INFORMAL LEARNING AS AN INTEGRAL PART OF E-LEARNING ENVIRONMENT OF THE MODERN EDUCATION

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Abstract: In modern society there is a clear trend of increasing the part of informal learning that should be considered to be an indicator of qualitative self-development and competitiveness of the employee in the labour market under current conditions. Because unlike traditional formal learning, it is able to fully take into account the personal needs of people and promotes quick and convenient knowledge, the quality of which depends on the student's ICT and creating a comfortable environment for personal fulfillment of their own activities.

Keywords: Cloud computing, personal educational environment, network services, formal, informal and non-formal learning, Project IRNet.

INTRODUCTION

The 21st century is the century of high computer technology, innovative economic development, global information, and intensive development of communication, a rapid social and economic change.

Modern educational process involves the use of advanced ICT, including network services that are gaining wider popularity among the users and significantly affect the communication between students and teachers. New information and communication technologies make it possible to create powerful educational environment, fast-growing, erasing the boundaries between traditional formal and informal learning, and subject to such conditions for successful e-learning important knowledge of modern technologies Web 2.0, which can be used for the creation and transfer of knowledge at a distance.

1. INFORMAL LEARNING AS AN INDICATOR OF QUALITY SELF-DEVELOPMENT AND COMPETITIVENESS

The development of informal learning related to the rapid development of e-learning - the forerunner of informal learning, increased innovation in business, productivity enhancement. Informal learning by Malcolm Knowles (1970) is the study, which is embedded in planned activities, but obviously not intended in terms of objectives, time and support, and contain an important element of learning (Glossary CEDEFOP). Informal learning is required from the student perspective and leads to certification.

A study conducted by Cisco, which was attended by 2800 students and young professionals from 14 countries under the age of 30, indicates the main problems J facing employers today while trying to balance the needs of the business and the needs of wage-workers (What do employees of Y generation want?, 2011).

This study revealed the desire of university students and young professionals to work in an open environment, which provides access to the Internet using a variety of electronic devices, as well as the opportunity to work remotely, it's their lifestyle requirements and conditions necessary to create their innovative ideas.

Another world-leading American integrated media company MediaTec Publishing Inc., which deals with the use of human resources management and training of qualified personnel in their research notes that the trends of the modern labour market require skilled workers' indispensable increase in the share of informal learning for high-quality self-development and competitiveness (West 2011). Forward-thinking companies understand that studying at universities and corporate training plays a major role in shaping the competitive specialist, but unfortunately, formal training is not able to take into account all the specifics of professional training future employees, and lays the foundation for further self-development and practical mastery of a profession. Important role in the growth of informal learning plays it every employee that provides a number of advantages of modern business, where, to date, valued new innovative approaches, interesting ideas, comprehensive awareness and mobility specialist, high level of PC, mobile devices and other modern gadgets as well as Internet technologies that are essential for maximizing success.

Unlike traditional formal learning, informal learning takes into account individually oriented human needs and promotes quick and convenient knowledge at any time and in any place. Some experts claim that 80% of knowledge is acquired through informal learning and accumulation of knowledge occurs primarily through collaboration to work or school, making use of informal learning ideal means to maximize the use of training activities.

The model support of informal learning (OODA) (Strategies for Creating Informal Learning Environments, 2010) includes four components: observation, orientation, decision and action, and is realized through a personal learning environment.

2. RELATIONSHIP OF UNIVERSITY'S AND STUDENT'S ELECTRONIC EDUCATIONAL ENVIRONMENT

Synthesizing the definition provided in the online sources (Anderson 2006, Chatti 2007a, Chatti 2007b, Fitz-Gerald 2006, Materials from the meeting of the working group on harmonization of training IT specialists with higher education requirements of modern IT-industry 2013, Wheeler 2010a, Wheeler 2010b) we can say that PLE (Personal learning environment) is considered to be a system that allows a person who learns to set their learning goals, monitor and manage their own content and process learning, and communicate and collaborate with others in the learning process, do informal learning. PLE determine such tools and services that are separate educational platform for use in learning and achieving educational goals.

In our opinion, Personal learning environment (PLE) is a collection of electronic content and advanced web services and applications, which are based on individual electronic educational platform and content management of electronic communication, cooperation and solving educational and research problems, and providing an opportunity for students to set learning goals and manage their own process monitoring academic progress and, on the basis of portfolio form own e-learning space, create own e-library, make and publish educational and scientific project activity and so on. This multifunctional of PLE will enable the student to efficiently and effectively acquire knowledge in the formal, informal and non-formal studies using modern cloud and web technologies and open educational resources. A free student access to their own educational electronic resources from any computer or mobile device at any time and from any location will allow faster and easier to work with information, teaching and scientific data and information to plan work support communication and collaboration with students and teachers together to solve educational and scientific problems, and enhance the ability of educational and research activities.

Building a personal learning environment (PLE) is based on the use of cloud technologies (SAAS- Software as a Service), which include such best (Hart Jane, 2013): Twitter (1st place), Google Docs (2nd place), YouTube (3rd place), Google Search (4th place), Evernote (virtual notebook) (6th place), Dropbox (file storage) (7th place), WordPress (blog, website) (8th place), Facebook (9th place), Google+ & Hangouts (10th place), Moodle (11th), Linkedln (12th), Skype (13th), Wikipedia (14th), Prezi (15th place), Google Scholar (35 place), Coursera (38th), Skydrive (43 place) and so on.

PLE is the result of the evolution of Web 2.0 and its impact on the educational process. Access to education is access to resources and services and allows students **not only to use educational resources,** but most importantly - **create them.** Education thus becomes the transmission of information and knowledge to create them. Feature of PLE is a tool that allows students to participate in a distributed environment consisting of a network of people, services and resources. PLE - is not

only a comfortable environment for the activity, but a means of creating a personal learning network where you can collaborate not only with direct subjects of the educational process, but also their communities to significantly expand the circle of friends, to go beyond the formal communication and get much more professional information.

PLE designing depends on the quality of the educational process, taking into account its use - it should be simple and effective. Selection tools of PLE - is a personal right of every student, it depends on its level of ICT competence, which should continue to grow and replenish the knowledge and skills to use new social services. That is why one of the objectives of the university is in constant development of ICT competencies of students through the use of new social service teachers in the learning process and the introduction of relevant corporate standards, including tools of PLE as a student and teacher.

To the minimum set of PLE tools, according to the researchers should include twitter, ning, blog, igoogle (netvibes), reader RSS, delicious (DIIGO), wiki (Kadle 2010).

PLE allows creating personal learning network and managing knowledge (Kukharenko 2013). According to Siemens (Siemens 2011) this is the most effective system for knowledge management.

In our opinion it is expedient tools PLE group in the core activities of students in the learning process: organization, search, publication, collaboration, communication, cloud storage services (see Table 1).

Now, given a list of the most popular tools (Hart 2013, IRNet project 2014, Kommers et al 2014, Smyrnova-Trybulska et al 2014), we can distribute them according to the following classification, which can be regarded as a model of student's PLE.

Table 1.

Classification of the most popular tools for activities

N	Group of tools for students	Name of tool	Popularity
1.	Organization	Moodle	**11**
		Edmodo	**29**
		Coursera	**38**
		Khan Academy	**41**
2.	Search	Google Search	**4**
		Feedly	**19**
		Google Scholar	**35**

		Google Maps	70
		Google Translate	77
3.	Publication	YouTube	3
		Services of sharing images: Instagram, Picasa, Flickr	52
4.	Collaboration	Evernote,	6
		OneNote	69
		Google Docs	2
		Wikipedia	14
		Adobe Connect	30
		Blackboard Collaborate	66
		PB Works	74
		Popplet	76
5.	Communication	Social Network:	
		Facebook	9
		Google+ & Hangouts	10
		Twitter	1
		Linkedln	12
		Yammer	20
		Email	32
		Skype	13
6.	Cloud storage services	Skydrive	43
		Google Drive	2
		Dropbox	7

Source: Own work based on the annual list compiled by Jane Hart from the votes of learning professionals worldwide,2013

Today each self-contained educational institution of Ukraine creates and develops its own e-learning environment - university portal, which is the basis of formal education of the student. Analysis of e-learning environments of modern domestic and foreign universities demonstrates rather high level of qualitative and quantitative indicators of implementation of electronic resources for educational purposes. The default for all universities is the fact that creating an electronic learning environment they rely on scientific and educational aspects of the life of the student, while individual needs are ignored. Consider an e-learning environment of the modern

university as an example of the Borys Grinchenko Kyiv University (Figure 1). From this example shows that despite the relatively high level of organization and content of a university portal, personalization student does not occur, and the creation and implementation of personalized e-learning environment of the student, which in turn is based on the personalization in a global network, student-centered learning, which acts as a basis for the formation of ICT and key competencies of the modern student, remains open. To open this question must match content-structural model of a typical e-learning environment universities and educational vision of personal space of student.

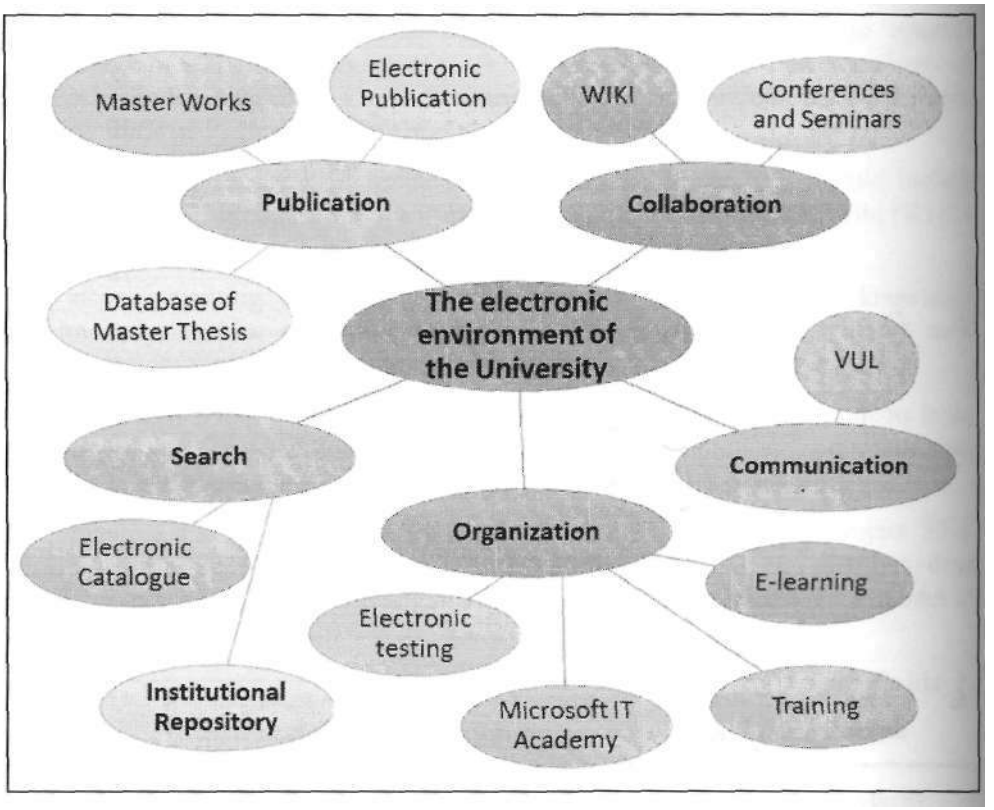

Figure 1.A typical e-learning environment of the modern university

Source: Own work

During development of personalized e-learning environment of the student must take into account not only the needs of students who appear for formal training, but also the needs of students who are needed in the informal and non-formal learning. Following some simple calculations, we can say that the modern student - a young people aged 17 to 25 years, as they are called, representatives of „Y" and „Z" generations. Representatives of these generations have qualitatively different values and skills, unlike their predecessors, they have grown up with the Internet and cannot imagine their life without mobile devices, electronic organizers and

computers. The main feature of „Y" and „Z" generations **is phenomenal ingenuity,** they **are fluent in all types of work, with many promising ideas and do not create yourself an idol.** This youth, who demands the individual approach to learning and committed to self-development to stand out with similar mass (Schroer 2014).

Transition of Ukrainian educational system to the paradigm of the XXI century "education for life", increasing popularity of distance education and implementation of the learning process of universities of the European Credit Transfer and Accumulation System (ECTS), in its provisions provides for individual and independent work of the student, depending on content of the course and the specific activities of the student, from 25% to 60% of the hours dedicated to the mastery of certain subjects (European Credit Transfer and Accumulation System). This significant percentage cannot be left unattended as object and subject of study. And it allows the student to effectively acquire knowledge during formal, informal and non-formal learning independently manage content and electronic communication, cooperation and solve educational and scientific problems, and provides an opportunity to establish learning goals and manage their own process monitoring academic progress, and, on the basis of portfolio form your own e-learning space.

CONCLUSION

Each modern self-sufficient university should consider educational trend increase in the share of informal learning, as well as to identify the interests of their students, realize their desire personification in the global network and student-centered learning, which in modern terms, acts as a basis for the formation of ICT and key competencies of the student.

Although the analysis of typical university e-learning environments demonstrates rather high level of qualitative and quantitative indicators of implementation of electronic resources for educational purposes, one cannot ignore the fact that the university portals cover only scientific and educational aspects of student life, and remain out of sight of his individual needs. It is one of the priorities of the university is in continuous development of ICT competencies of students and teachers by creating and implementing personalized e-learning environment, the use of new social services in the educational process and the introduction of relevant corporate standards.

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