THE USE OF ICT IN HIGH EDUCATION: DISTANT RELATED APPROACH

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Abstract. Some aspects of ICT that can be effectively used in high education are discussed. Specifically, web site based approach and on-the-go opportunities offered by modern means of communications. Contradiction between fast communications and old-fashioned rigid educational systems are considered in terms of «distant related approach».

In modern society various information is available for consumers via multiple channels: media, radio, TV, web sites of both mass media and independent commercial companies, smartphones via mobile phone operators, tablets, etc. Unlike twenty years ago, the users consume information mostly on-the-go, i. e. when performing their everyday duties, in the transportations, when having rest, etc. Modern communications applications make it possible to communicate persons with each other without meeting physically yet benefiting from opportunities offered by information and communication technologies (ICT).

It is known from experience that actually every student in the Belarusian State University of Informatics and Radioelectronics (BSUIR), Minsk, possesses a smartphone and sometimes also a tablet and, very frequently, them both. The students willingly install various communications applications such as WhatsApp, Viber, etc. That means the students can easily transfer, receive, and consume information from various sources. Therefore, the students possess both hardware and software necessary for effective use of ICT.

It makes sense to analyze which types of studies can be carried out using the opportunities of ICT. Any curriculum in BSUIR specifies the following types of studies: lectures, seminars and workshops, laboratory experiments, individual assignments, semester and course projects/works.

Lectures is a “weak point” of a number of professors in BSUIR. A lot of time is spent on useless dictating or reporting known materials also available in electronic form. Instead of visiting classrooms (with tens of students) and even lecture halls (with more than hundred students) the students could read the lectures on-line or download them. Furthermore, appropriate tests are available for both current materials and complete courses [1], [2]. Any questions can be e-mailed to a lecturer and be promptly answered.

In modern teaching techniques the role of seminars and workshops is ever increasing. However, they can be organized in more effective way using the benefits of ICT. Messengers such as above WhatsApp, Viber allow to organized chats for an entire student group, a number of groups (for lecturers) or for a certain team of students interested in specific problem or having common interests (e.g. similar subjects of their reports).

At present, a number of departments in BSUIR have courses of laboratory experiments based on appropriate software. For instance, such circuit simulators as PSpice, Electronic Workbench, Proteus, etc. are used in teaching various courses of electronics to Electronics and Computer Engineering (ECE) students. That means the laboratory experiments can be performed (and actually are performed by some students) remotely. The use of ICT can be implemented in this kind of learning activities quite easily.

One more tool for productive teaching is the use of social networks such as extremely popular Facebook, Twitter, YouTube, etc. These networks allow to present a lot of materials, including texts, images, videos to organized groups of students. Unlike common lectures delivered with premises of a university the materials placed in social networks can be modified or amended and, what is even more important, listened to, looked at, and consumed in any place and at any moment.

For such types of studies as individual assignments, semester and course projects/works, ICT can be used first, for reporting results (using e-mail); second, for consultations and supervision of student activities (using chats).

For every type of activities on-line testing can be used to verify acquired knowledge [2].

The use of ICT and, or in other words, distant related education techniques, offers a number of obvious benefits and, on the other hand, is unavoidable because of the modern life style.

However, the use of ICT is accompanied with a number of challenges. The most essential problems to solve are:

– the need to tailor new curricula based on the use of ICT;

– the necessity to overcome the resistance of some professors reluctant enough to accept ICT techniques.

The realization of specific courses for ECE students based on ICT and overcoming related problems are points for further discussion.

References

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