Implementation of e-learning into the process security education in universities

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Abstract

The article provides assessment of the significance of the e-learning implementation, as one of the most modern methods of teaching, using information technology in security education. The implementation is based on the main idea of e-learning, it means, that it is necessary to provide free and unrestricted access for students towards their education. If we want the society to take advantage of security education as an intensive factor of economic and social growth, it is important to know the manner of applying such methods, forms and means, the intensity and the circumstances necessary to impact on the learners, in order to achieve the final efficiency of education.

Keywords: Security, security education, e-learning, teaching.

1. Introduction

Security is becoming the latest strategic and socio-economic role, but also to ensure its reliable functioning of any organization that has an objective of the environment and sustainable development in existing conditions. Safety occupies a large area of human needs, therefore it is important to recognize its important role in the process of education and training. In the education system it is necessary to take into account the existing potential threats to human life. This issue should be dealt with by educators at all levels of education. It is their responsibility to know,

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and then to pass on the knowledge of how to prevent, or to escape the threat and how to respond to the already existing crisis situation. At the present time, the term security education is used to denote education in the field of security.

If we are supposed to understand security education as an intense factor of economic and social growth of knowledge society as a whole, it is important to know in which way, by which methods, forms and aids, in what intensity and under what circumstances it is necessary to affect the educated by in order to achieve the resulting efficiency of education (Kovacova, 2009). Currently, the primary focus aims at rebuilding of schools in terms of content, but this effort should further evolve and lead to modernization of education methods, material and organizational aspects of educational process, improvement of teacher training, and ensure the continuity of lifelong learning at all levels of education. Last but not least, we should monitor and evaluate efficiency and quality of education. (Zaťkova, 2014)

One of the innovative forms of education is e-learning, a modern form of education that is often used at vocational training of security personnel in external, distant form of college education as well as in the courses of lifelong learning. It is the most modern way of teaching with usage of information technologies and it represents the implementation of information technologies into development, distribution and management of education or training.

2. Characteristics of security education

When solving problems in the security field, education and specific training of security services personnel at different levels of security as well as managers, on which high knowledge demands are placed are important aspects. "Obtaining or extending of professional expertise and required professional readiness that are enabled by a system of education are a prerequisite for conducting professional personnel activities that are necessary" (Kavan, Majzlikova, 2013). Within the conditions of education at colleges the situation can become better by increasing of security awareness of people transiting from schools to practice, by widening their knowledge and skills connected with security, increasing qualification and expertise of graduates and their preparation of solving of risky, emergency and crisis phenomena in various areas of security (civil, economic, environmental, technical and technological, logistical etc.). We can therefore talk about security knowledge content of which are theoretical and practical knowledge about protection of people and property with possibility of its versatile use in European security environment. The basis of security knowledge lies in analytical activity that is aimed at averting or minimizing safety risks of various forms and causes towards individuals and society as a whole. Security knowledge does not only relate to increasing of knowledge and professional level of personnel of security services, experts in the security field or managers.

The aim of education is to prepare a group of experts for the management of security institutions of different sizes and varying degrees of complexity. It is necessary to develop and clarify its own terminology of the relevant terms, used in the preparation of security experts - in education of security management specialists (Losonczi, Mesaros, 2012). Security education should be directed towards the formation of a professional. A professional with extended competences. A professional active in the working process. A professional creating values for other people. Education of security managers should be implemented in conjunction with the principles of praxeology, which emphasizes the need to consider the learning objectives. The educational process should rely on the considerations of rationality. The aim and task of security education should be demonstrating the constantly changing world and the need for the security managers to adapt to this reality (Kovacova, Tyrala, 2011). Organized activity of teaching staff, subject to the objectives and tasks of the teaching process, has a significant impact on the development of plans and programmes, improving the methodological work, the qualifications of teaching staff, organisation, management and evaluation of education and training of specialists. The objectives and tasks of the teaching process help create optimal conditions for the conscious and positive activity of well-educated and skilled security managers of different specializations (Kovacova, Klimo, 2013).

Deficiencies emerging in security education prevent the effective investigation of professional and societal aspects of security problems, by which the basic cognitive element for the effective management of security systems is limited. It is necessary to deal with deficiencies arising in this education and it is also necessary to examine and remove them.
3. Importance of e-learning in terms of universities

Since the establishment of the first university, teaching system at schools have been almost unchanged, but over time it has changed and updated with curriculum, equipment has been modernized, but the basic concept of group instruction of pupils in classes remained unchanged. However, the volume of scientific knowledge has rapidly increased in recent years and keeps increasing every year. The number of people who need additional education and upgrading of qualification has also been increased. Demands on educational level of the whole population are increasing and therefore make learning a lifelong process. With these claims, it is more difficult for classical education to emulate and space for radical innovations is created. Current technical development and way of living encourages a change of approach to teaching process and calls for constant access to current information 24/7 at the lowest cost possible. E-learning perfectly meets the above requirements (Pavlenko, Haľko & Litecka, 2011). Although it will probably never replace the traditional way of teaching, nowadays it is an efficient alternative or complement to standard teaching.

E-learning is an efficient way to get in touch with students and give them valuable information in shorter time and at greater distances. Self-studying via e-learning provides immediate feedback. Studying is often organized into several on-line courses depending on the educational circuit. Course can consist of theoretically unlimited amount of data, control questions, tests as well as certificate about successful completion. To create a course means to define its content that is clearly structured into chapters, to allocate the group of people or the whole departments that are required to get to know the topic, create timetable for getting to know the curriculum and establish the deadline for taking the final test. It is organizationally challenging to measure the level of knowledge in a standard form. In this area, e-learning offers and immediate percentage evaluation of tests, information about the success within a group, number of false answers. There is a possibility to repeat the curriculum once again when failing the test that can be subsequently taken again without additional costs (time) for training organizer. Educational outputs, statistics about the success of tests have a high informative value for organization in terms of the efficiency of courses, motivation of employees and their ability to learn. Each course is usually only one from the system of prescribed courses and their continuity called "the learning path". It serves for complex training of some type of worker and dealing with the whole educational process for the working position. Standardized systems have the possibility to simply import these courses and tests, which makes work easier when courses are prepared by external company. We distinguish 4 versions of e-learning (Fig. 1.)
E-learning in 1.0 version offers only static, linear educational content, limited interaction and creative activity of participant. Moreover, it requires preparation for change of strategy and style of learning of students. In this form, e-learning replicates known issues and failures from attendance forms of education and often highlights them by technical complexity of the user interface and control. Another fundamental problem is stagnation, respectively satisfaction with basic 1.0 version of e-learning, insufficient implementation of new technologies, especially social internet networks and the reluctance to experiment with new theoretical concepts and technologies. However, well prepared e-learning 1.0 can be truly effective e.g. as a part of combined form of education as well as flexible online source of current information and knowledge in professional training.

Currently, it is possible to base the naming of trends in e-learning and online education on current technologies, mostly social internet networks (social media). Progress, in form of e-learning in version 2.0 brings open, personalized and distribution model of education. It uses the activity of system users to generate educational content and at the same time it allows connection of users for sharing knowledge and sources. It encourages cooperation and collaboration. Version 2.0 brings lots of social stimuli (community) that facilitate the process of division and support the transfer of knowledge in e-learning.

E-learning 3.0 is an experimental concept of other generation of e-learning, where on the basis of e-learning 2.0 the semantic system of classification of information is developed. The principle of the so called semantic web is a classification of information with the help of metadata that will enable to effectively process complex and great volumes of data by computer. Semantic technology thus allows very fast, accurate and complex access to information or knowledge. This preparation of data will enable to create intelligent educational systems that can radically change the way of learning of humans.

It is expected from e-learning 4.0 to have a system of artificial intelligence that will provide basic cognitive needs of a man. E-learning 4.0 can also be directly technologically supported platform of collective intelligence. A different approach than e-learning versions is offered by various concepts, such as education networks, knowledge systems, interactive multimedia and social media, iTunes, virtual and augmented reality etc. Anyway, it is obvious that technologies significantly influence educational theory and practice, therefore it is very important to reflect this development from andragogical perspective as well (Cmurova, at al., 2013).

E-learning can be viewed from multiple angles, the scope of the whole meaning of e-learning is however quite difficult to define precisely. It is necessary to bear in mind the great possibilities of e-learning usage as well as a number of problems that need to be solved in order for e-learning to be used fully (Klement, 2011). In spite of the fact that first courses appeared in 1996, public and students are not yet sufficiently informed about their potential. Creating an e-learning course is time consuming and difficult for teacher’s qualification and his cooperation with people of other professions - technicians, graphic designers, programmers. This transfer of information is most often
realized via on-line distance courses. Distance education as such, the self-studying with the help of a tutor that is physically separated from students and only coordinates education have been existing for many years.

Concept of informatization of Ministry of Education in Slovakia with a view to 2020 brings basic idea of further development of education, science, research and sport from the point of view of global trends of digitalization and development needs of Slovakia. Its aim is to define technological needs in the following years in order for Slovak schools and scientific institutions to further improve their quality. This concept thus represents digitization as one of the most effective tools for Slovak teachers and scientists to achieve better results in education and research.

4. Importance of e-learning into security education at colleges

Development of information technologies intervened into the process of education of security personnel and brings significant improvement of the quality of teaching process. Internet, together with high technical equipment of households, workplaces and schools have contributed to a fact that distance learning courses are now available for all. E-learning, as the most modern way of teaching with the usage of information technologies represents implementation of these technologies into development, distribution and management of education or training of security personnel. (Frk, 2010)

If the institutions of security education are supposed to prepare graduates that are able to react on the needs of the modern labour market, develop scientific and research potential together with Slovak industry, and do it with the lowest administrative burden possible, the complex digitization of the system of this type of education is a necessity. In order to improve the quality and development of security education in the area of digitalization, it is necessary to develop some significant areas:
- infrastructure,
- optimized electronic services,
- digital educational content,
- digital skills,
- cooperation with employers.

At the University of Security Management in Kosice, which is an institution of security education within Slovak colleges, the ASFEU project, financed by EU funds has been realized. Within this project, e-learning has been implemented into education. For this purpose, vocational subjects, contents of which were transformed into electronic form have been chosen. Research that followed proved a lot of advantages that e-learning has. All of them are mentioned above. This research was conducted in order to determine the efficiency of education in this form. However, some shortcomings were also discovered. It is necessary to take them into account when implementing e-learning into security education. It is the incomprehension of the necessity of different approach to the creation, organization and management of e-learning, which often leads to following mistakes: lecturer is not replaced by a tutor or facilitator, but he/she retains full control over the learning process, content is formed by authors of partial topics, often without coordination and influence on the educational process itself. Another problem is that the authors of e-learning courses also often prefer only one of the sides of such education at the expense of the quality of other aspects, e.g. course has great technical or graphic design, but didactically, the educational content is problematically processed. Also, the transfer of documents from attendance educational activities into imperfect distance form, non-usage of the multimedia potential, inability to cooperate with other participants etc. are other commonly repeating mistakes. The choice of e-learning brings a necessary reduction of content of education, which often leads to instant form of information and knowledge, the absence of deeper context and linking of the parts of educational content, which certainly does not contribute to a quality of the resulting knowledge.

Nowadays, there are different opinions on e-learning, either it is a technological pessimism of the conservative part of the professional community, often caused by insufficient knowledge of technology; or problems with digital literacy among target groups, or technological and andragogical unpreparedness to realization of e-learning etc. However, it is objectively possible to critically perceive mostly practical application or implementation of e-learning. Practical needs, in context of undisputed advantages of e-learning however currently form a pressure on the realization of these activities at educational institutions which however often underestimate the requirements on
preparation and realization of education in this form. The results are difficulties and problems of learners with poorly prepared courses and unused full potential of technologies for effective education.

5. Conclusion

Unlike traditional approaches to security education, e-learning is not only one approach that is suitable for all. In addition to wide range of learning styles, from which the target group consists, learners most often look for information in non-formal, conventional manner. In order for schools to fulfil formal and non-formal needs of education, they have to introduce various types of educational strategies. These strategies will make rich possibilities of educational sources available to students in such way that will be the most convenient at the time. Content will reflect the aims of the individual as well as the aims of the whole college.

Reasons for introducing of e-learning are practical with respect to possibilities of internet services and computer programmes; it is possible to classify the advantages that classical education cannot provide. Creating textbooks for e-learning that must fulfil psycho-didactic aspects is crucial for active participation of students in pedagogical process.

E-learning brings informative development of college and supports its progress. E-learning simply means education of the future.

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