Adult ICT Competence in Educational Processes

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ABSTRACT: The importance of life-long learning for the European future is now approved at the highest level and is the key element in seeking for public spirit, strengthening social cohesion and increasing employment. It considered as a great challenge for the new century with the help of new information and communication technologies (ICT). ICT competence closely related to professional competencies. There fore ICT competence is important for both learners and adult educators, and their education is an essential factor in providing opportunities to succeed in the labour market and to become an active citizen. The article reveals the significance of applying information and communication technologies in the labour market and the usefulness of e - learning in the adult education professional activities.

Keywords: Adult education, competence, information and communication technology (ICT), knowledge, lifelong learning (LLL), skills.

INTRODUCTION

Adult education is becoming one of the decisive factors in the progressive development of the education system. It has proved to be beneficial in various aspects: in developing abilities needed for life and profession, enhancing integrality and political stability of the society, encouraging active citizenship, reducing social differentiation and increasing employment possibilities.

In terms of learning goals, adult education pursues two trends: 1) acquisition of profession-related knowledge and development of relevant abilities and 2) general cultural training (Law of non-formal education of the Republic of Lithuania, 1998). The document “General abilities of life-long learning” (2007) distinguishes eight general life-long learning competences necessary for everybody’s personal development, sense of citizenship, social integration and involvement. The competence of vital importance is digital literacy: ability to use information and communication technologies creatively and critically in everyday life at home and at work, during leisure time and communication; to search, select and process information with the help of the basic computer software, the Internet, or electronic mass media.

Information technologies open new possibilities for science and education. ICT together with the changing social demands and attitudes give rise to changes in the traditional concept of education, relations among the participants of the learning/teaching process, and raise new requirements to everyone involved in education [9]. ICT integration in the education system has become a necessity for Lithuania in order to keep up with other countries. When speaking about ICT integration in the education system, [5] stress that it is an overall process that can considered in economic, professional, social, cultural and pedagogical aspects.

Some surveys (DETYA) state that only 60% of university students have appropriate technological skills needed for independent work on the Internet. A lot students lack basic skills and experience for independent work with technologies. Young network users have a superficial understanding of applying web services in studies and creative work [2].

The present tendency in Lithuania is similar to that in other countries: a gap between the young and older generation in terms of the level of key competences. The older generation makes up a constantly increasing part of working people, thus their lagging behind the young weakens the status of elderly people in the labour market and slows down the economic and social development of the country.

In order to ensure life-long learning, an appropriate quality of education and training services should provided, and certain conditions for encouraging individual growth of different age and interest groups should created. LLL is vital both for learning of people, public at large, and for persons working in the education system. Higher school lecturers, adult educators should play an important part in implementing life-long learning in reality. Therefore, people working
in the education system should adapt to the present changes, accept innovations and get fully involved in the LLL process.

The aim of the present paper is to overview and analyze the importance of ICT competence and the demands of work activities. The object of the paper is ICT competence of learners and lecturers.

The objectives are:
1. To overview the adult ICT competence in the context of life-long learning.
2. To determine ICT competence among higher school lecturers and adult educators and its application in educational processes.
3. To study the demand for ICT competence in the labour market.

The following research methods are applied: analytical literature review, research sources and documents analysis, synthesis of systemic theoretical analysis, survey by using questionnaires.

ICT COMPETENCES IN THE CONTEXT OF LIFE-LONG LEARNING

The present information, power and transport communications have made the world much more interconnected and dynamic. Everyone has to be aware of their ability to use personal creative power and knowledge. Not only the initial stages of knowledge acquisition are of great importance – the demand for refreshing permanent skills and general abilities is growing and the significance of life-long learning is increasing [3]. The main EU and Lithuanian documents regulating education [1, 4, 6] claim that directing education and training systems towards life-long learning will play a decisive role in the future of Europe as a knowledge society.

The research report on ICT impact on European schools [2] states that a majority of teachers still lack confidence in applying ICT-based methods in practice. The qualitative content analysis in Universities of Applied Science, performed by Kankevičienė [2] allowed the author to diagnose the main obstacles for integrating ICT into the education system: the lecturer’s pedagogical competence, the lack of ICT skills among lecturers and students, poor lecturers’ skills in

ICT COMPETENCES IN THE CONTEXT OF LIFE-LONG LEARNING

The present information, power and transport communications have made the world much more interconnected and dynamic. Every person has willy-nilly become not only a member of the local community, but also of the global society, and his success depends on his ability to make use of personal creative power and knowledge. Not only the initial stages of knowledge acquisition are of great importance – the demand for refreshing permanent skills and general abilities is growing and the significance of life-long learning is increasing [3]. The main EU and Lithuanian documents regulating education [1, 4, 6] claim that directing education and training systems towards life-long learning will play a decisive role in the future of Europe as a knowledge society.

The document of the European Parliament and Council "Key Abilities of Life-long Learning" (2007) distinguishes eight competences of life-long learning, which are all equally important, interconnected and complementing each other. The essential factors for developing these competences are basic language, literacy, calculus and ICT skills, and all the training activities is based on the ability to learn.

LLL competences have become inevitable due to two imperatives: the need to find the necessary information and the ability to evaluate the quality of the obtained information. Therefore, during the last decade serious attention has given to mastering new technologies, developing initiative, computer and information literacy and communication [8]. Computer and information literacy provide additional possibilities for people to improve their qualification, to learn independently, to search and use information needed at home and at work. This is the basis for independent and life-long learning (Bundy, 2004). Improving qualification with regard to personal needs, mastering new technologies allow a person to adapt to the changing environment and ensure successful long-term performance [7].

ICT competence closely related to professional competences. Therefore, ICT competence is vitally important, and its development is an essential factor in providing possibilities for entering the labour market and being an active citizen. People can choose where and how to develop their ICT skills: at the university, college, vocational schools, adult training centres or other adult education institutions. They may be formal or non-formal educational institutions. The choice depends on the level of personal abilities, place of residence, employment, time or financing. Lately, growing attention has given to non-formal education as a special branch of adult education. Non-formal adult education, which has increasingly been using e-learning, is important since it is more flexible in terms of geographical location, time choice, improving or changing qualifications and competences what help to take a firm position in the labour market, to improve life quality and integration into the modern society.

Thus, the LLL paradigm enhances education with the aspects of universality, globality and availability, liberates learning from the limitations of the traditional learning paradigm. LLL is the best way to face all the changes, to integrate all the members of the society into social life and active citizenship, to help them create a productive and satisfying way of life.

LECTURER’S ICT COMPETENCE IN THE EDUCATIONAL PROCESS

ICT competence can efficiently applied when information technologies harmoniously integrated into the educational process by enriching pedagogical technologies and facilitating management tasks, while the experience, knowledge and traditions accumulated in the education system complement the learning environment [5].

The lecturer’s or adult educator’s role in integrating ICT into the educational process is of great importance both in formal and non-formal education. People working in the education system should be fully involved in the LLL process as their ability to accept innovations and constantly to improve their skills predetermines their competence level and successful work results in the educational process.

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Developed and constructed through the whole human life through professional and personal experience. The Life-long Learning Strategy (2008) focuses on developing general abilities of adults. One of the Strategy aims is to improve people’s computer competence in order to reduce social differentiation in the area of ICT (digital divide). Even though people claim they ‘are able, know how and want’ to use information technologies, not all the citizens find the principles of building the information society attractive and understandable, and the computer literacy of the population is not sufficient.

The most representative data about Lithuania’s adult preferences concerning the subjects they would like to study obtained by the survey among the country and township population: the majority of adults would like to study foreign languages and computer literacy. According to the data of the Lithuanian Department of Statistics (2008), the number of elderly people is increasing. Consequently, recruitment of all the employable people and help for staying in the labour market is a significant precondition for the growth of the country’s economic and social well-being. The main hindrance in employing elderly people is the fact that their competences do not meet the demands of the present labour market. The developing information society and the changing nature of labour requires specialists able to apply their knowledge efficiently in professional activities and to work with ICT.

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Methodology. The research basis is subjective-interpretational-constructivist conception. The article argues that key competences are formed, developed and constructed through the whole human life through professional and personal experience.

Empirical research and its results. In 2013, quantitative research conducted. The research carried out to determine the ICT competence needs for the information society. The article involved the survey of 1640 adults of all ages from all over Lithuania.

The tool of the research - survey, which consisted of a detailed questionnaire. The questionnaire presented in the electronic version by creating free access to every adult. Development of the ICT competences revealed by means of theoretical analysis has become the background of the research instrument.

The respondents selected randomly. Statistical and descriptive analysis conducted to analyse the data. The majority of the respondents were 50-59 year old persons (35 %), 18-29 year olds made up 24 %, and 40-49 year old persons accounted for 23 % respondents. Most of the respondents were higher education graduates (73 %).

The answers to the question whether ICT competence is important in professional activities were as follows: 62 % said it was very important, 36 % claimed it was important. A slightly lower percentage of respondents considered ICT
competence very important for seeking professional career (very important – 54 %, important – 43 %.). The lowest level of importance of ICT competence was marked by respondents in relation to social, cultural activities and citizens’ duties – even 22% considered it not very important. However, it turned out to be of great significance for personal development: 68% respondents marked it as very important, 31% - important, in total even 99% (Figure 1).

The analysis of the answers to the question “Which of the ICT competence skills are most important for you?” showed that most essential skills were marked in the area of professional activities. The most frequently mentioned ability was that of using the Internet for searching and selecting useful information (48%), followed by using electronic devices for mathematical calculations (42%). Various ICT skills considered important for personal development (38-39%). However, these and other abilities did not exceed 21% when evaluating their significance in participation in social activities and accounted only for 17% when speaking about seeking career. Using the Internet for searching and selecting useful information in seeking career and using IT services for personal and/or job goals, participating in social activities made up only 4% (Figure 2).

The best way to improve ICT skills is to learn directly with a colleague who has better knowledge (very helpful – 63%, helpful – 28%). 97% consider learning by oneself in everyday activities and/or at work. 20% stated that independent learning by studying literature is not helpful. 52% were of the opinion that non-formal training, e.g., attending seminars, and learning online or virtual distance learning were very helpful or helpful. It may concluded that learning from experience or direct learning are most beneficial.

The greatest obstacles in developing ICT skills were lack of time (39%) and lack of money (17%). The most powerful encouragement for developing ICT competence is the need of these skills for work (30%). One fourth of respondents mark that those skills can contribute to personal development. For some respondents it means new career possibilities (14%), self-realization (11%) or searching for a job (10%). Family support does not have a significant influence.

In the rapidly changing world at present ICT competence is gaining importance in professional life. Among all the abilities when searching for information about job vacancies, the ability to use the Internet for searching and filtering
information distinguished as most important (62%, Figure 3). The ability to use IT devices for personal goals (48%) and to make use of IT services (45%) also proved to be important. The answers also show that the ability to process information by using appropriate software is helpful in preparing the documents needed for employment (56%).

![Figure 3: Impact of ICT competence skills on a person's professional life](image)

After the person gets employed in the labour market, ICT skills help to keep the job, to achieve better results and to save time and effort. Most helpful in this respect is the ability to make use of IT services (46%) and the ability to use electronic calculation devices (44%). Better results can achieved if a person is able to use the Internet for selecting information (38%), to use software (35%) and to apply IT devices (32%).

ICT competence consists of various abilities and skills, its wide range embracing mass media and communication, technologies and computer science, literacy and informatics. It consists of technical skills for using digital technologies, abilities to apply digital technologies in work, studies and a variety of daily activities, ability to evaluate critically digital technologies and motivation to participate in digital culture.

![Figure 4: Abilities related to ICT competence](image)

Upon the basis of theoretical analysis and quantitative research, the ICT abilities presented in Figure 4 distinguished as the most prominent in educational processes and mostly applied by adults in their personal, social and professional activities.

CONCLUSIONS

LLL cannot imagined without personal qualification improvement, development of personal knowledge and skills, thus, life-long learning is a permanent self-development. ICT application has become critical in the information society based on LLL when seeking efficient high-quality change in the teaching/learning process. ICT competence and its development is a decisive factor in the LLL process, providing possibilities to get employed in the labour market, to get
integrated into the social life and active citizenship. The paradigm of life-long learning liberates learning from the limitations of the traditional learning paradigm, and ensures the aspects of universality, globality and availability.

The common tendencies in the country and the performed research have shown that ICT competence is very important for adults in their personal, social and professional activities. The results also testify to the fact that it is significant in seeking a career. ICT skills are essential in searching for information about job vacancies and in preparing documents for employment. The necessity of ICT skills for the job and the wish to improve self-development are the main incentives for developing ICT competence. ICT is most significant for personal development. The most important ICT ability is to use the Internet for searching and selecting useful information, to process information with the help of computer software, to make use of IT services for personal and/or job-related goals.

ICT application is vital for lecturers and adult educators in their professional activities. However, their ICT skills are not sufficient, and they wish to develop them. The main obstacle in integrating ICT into the education system is the lecturer’s pedagogical competence and the lack of the students and lecturers ICT skills. The problem is the elderly lecturers’ ICT competence and the lack of skills in applying technological teaching programmes.

REFERENCES