical and comfortable use;
- complete data protection, notes can be wiped off without the risk that access to them will have e.g. students from another dean`s group.

Wide choice of planners with the different time scope, from a week to a entire year is a universal solution- now it is possible to describe every column and row depending on needs. Planners have an extremely lightweight and durable construction.

3. Information Technology in Higher Education

The term “information society” refers to the four meanings (Haber, 2010, p. 55):

1. Evolutionary - refers to the successive stages of social and economic development. The first step is the development of agriculture, the second - the industry, and the third is the development of knowledge and information.
2. Ideological - refers to the public policy long-term objectives which focus on social and economic transformations. Change the economic system gives a chance for development
3. Technology - indicates the rapid development of information and telecommunication technology, which transforms systems of work, employment, governance, management methods and education, and introduces new cultural and civilization models.

4. Cognitive - refers to the development of sociological theories related the search for the essence, genesis and meaning of the formation of information society.

The great importance and the scope of the notion “information technology”, which includes such terms and areas as computer science, information, telecommunications, media, multimedia, forces to clarify mentioned earlier definition through the recognition of information technology including its scope conceptual elements (Osmańska-Furmanek, 1999, p. 18):

- creating, using and the influence of media messengers, including multimedia, on social communication through information media;
- synthesis and analysis of the information;
- ethical, social, legal aspects and education human actions in the sphere of the information technology;
- confidentiality and data security.

The basic skills and issues of information technology that each university teacher should get, include (Sysło, 2007, p. 49):

- basics of using information technology, its tools and methods of use;
- the role and possible ways of using the information technology on the classes conducted by the teacher;
- the use of information technology as part of own workshop;
- social, ethical and legal aspects in the access and using the information technology;
- the use of information technology as a teaching aid during classes.

The process of teaching at the university based on elements of modern didactics, mass production of information, in all subjects, should lead to increased of knowledge and qualifications of academic teachers, proportionally to the development of technique and information technology (Mianecka, 2010, p. 9).

Thanks to classes taking into account the information technology students have the chance to get (Sysło, 2007, p. 31):

- ability of correct using sources of information and tools for its processing;
- knowledge about possible applications of this technology, including the sources from which it is possible to obtain information and the tools e. g.: spreadsheets, databases, software for simulation and modelling and communicating via a computer network;
- knowledge about the new opportunities that information technology provides, the consequences of its activities, capabilities and restrictions.

It is noted that information technology plays a very important role in teaching, which cannot be compared with the role of other technologies. The man is a creative and independent being, so science should not only make possible to process information, but also enable the creation of new cognitive structures based on acquired information, development of skills the constant learning and the ability to cope with new information resources (Sysło, 2004, p. 23).

4. Conclusions

Significant changes in computer science and progressive technology are forcing changes in management of higher education, the significant transformations, which are extremely important element in the information society. Priority tasks of universities include preparing students for living in the information society, whose functioning is hard to imagine without information technology and the ability to use it (Siemieniecki, 1998, p. 59). Education, similarly to other spheres of modern man life, should undergo transformations due to changes

in social and technological conditions. The principal task of education is to help a young person in achievement of competencies or ability to use modern technology (Sysło, 2004, p. 12).

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