TEACHER´S DEVELOPMENT IN THE INFORMATION SOCIETY FOR LIFELONG LEARNING PROVISION

RAZVOJ NASTAVNIKA U INFORMACIJSKOM DRUŠTVU ZA OMOGUĆAVANJE CJELOŽIVOTNOG UČENJA

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Abstract

An analysis of teacher's development in the information technology enhanced learning is made with the reference to lileflong learning needs of the society. The relationship between teacher's profession and occupation is described and a classification of their differences is proposed. Lifelong learning is defined and different points of view are presented in order to clarify the term and describe the links between lifelong learning and e-learning. It seems that modern information technology support is going to be the foundation of the efficient and cost-effective lifelong learning. To come to this point the e-learning has still to become inexpensive, user friendly, actively motivating, multimedia supported, widely accessible and much better connect learning itself with day to day practice. Innovations in information technology supported learning are answering these needs. On the other hand new technology in learning processes is creating new means of communication, knowledge transfer and social relations which is resulting in completely new learning and teaching concepts.

Sažetak

Analiza razvoja učitelja u u učenju pomoću informatičkih tehnologija napravljena je s obzirom na potrebu cjeloživotnog učenja u društvu. Opisan je odnos između profesije i zanimanja i predložena je klasifikacija različitosti. Definirano je cjeloživotno učenje, te su dana različita gledišta da bi se razjasnio pojam i objasnile veze između cjeloživotnog učenja i e-učenja. Čini se da će moderna informatička tehnologija biti temelj učinkovitog i jeftinog cjeloživotnog učenja. Da bi se došlo do te točke e-učenje mora postati jeftinije, lakše za korištenje, mora poticati aktivnost, podržavati multimediju, široko dostupno, i bolje povezati učenje sa svakodnevnom praksom. Inovacije u učenju pomoću informacijskih tehnologija odgovaraju na ove potrebe. Nove tehnologije u procesu učenja stvaraju nove načine komunikacije, nove načine prijenosa znanja i nove društvene odnose, što rezultira novim konceptima učenja.

1. Introduction

When we think of a teacher, we install him/her into all levels of the educational activities. When we think of a school, we have all forms of educational processes in mind, in which a teacher and a co-participant (a pupil, a student, a participant) are directly and interactively related. In its organisational structure, in which a pedagogical function is a primary one, a school is not separated from the system of societal values of its time period. A school is a legal form of an institution and an open system, which is related to a wider society from which it gets tasks and means for its work, to which it is responsible for its work and from which it pumps educational influences. A school, as an institution and a condition for human existence, has been established by a human and it also has to be changed by him/her. An evident overall emphasis on lifelong learning provision with the means of modern information technology enhanced learning has a strong influence in the development of teacher's profession and occupation.

2. Lifelong learning and education

"Lifelong learning" is the frequently used term which is, on the other hand, very general and thus not exact. Since the term is used as a strategic measure in the most important political declarations of the European Union (EU), the most thoughtful definitions, are published by
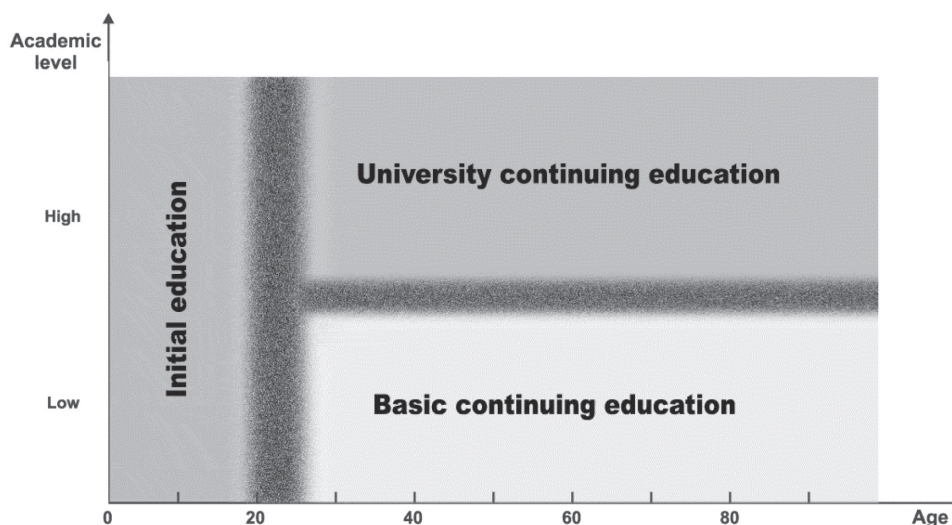
Fig. 1: Lifelong learning - the whole area

the European institutions and learning networks. The affirmed aim of the EU written in the famous "Lisbon declaration" is to become "the world's most dynamic and competitive knowledge based society by 2010". Though sometimes disproved, education and training have become major points of attention in the policy decisions and programs since both are the means to boost up the economic growth and aid the greater social cohesion. Furthermore the lifelong learning with four major objectives (personal fulfillment, active citizenship, social inclusion and employability/adaptability) is seen as a key element of the strategy devised in Lisbon. Let's not refer only to the political agenda – from the practical point of view of the individual the most conclusive seems to be the following statement /**1**/: "Lifelong learning is an essential survival tool and we should all be doing it." The related terms of »lifelong learning« and »university continuing education« both describe very broad ideas. They are consequently very expansive and not consistently defined. In fact the problem is that there are too many definitions of the terms including the ones from UNESCO, Council of Europe, European Commission, EUCEN (European Universities Continuing Education Network) etc. In our context the most relevant definition for lifelong learning is the one from the Communication of the European Commission, titled "Making a European Area of Lifelong Learning a Reality" /**2**/ which says that it is »all purposeful learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective«. This includes all forms of learning: formal (courses and examinations), non-formal (without examinations) and informal (without either courses or examinations). In this policy document the concept of "European lifelong learning area"

(which reflects the earlier one of a European research area) is the area where citizens can move freely to "learn, work and make the most of their knowledge and skills to meet the aims of the EU to be more prosperous, tolerant and democratic". The spirit of the referenced Communication is captured in the on the first page: "When planning for a year, plant corn. When planning for a decade, plant trees. When planning for life, train and educate people". Usually people understand LL more practically and with deeper meaning as presented by Lockwood and Gooley /**3**/. "Lifelong learning is a continuous process that motivates and empowers individuals – it assists them to acquire new knowledge, skills and understandings that can be applied confidently in new circumstances and environments. These flexible and adaptable people will be the key to empowering communities, especially rural and remote communities, as they face the challenges of the 21st century. The challenges, arising mainly from the shift from an industrial and service economy to a knowledge-based economy require people who can adapt to change by learning new skills and acquiring new knowledge." In fact lifelong learning in its definition covers the whole education area: initial education, basic continuing education and university continuing education. All the listed components are graphically represented in the Fig. 1 (a slightly different form of which is presented in /**4**/). According to some writers the usage of lifelong learning term is so all-encompassing that it is in danger of losing all meaning /**5**/.

Very good description of the continuing education from the social point of view is presented by Taylor /**6**/ where it's central concerns are classified as:

– individual and cultural education for personal growth and understanding

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– facilitating the pleasure of intellectual discovery and debate
– civic and collective education to meet the needs of the community and to enhance democratic structures
– developing adult students critical faculties
– disseminating the core value of university education
– awareness of scientific, environmental and social issues
– developing effectiveness and capability through intellectual and specialized skills
– generally bringing together the expertise and values of the university and the life experience and real life issues of the regional community.

3. Lifelong learning and information technology

"Technology can make lifelong learning a reality" /7/ is in a nutshell presented the North American point of view. With electronic tools, people can (theoretically) learn virtually anytime and anyplace they choose without obstacles in place, time and social status.

UNESCO's "Policy Paper for Change and Development in Higher Education" urges higher education institutions to make greater use of the advantages offered by the advancements of communication technologies so that "each university should become an open university offering possibilities for distance learning and learning in various points in time" /8/. The e-learning is not seen as a shift from the traditional to open learning, but rather as a support to conventional learning processes with the use of modern information technology and distance educational methods. Modern implementation of e-learning in educational institutions can be considered as the result of the convergence process of distance and conventional education.

As recent reports demonstrate clearly, the pace of e-learning and ODL (Open and distance learning) is accelerating, and it is likely to take a growing share of higher education. According to the cited UNESCO report /9/ open and distance learning is one of the most rapidly growing fields of education, and its potential impact on all education delivery systems has been greatly accentuated through the development of ICT – based technologies, and in particular the World Wide Web. E-learning at the tertiary levels shows a two-track development pattern. On the one hand, numerous open universities have emerged to absorb large numbers of new learners, while, on the other hand, increasing numbers of traditional universities have begun

to offer their programmes also through distance education. The development of new information and communication technologies has reinforced this trend. In the book where the role of "Net Generation" is explored /10/, the new ways of learning for the new generation are presented.

The new learning process brings up the following shifts:

– from linear to hypermedia learning,
– from instruction to construction and discovery,
– from teacher-centered to learner-centered education,
– from absorbing material to learning how to navigate and how to learn,
– from school to lifelong learning,
– from one-size-fits-all to customized learning,
– from learning as torture to learning as fun, and,
– from the teacher as transmitter to the teacher as facilitator.

Tapscott's research leads him to conclude that the "Net Generation" is a force for educational transformation. They process information differently than previous generations, learn best in highly customisable environments, and look to teachers to create and structure their learning experience. Furthermore, the importance of understanding the behavioral patterns of the network generation exceeds merely appreciating that they are comfortable working online. A crucial element for successfully delivering virtual courses entails transforming the educational experience so that it is meaningful to the information-age learner.

Due to the overall development and wide implementation of e-learning and because of high number of students that will participate in LLL it is evident that e-learning is going provide technical foundation on which efficient LLL will be built. Nevertheless, to come to this point the e-learning has still to become inexpensive, user friendly, actively motivating, multimedia supported and widely accessible. A complete model for implementing e-learning at a university or other larger educational institutions is presented in /11/, where aspects concerning organisation, potential barriers, implementation, planning, infrastructure, administration, evaluation, quality and economics of e-learning are described.

4. How can LLL benefit from technology and innovation in learning processes?

Users/learners of Lifelong learning services to be offered by universities and other educational institutions are expected to be mostly adults with different levels of background knowledge and different levels of ICT skills. Therefore it is crucial

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that LLL e-learning platforms are built on friendly, easy to use and robust technology. On the other hand the didactics will have to be designed in a such a way that the learning process is motivating for the learner, that it supports the information age generation (constructivistic learning) and that it improves transfer of acquired knowledge in a learning process into a practice. As far as the high quality access is concerned there is a new technology coming up, namely the m(mobile)-learning which will make the learning possible practically anywhere and anytime. In majority of e-learning programs offered today, the burden for learning is placed wholly on the shoulders of the learner. When "e-students" go to a course web site, they enter a menu of activities: announcements, documents, assignments, external links, communications, and tools. Students are expected to navigate through this material on their own, without much support. They are generally offered email links (to faculty and other students, to more material, etc.), but not much more. *"Collaborative learning"* is trying to solve this situation by creating a virtual social space for the teaching and learning needs of the particular group of people inhabiting that space. This space has to be managed. Such a common space is very important for the motivation and effective learning of UCE students that lack the social component of traditional student's environment. Such a system also allows for something that is often overlooked in the e-classroom: recognizing and acknowledging the most valuable contributors. All these qualities are beneficial to the adult learner who is using the ICT as the means of interaction with the educational institution, teachers and fellow students.

From the perspective of ICT itself a new vision can be found in the current development and usage of "social software" based tools and services that are highly supportive of e-learning practices and processes. Social software, such as Weblogs, Wikis, RSS-based content syndication, social book-marking, podcasting, etc., shows several positive effects within the realm of education. Wider adoption for educational and lifelong learning purposes could have a big innovative impact as these tools and services are ideally suited to learner-centred as well as collaborative approaches in developing competences required in our knowledge society. Software-based tools, services and multimedia allow for the emergence of innovative educational practices when used in didactically sound ways. There really exists a knowledge gap in how to use digital resources intelligently in learning innovation, but this gap will be best closed by teachers with the right professional attitudes through sharing within communities of practice experiences and lessons learned.

Will Richardson, author of "Blogs, Wikis, Podcasts and Other Powerful Web Tools for Classrooms" /**12**/, in an article published in the George Lucas Educational Foundation's "Edutopia Magazine", writes: "The good news for all of us is that today, anyone can become a lifelong learner. (Yes, even you.) These technologies are user friendly in a way that technologies have not been in the past. You can be up and blogging in minutes, editing wikis in seconds, making podcasts in, well, less time than you'd think. It's not difficult at all to be an active contributor in this society of authorship we are building. As usual, many of our students already know this. (…) In an environment where it's easy to publish to the globe, it feels more and more hollow to ask students to 'hand in' their homework to an audience of one. When we're faced with a flattening world where collaboration is becoming the norm, forcing students to work alone seems to miss the point. And when many of our students are already building networks far beyond our classroom walls, forming communities around their passions and their talents, it's not hard to understand why rows of desks and time-constrained schedules and standardized tests are feeling more and more limiting and ineffective." /**13**/

When describing technology for learning we have to mention the Web 2.0 which can be distinguished from the Web 1.0 version with respect to several technological as well as behavioural features /**14**/. It has also inspired parts of the education community among others. The following are some elements that are more widely understood to form part of the Web 2.0 and to be of interest for an "e-learning 2.0" /**15**/:

– Social Software for easy publishing and sharing of ideas, content and links: In particular Weblogs, Wikis, Social Bookmarking, and content sharing websites such as Flickr. Increasingly also collaborative authoring and other interactions in real time: For example, Writeboard, Writely, SynchroEdit and others;
– Collaborative filtering: Discovery of "most interesting" resources through filtering techniques, but also ongoing conversations, recommendations and cross-linking of resources in social networks; | Open APIs of Web service applications (e.g. Google Maps API, Flickr API) for creative re-use (e.g. mashups) of services and content;
– Many services based on RSS [Really Simple Syndication] feeds, which are used to continually update websites as well as the personal libraries of end-users with information about, and a link

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to, available thematically relevant content (which can also be pod- or videocasts);

– The content on Web 2.0 websites will also often be licensed as open content (e.g. Creative Commons).

5. Teaching: a profession and occupation

The teacher's university degree for all levels assures teachers a teacher's occupation. The occupation is an activity, for which a qualification is necessary. Occupation can also be a synonym for profession, although some authors do not agree and explain the difference between them. A professional development begins when the occupation is gained and activated. With the term activation of the occupation, an active realization of the occupation is meant, because somebody can have a teacher occupation but does not work as a teacher. A teacher's professional development takes place, when:

a) teacher is a coordinator of his/her professional development
b) teacher integrates personal, social and professional level
c) teacher creates a process of cooperation and cooperative learning
d) teacher is active in the lifelong education
e) teacher becomes an autonomical member of his/her profession
f) teacher develops his/her competence.

The basis of the professional development is therefore the teacher's education, knowledge and abilities he/she gained in the time of the university study.

Professional characteristics of a profession involve several areas:

• a professional worth (he/she does his/her work properly, encourages his/her personal development and considers a pupil's dynamic development. Uses democratic interpersonal relationships and acknowledges a difference)
• a professional development (he/she critically judges his/her abilities, actualizes knowledge, encourages innovation)
• a personal development (uses active thinking, carries out moral, cultural and social processes, shows self-confidence)
• an interpersonal development (ability to respect others, motivation, effective communication, interactivity, intraactivity, empathy)
• a realizational development (ability of application, synthesis, analysis and generalizations, ability to use informational technology to raise a working quality).

If we tried to put the tabular attempt of a classification of the difference between the occupation and teacher's profession in words, we could conclude that teacher's occupation in information society is only then successful, when both - the individual and also the society care for its professional development.

6. Importance of communication in a teacher's professional development

At the interpersonal level the informationally persuasive interaction is necessary, which combines the objective information and persuasion. Interaction

Elements	occupation	profession
Knowledge	starting-point	developmental
Qualification	starting-point	permanent and deeply engaged
Having liking for	temporal	permanent
Avtonomy	enstranged	present
Sensitivity for changes	temporal	permanent and stimulative
Abilitiy of critical judgment	temporal	permanent
Sensitivity for argumentative critic	unnecessary	stimulative
Personal development	segmental	up-to-date
Ability of communication	verbal	interactive
Interpersonal relationships	relatively correct	intercultural

Fig. 2: An attempt of a classification of the difference between occupation and teacher's profession

is becoming a part in the mutual relationships, which are established between the teacher and pupils, and is mutually influenced by both sides.

The success of interpersonal relationships depends on the level and quality of an established interaction. To make teachers ready to accept the ideas consciously, the teacher has to become open-minded for the new generation.

Interaction happens at many levels:

- physical union is shown through the help of nonverbal signs and physical closeness; a bigger physical closeness indicates a bigger participants' empathy in the communicative process.
- Action-reactional union starts with a verbal communication, in which the most important paralinguistic signs are those, which stimulate reactions.
- Emphatic activity conditions the mutual influence
- A dialogue is the highest level of an interactional union, which enables that one becomes accustomed to the other's personality, enables a cognitive and affective unity, mutual trust and attention.

A human needs information to understand what is happening in his/her world. Informational communication is neutral, it helps to understand facts and data, is complex and objective. Persuasion is based on a personal ideal of a teacher, the more the teacher is persuasive with the signs of verbal and nonverbal communication, the more effectively he/she will establish pupils' conviction of an interactive relationship.

7. Conclusion

We have known for a long time that a teacher is not the only carrier of knowledge. Information society has brought new possibilities of education, above all, it has brought reachable and actual information. Technology enhanced learning proved to be very effective, and it has started to be successfully accepted also in Slovenia. Many different aspects of education and e-modeling workshops are entering our lives as a key to the successful online learning. They enable a better access to educational programs, adoption of contents and realization according to individual needs, they are able to adapt to the market changes.

In the introduction we wrote that school was established by a human and that he/she has to change it. People change school and now they are introducing all proven characteristics of the informational technology. Pupil's knowledge will be changed by the teacher. The teacher will have to change his/her knowledge and his/her pedagogical

approaches. He/she will have to take care of the personal development and the occupation of a teacher will be his/her starting-point. From the history of the teaching profession we will pull an important characteristic the teacher has to have: ability of a spoken word. To this we would add the necessity for the interpersonal trust that develops an ability for emphatic relationship of the projection into the pupil's state, and so the communicative process can be developed, in which two complex personalities are cognitively and affectively united and as such sense new experiences. This human interpersonal relationship and moral ethos should become the foreground of the teacher's professional development.

Our concluding thoughts about the teacher will be dr. Gilly Salmon's words. She said: Not the technology is the most important, it is meant for serving us, the most important is the individual, whom the technology is meant too /**16**/.

Information technology supported learning is creating new means of communication between students (and teachers) and as a consequence new ways of knowledge transfer, such as collaborative learning are evolving. As several shifts of the learning process are identified, one can conclude that the influence of e-learning on education will be very extensive. New social relations are being born between the key players of e-learning (students, university/faculty, teachers/instructors, support staff and administrators). Some eminent authors suggest that a driving force for educational transformation is actually the new generation of learners – the so-called "Network generation".

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