

Enhancing a knowledge society concept via educational projects

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AULA, 2017, Vol. 25, No. 1-2: 55-63

Abstract: The research tempted to understand the importance of a coordinated response to the challenges aroused from offering educational services to foreign citizens and adults by Ukrainian universities. The paper presents the experiences on how the information and communication technologies may be used in addressing challenges of modern society while changing the teaching approaches.

Given Internet and informational-communication technologies role in effective building of the inclusive knowledge society the paper presents the overview of three case studies observed during a 4-7 years period at the basis of Sumy National Agrarian University: peer-design of the educational courses and a MOODLE use for distance learning of foreign students (15 courses, 80 students), and rural citizens (386 farmers) education via Internet. The conclusions were delivered under the context of explored issues, challenges and opportunities of the knowledge society, open education and lifelong learning concepts. The paper highlights the importance of identifying good practices in specific areas of youth and adult education within the educational projects under an increasing foreign students flow into the country and a rapidly rising number of rural unemployed. The results of the paper try to generalize the best approaches to reach the aforementioned goals which may be further used by universities working in the same field.

Introduction

The teachers team consisting of the authors of the paper was among the first teaching staff of Sumy National Agrarian University (Ukraine) who started working with foreign students in English and who was also involved in the MOODLE on-line courses development. The number of foreign students (mostly coming from African and Asian countries) has been constantly increasing since 2010, while due to the visa issues they couldn't start to participate in the educational process in time: some of them arrived 2 months later the academic year beginning. The university educational project aimed at engagement of the MOODLE platform into the on-line courses design set the problem of developing the content which would have been easily grasped by the foreign learners. This brought out the need to investigate the comprehensiveness of the open education and digital tools use within the educational process at the university.

The MOODLE platform was chosen by the university due to its leading position at the learning management systems market. It is one of the oldest and the most popular online learning platforms with over 60 million users worldwide. It has the following advantages:

- it is free of charge;

- it has an extensive documentation available in Russian and English along with a number of forums on the use of this online platform;
- it has a long history of successful use not only in the universities of the EU and the US, but also in the other countries (more than 68 000 customers worldwide) (Lambda Solutions 2013);
- it is an open-source platform that allows the development of additional modules needed for some special needs of the university as well as the plug-ins developed by the community of other developers which are also free of charge in most cases.

Despite the drop in the number of clients the MOODLE experienced in 2016-2017, it still remains one of the leading players at the market.

A number of empirical observations made us to consider the effectiveness of an educational course design done by a single teacher, because, as the experience showed, the courses content delivered to a Ukrainian group of students and to a mixed one (or up to 100 % consisting of foreign students) is expected to be up to 50 % different. This refers to several defining and significant factors: educational and cultural background, cognitive skills, teaching approaches used by previous teachers, places of future knowledge application (both in geographical and management-practice sense), personal motivation, teacher's and students' ability/experience of teamwork under the intercultural context, etc.

The need to teach foreign citizens in English and absolute lack of the English-language literature available in Ukraine also pushed us to use as many Internet open access resources as possible. This brought up to the surface a number of issues to be learnt and solved: starting from intellectual property rights and finishing with technical implementation of the ICT tools into the educational process considering the lack of PC equipped classes, speed of the Internet, teachers' and students skills in ICT use, their motivation to do so, etc.

Additionally, during the FAO/EBRD educational project¹ implementation during 2014-2016 the researches team had to deal with the representatives of the farming sector of seven regions of Ukraine teaching them directly or on-line. This allowed to observe the empirical data of the MOODLE/Internet use by the farmers, representing both the adult education and the rural citizens segment. The summarized and generalized conclusions of the 5 years' experience in the topic are presented in the paper along with the processed theoretical implications which are currently discussed within the scientific community.

The paper goal is to demonstrate the importance of a coordinated response to the challenges resulted from offering educational services to foreign citizens and adults by Ukrainian universities. The paper presents the experiences on how the information and communication technologies may be used in addressing challenges of modern society while changing the teaching approaches.

¹ The two stages project "Successful Grain Agribusiness in a Small Area", which had been implemented in 2014-2016 with the support of "Central European Initiative" in partnership with Sumy National Agrarian University.

The paper considers a “knowledge society” concept due to its importance for the social processes in Ukraine in general and the world trends incoming to the country. The UNESCO World Report establishes four principles that are essential for a knowledge society development (United Nations Educational, Scientific and Cultural Organization 2005). These are the cultural diversity, equal access to education, universal access to information, freedom of the opinion expression. It’s rather obvious that these principles are crucial for the successful country positioning in the modern world, however the dynamically developing society in Ukraine requires particularly careful compliance with these rules.

Nowadays the use of digitalized communication is becoming increasingly adopted by the higher education institutions all over the world. Many leading universities are looking at a computer-mediated communication with their learners as something that is worth to invest in because it is a “versatile medium for the delivery of educational programs “anytime, anywhere” (D. Garrison and colleagues 2000, 87). This lays in line with the global trends of countries integration, migration for work and studies and, what is more important, with a philosophy introduced by the EU experiences and fixed in the Sustainable Development Goals of the UN 2030 Agenda for Sustainable Development (the UNO 2015).

The problem background

Why the IT skills for all is still a subject of discussion in Ukraine? The difference in e-learning perception by the EU and post-USSR countries is vividly seen by the following example: Merriam-Webster’s Dictionary, America’s leading and one of the most-trusted providers of language information for English learners in post-USSR countries, doesn’t offer the definition for the e-learning term at all. This is a traditional approach to the language data base formation which lacks flexibility and necessary timely resources of a whole volunteers community. While a free online encyclopaedia “Wikipedia” gives it with references to Richard E. Mayer, the founder of the e-learning theory, as a “cognitive science principles of effective multimedia learning using electronic educational technology”. Wikipedia is an Open Educational Resource that can be modified and enhanced by the volunteers from around the world. This unique feature of the OERs allows free access for everyone to the information which once required special conditions of access and more complicated rules of reuse, translation and modification. Still, even though post-USSR countries enjoy the benefits of such resources they are not considered to be of scientific or teaching value for the schools and universities. D. Amemado notes this tendency even for the European universities which “do not adopt technologies primarily for pedagogical or teaching and learning task-related reasons” (Amemado 2014, 28). ICTs are rather used as an additional enriching tool which may be used by a learner’s choice and will.

Massive open online courses (MOOCs), accessible to anyone with a computer and access to the Internet, allow enrolment of a significantly bigger number of students than it is possible for the traditional educational institutions. There are researches that call the MOOCs “to be an online crossroad where to learn from other areas of studies and from professionals and scholars of different backgrounds” (Amemado and Manca 2017, 22). They also stress that learning activity is currently “distributed across people, environments and situations” (Amemado and Manca, 2017, 25). It means that roles of the learners’ or instructors’ are exchanged sometimes and subjective human knowledge assessment is eliminated by automatic grading.

It is interesting to note that we are describing the trends that exist now, but were caused by the development of digital technologies and information society transformation, while in 1980 an American futurologist Alvin Toffler had already offered a term “prosumer” in his “The Third Wave” book. He referred to a person who consumes and produces media at the same time. Nowadays this term describes either online buyers or, in line with a new educational philosophy, learners who are involved in the development process of educational resources. The university students, graduates, adult learners received an opportunity to use more personalized teaching materials adjusted to their needs – either cognitive or professional, cultural or financial. And thus, involvement of the learners raises the material value, while educators may further use, share, and modify those materials, significantly multiplying the learning effect.

According to A. Peters and G. Britez “Openness is a concept that has come to characterize knowledge and communication systems, epistemologies, society and politics, institutions or organizations, and individual personalities” (Peters and Britez 2008, 3). It means that downloading someone’s case study, adapting it to your students’ needs and re-uploading a new version back on-line is not a crime but an act of creation the added value for the educators community.

By 2018 about 64 % of the population of Ukraine became the regular internet users and 35 % of them are people aged 15 to 29 years old which is the optimal age for studying. In numbers these are about 7.35 million of people. The actual number of students in Ukraine amounts to 2.5 million of people. So the wide use of MOOCs can potentially involve up to 5 million of people into the study processes. The value of such a breakthrough in the question of the achievement of the knowledge society can’t be overestimated (Factum Group Ukraine 2017, 10-18).

As for the “knowledge society” term, it was introduced by Peter Drucker in the late 1960 s and developed by Robin Mansell and Nico Stehr 30 years later, being recognised by all the OECD members, emerging economies and even developing countries nowadays. The UNESCO world report 2005 “Towards Knowledge Societies” outlined the need of further transformation of the knowledge society onto a knowledge-sharing base, stating: “... for access to useful, relevant knowledge is more than simply a matter of infrastructure – it depends on training, cognitive skills and regulatory frameworks geared towards access to contents” (UNESCO 2005, 21). The issue of the content quality and accessibility motivated this research paper creation.

Research questions and methods

Some researchers of the online studies note that the largest number of students who have participated in online courses have done so hoping that “e-learning courses would be easier to absolve than the traditional classroom subjects” (Nagy 2015, 65). From the other hand, bad management of the teaching and learning process with the use of ICT may become stressful both for a teacher and students in case they don’t possess the necessary competences and don’t have the opportunity/time/ability to gain them. Then “the process of learning may be reduced on pure formality which will grow into alienation” (Atanasoska, Andonovska-Trajkovska, Cvetkova 2016, 147). The fact is, teachers need advanced skills and some prior training or experiences for integrating ICT in the educational process. Gaining these skills depends on a number of factors of both subjective and objective nature. The studies of T. Atanasoska and her colleagues (2016, 153) show that “the teachers use PowerPoint application in Microsoft Office mainly, and they use it every time when they are integrating ICT in the teaching process”. Glance and colleagues (2013) found out that “the main tools used in a great number of MOOCs were formative quizzes, short video formats, peer and self-assessment and discussion forums”. They consider it as a limitation to the educational abilities of MOOCs, as well as it demonstrates the lack of variety of tools necessary for the effective e-learning design. D. Laurillard (2006) found easy explanation for this phenomena more than 10 years ago: “Most staff using these technologies did not grow up with them”. The issue is that this staff teaches the generation which was born within the knowledge society and will be using ICT since the early childhood. Being the representatives of a post-USSR society suffering from constant economic instability and political drawbacks, we think that namely social and political issues are the macro level obstacles for the knowledge society enhancement.

So, taking into account the results of the previous researches the current study was aimed to answer the following questions:

- » Can the introduction of the online-education in a form of a learning management system remove some barriers for the learners on their educational path?
- » What is the difference between requirements of the Ukrainian students, foreign students and learners coming from a narrow professional field or a specific territory towards the learning outcomes, course content and the way it is presented?
- » Which factors affect the quality of the online education?

These questions were inspired by the experience of the researchers’ team in dealing with the creation of the university curriculum for foreign students and adults, as well as with participating in the professional and career development competences of a university teacher. Being an executive of the educational projects with the use of on-line resource enriched the researches team experience and observations data.

To answer these questions the following methods were applied. Using the method of a documentary analysis, the documents regulating the ICT introduction into the education in Ukraine and the EU were analysed in order to assess the importance of government regulation into the process of implementation of an online learning. During the practical implementation of the online learning system, the statistical observation and survey methods were used to compare the requirements of different groups of students towards the online-learning system and to estimate the obstacles these groups faced during the experiment.

By using MOODLE feedback analysis we obtained the results of on-line education potential for foreign students and for adults coming from the narrow professional field and being the rural residents (farmers). By means of the questionnaires and face-to-face communication we asked the users of our educational programmes about the challenges they faced during accessing the on-line learning and during the studying process itself.

Our personal observations cover the period of 7 years of teaching foreign citizens (up to 15 students each year per each member of the research team, the focus group was presented by 80 students in whole both in bachelor and master studies). The number of farmers who were involved in the FAO/EBRD specialized training program “Successful Agribusiness Grain in a Small Area” was 220 (6 modules) in 2014-2015 and 166 (4 modules) in 2015-2016. The overall duration of the educational projects implementation was 5 years (15 on-line courses in English and 2 on-line courses for farmers). It gave us the opportunity to present the experiences on how the information and communication technologies may be used in addressing challenges of a modern society while changing the teaching approaches.

The conclusions were delivered under the context of explored theoretical issues, challenges and opportunities of the knowledge society, open education and lifelong learning concepts.

Observation and analysis of results: Ukraine comparing to the EU

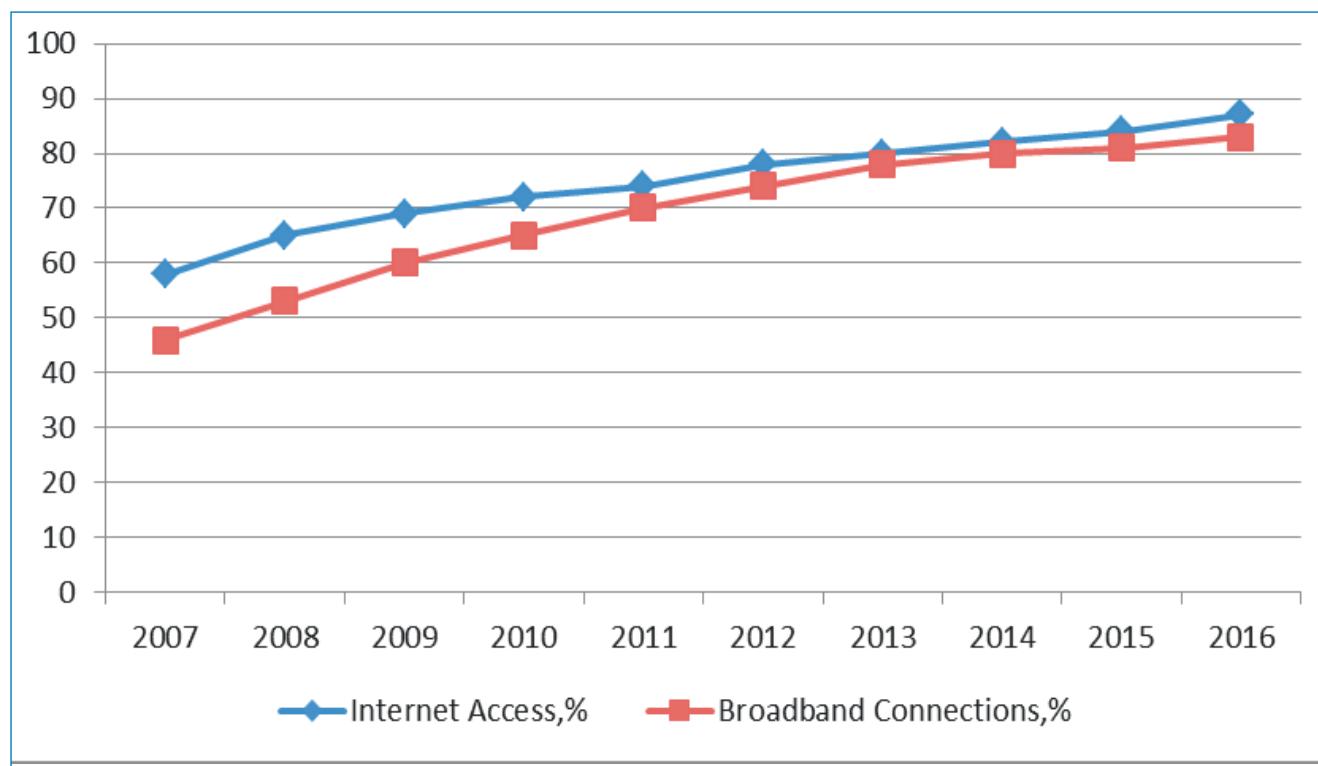
The major findings of the study are based on the analysis of the European and Ukrainian experiences in enhancing the knowledge society via open education and ICT tools development. Thus, according to the Deloitte Limited EU Funding guide (2014, 5-7) the main EU funding programmes of the 2014-2020 period are: “Horizon 2020” with a total budget of € 77.03 billion, “Connecting Europe Facility” with € 21.94 billion and “Erasmus+” with € 14.8 billion. Apart from those there are also other funding programmes for education in particular (Consumer Programme 2014-2020, Customs 2020, Fiscalis 2020, Hercule III, Internal Security Fund Component for Police Cooperation, Pericles 2020) and separately there are those aimed at the ICT development (Ambient Assisted Living Joint Technologies Programme (AAL JP), Competitiveness of Enterprises and SMEs (COSME), Fiscalis 2020, Galileo, Egnos, Horizon 2020). These statistical data show the level of financial support provided for the innovations and ICT development, as well as for education in Europe. While, according to the official Ministry of Education and

Science report, there is one computer per 27 students in state schools in Ukraine. 87 % of schools have the Internet access, 96 % of schools are equipped with some amount of the hardware (40 % of it is old-fashioned) and software (13 % of it are used without an official license).

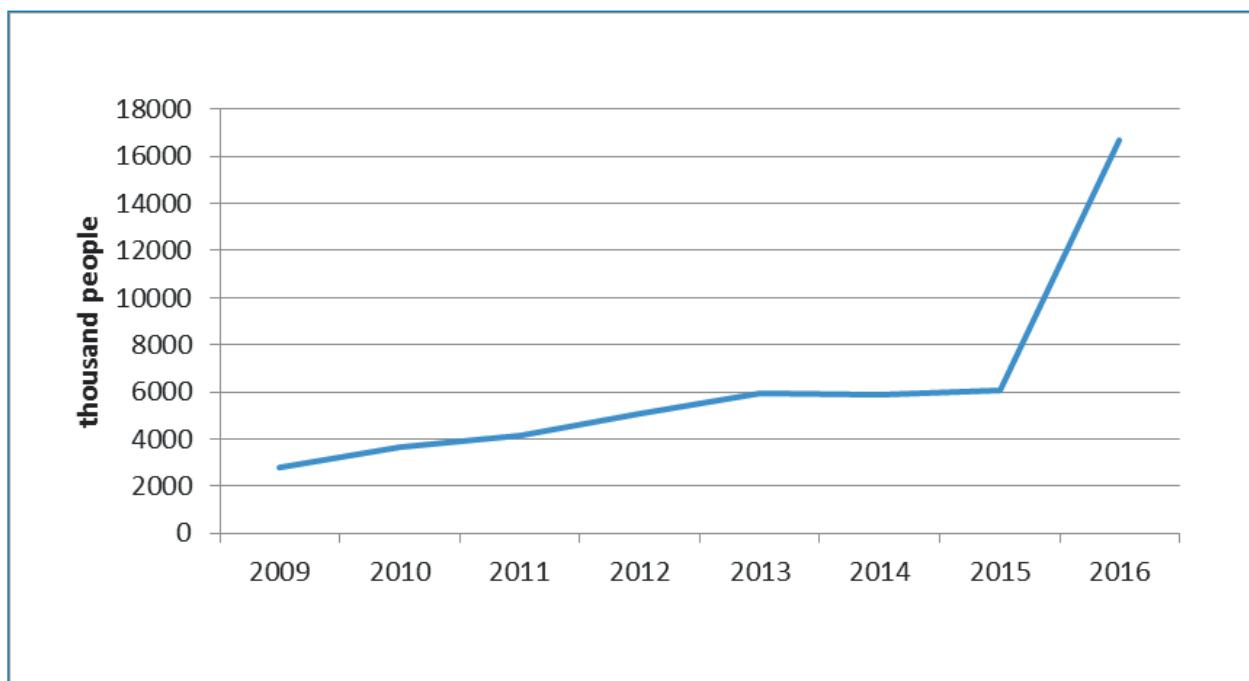
The insufficient infrastructure (number of computers, low Internet speed, relatively high costs for ICT skills training, mobile Internet traffic, Internet accessibility in rural and remote districts), low awareness in ICT potential for daily life and in applicable opportunities for advanced computer skills, weak state policy for digital society development and innovations support – all these and much more results in low computer skills and low efficiency of use of digital resources in Ukraine. Affordable and widespread broadband Internet access is very important for a knowledge-based society enhancement.

According to EUROSTAT (2017), 83 % of the households in the EU-28 had broadband access to the Internet in 2016 (see Graph 1), apart from the Ukrainian state-of-the-art (see Graph 2), which is 62 % of citizens older than 15 (Factum Group Ukraine report 2016). 97 % of such EU users were recorded in Luxembourg and in the Netherlands, while the lowest rate of 64 % households with internet access was observed in Bulgaria. More than 82 % of all EU citizens starting from the age of 16 used the Internet at least once in three months, 71 % of whom accessed it on a daily basis.

Graph 1: Internet access and broadband Internet connections of households, EU-28, 2007–2016 (% of all households)



Source: EUROSTAT, 2017.

Graph 2: Number of internet users in Ukraine, 2009-2016, thousand people

Source: State service of statistics of Ukraine, 2016.

It should be noted that similar to Ukraine, there is an urban-rural division within the EU-28 in terms of internet access. 86-88 % households in cities/towns have comparatively high access rates, while in rural areas their share is 80 %. The improving situation in Ukraine with those numbers does not mean the improvement in computer skills for the rural population though. Almost 47 % of rural households and 69 % of urban ones have the Internet access (Factum Group Ukraine 2016).

It is important to note that in the EU-27 women and men shares in the number of those who participated in education and training in the 12 months before the interview were equal. According to the official statistics, men were sensibly more likely to get new knowledge in the Netherlands and Germany, while the reverse was observed in Finland, Lithuania and Latvia. It's a common sense that younger persons (aged 25–34) would be twice more active than older workers (aged 55–64). The most interest for further training were shown by the persons with a tertiary level education (61.3 % for the EU-27 in 2011), while only 21.8 % of those with the lower secondary education were the likely to have participated in it.

Except the background education, statistical observations in the EU-27 showed the trend of three most commonly named obstacles for education and training (EUROSTAT 2011): 50 % considered the training unnecessary; 21 % claimed lack of time due to family responsibilities; 18 % complained for the conflict with work schedules.

The input of a real sector of economics into educational programs development means a lot for their learning outcomes future applicability and efficiency of their graduates at work. Thus, the

university graduates were involved in the curricula review providing their valuable and specific feedback.

Observation and analysis results: teaching foreigners and adults in Ukraine

Another inflow of those who may study using the distance learning form of education are the foreign students, whose number has been constantly increasing since 2010. Mostly these are the citizens of African and Asian countries with either rather basic academic skills in the field of computer literacy and Internet navigation. The other difficulty is that in addition to their academic background that sometimes differs from Ukrainian significantly, due to the visa issues they are not able to start the educational process in time (1st of September). Some of them may be 2 months late for the academic year beginning, which means they should start learning something themselves. Sumy National Agrarian University has launched an educational project of the on-line courses at the MOODLE platform. The need to design the English language content and then upload it to the MOODLE set the problem of the teachers' e-learning basics literacy: we had to investigate the comprehensiveness of the open education and digital tools use within the educational process. Up to 80 % of teachers cohort had their MOODLE training within next 3 years.

Students' feedback and voluntary peer-review made us consider the effectiveness of an educational course design only by one teacher. A lot of factors that define the quality of the course and its future applicability by the students should be taken into account: educational and cultural background, cognitive skills, teaching approaches used by previous teachers, places of future knowledge application (both in geographical and management-practice sense). For example, the courses content delivered to a Ukrainian group of students and to a mixed one (or up to 100 % consisting of foreign students) must be up to 50 % different, and if it refers to such courses as "Commercial Law of Ukraine" or any other course focused on Ukrainian legislation or experiences, the "international" content must occupy a bigger share.

For this, English-language literature had to be used which was absolutely absent at the Ukrainian market. The import costs of these books is usually 2.5 times higher than their original price. All these pushed the teaching staff to use as many Internet open access resources as possible facing more challenges to be learnt and solved: from intellectual property rights to technical implementation of the ICT tools into the educational process. It was a difficult and time and efforts-consuming process considering the lack of PC equipped classes, speed of the Internet, teachers' and students skills in ICT use, their motivation to do so, etc.

As to the level of satisfaction of the foreigners with the online course in MOODLE the results are presented in a Table 1. The following parameters were evaluated by the foreign students during the survey:

- Usability of the platform (UP);

- Convenience of the interface (CI);
 - Speed of work, comparing with offline study (SW);
 - Convenience of a built-in knowledge assessment system (AS);
 - Understandability of the teacher's explanations (UE);
 - Availability of explanatory documentation (AD);
- The rating scale for each parameter was from 1 to 10 points.

Table 1: Results of satisfaction assessment of the foreigners with the online course in MOODLE

Number of students that rated the online course with such a grade	Parameters						Total number of points
	UP	CI	SW	AS	UE	AD	
10	42	49	43	31	68	59	2920
9	21	18	25	22	7	14	963
8	10	10	11	16	5	4	448
7	5	2	0	8	0	3	126
6	1	2	1	2	0	0	36
5	1	1	0	1	0	0	15
4	0	0	0	0	0	0	
3	0	0	0	0	0	0	
2	0	0	0	0	0	0	
1	0	0	0	0	0	0	
Total number of points							4508/4800

It can be noticed that the level of satisfaction is rather high (93.9 % or 4508 points of the maximal available amount of 4800, in case all the students have rated all the parameters 10/10). The results show that the satisfaction of the respondents greatly depends on the level of competence of the teacher (UE). Such parameters as Availability of explanatory documentation, Convenience of the interface and Speed of work, comparing with offline study were also rated quite high. At the same time students were less satisfied with Usability of the platform in whole and Convenience of a built-in knowledge assessment system.

EBRD/FAO Project Case Study. The observations results obtained during the implementation of two phases of a specialized modular training program “Successful Agribusiness Grain in a Small Area” (financed by EBRD and FAO under the support of the “Central European Initiative” Fund) represent a low potential for on-line education and OER use for rural citizens of Ukraine. They also demonstrated low motivation and very low ICT skills.

The training program was designed for representatives of farms with a land area up to 5 thousand ha and engaged 220 + 166 participants from 7 and 10 regions of Ukraine respectively to the project phase. The majority of the registered participants consists of the farms' heads, their deputies (both

cover 57 %), agronomists, economists and engineers. The average size of participants' farms area is 997 ha. During the project a tendency to attract more representatives of the households with a small land plot had been noted.

85 % of the participants of the second phase were represented in the previous project stage. A deeper research on the topic showed that farmers if use the Internet for information search, use either news portals (as www.ukr.net or www.mail.ru) or specialised trading web-sites. More seldom advanced agriculture-targeted web-portals (as www.latifundist.com, www.fruit-inform.com or www.kurkul.com) are checked.

A specific training program was designed for each project phase containing face-to-face seminars, field trainings and an on-line course within the MOODLE platform (for example, at <http://fao.sau.sumy.ua/login/index.php>). The participants were informed about the on-line course opportunities and technicalities in live and also via direct e-mailing. The photo and video records of second phase project activities (trainings, press conferences at the regional and national levels) were placed at the project web-page (www.fao.sau.sumy.ua). On completion of each module the participants were tested on-line on mastering the theoretical and practical materials, the results of this formed each participant's score within the entire project training course. The best results of the second project phase were awarded with an educational tour to France. Because of the presence of an additional motivation factor this paper presents namely the analysis of the second project phase covering 166 farmers from 10 regions of Ukraine.

For the wide promotion of the project results and an on-line course public access, there were a project web-page and a Facebook group links, as well as an inviting banner to the on-line MOODLE course created at the Sumy NAU official page (www.sau.sumy.ua). Promo videos and texts were constantly added to the project web-site telling about the launch\closure of the modules as well as about the invitation to the on-line course. The process of registration for participation in all the modules was carried out in several ways: online through the project website (2 % of farmers used this tool), via email (only 10 %) and, mostly, via direct personal phone calls. The results of the observations demonstrate that 100 % of the farmers had the e-mail address, 70 % used it personally and only up to 30 % used it on a regular basis. Most of the project information requiring urgent farmers' feedback had to be delivered via the phone.

As for the reporting date of 02. 03. 2016 there were only 46% participants registered in MOODLE, originally coming from Sumy, Kyiv, Poltava, Odessa, Zaporizhzhya, Zhytomir, Kharkiv, Chernihiv, Lviv, Cherkasy regions of Ukraine. This number represents both urban and rural populated regions. According to the statistics of the targeted visits (1. 10. 2015 – 01. 03. 2016) there were 1867 unique visitors at the project web-site (for your information: a Ukrainian business website for farmers FARMER2B (farmer2b.sale) specializing in machines and equipment sales may get 380 visits a day, a large Ukrainian portal on the purchase of grain gets 8420 a day). The amount of traffic is got by the website depends upon the level of interest in what it is about. The project was strictly aimed at the small scale farmers who didn't surf the web much and thus were not visiting the web-site.

The project participants were also interviewed in order to obtain their feedback on satisfaction with the on-line learning process and difficulties they met. Handouts and information provided always pleased the majority of participants in terms quantity and being up-to-date, they also enriched personally and professionally the participants. It means that quality of the modules content did satisfy the majority of the participants. An overall assessment rate of the event level and its content was 4.77 points in average (maximum 5 points).

Summary

The first phase of this comprehensive study was a thorough review of the education literature focusing on issues of the e-learning concept, the Community of Inquiry theoretical framework, lifelong learning in the context of the ICT skills development, the pressing need for collaboration within educational content development. Further the authors deepen the research problem into the field of offering educational services to foreign citizens and adults by Ukrainian universities with the use of the ICT technologies.

As a describing background, the paper offers comparison of the general policy trends of ICT skills development and ICT tools support by the EU and Ukrainian government, their perception of the computer-based education under the influence of the new educational philosophy of prosumers. The main finding of this comparison is the following: the EU together with the UNO units has a strong strategy in this domain. The majority of CIS countries can't boast with something even remotely similar using rather a "got problem – started to look for the solution – while was searching, the client dealt with it somehow" approach. Namely this issue makes it difficult even to use the Internet opportunities designed and launched by other developed countries (Open Education Resources, high quality hardware/software, prosumer philosophy for getting the information you need). That is why a question for further discussion is: what is the best mode for enhancing the knowledge society in such post-USSR countries as Ukraine?

From this review, a conceptual framework of the successful computer-mediated communication with the learners was assumed basing on the experiences of the research team which were gained during the process of creation of the university curriculum for foreign students (7 years) and adults (4 years), as well as with participating in the professional and career development competences of a university teacher. The analysis of the data and observations obtained during the implementation of the educational projects with the use of on-line resource formed the following conclusions:

- On-line education is powerful tool for the learners having some barriers on their way to the university;
- The insufficient infrastructure, low awareness in ICT and advanced computer skills;
- Limited skills of teachers in the use of ICT skills for the educational process improvement limit the students opportunities for the future, as well as reduce the OER and ICT potential;

- Learners coming from the narrow professional field or a specific territory (being the rural residents or foreign citizens) have different requirements towards the learning outcomes, course content and the way it's presented;
- There is a tendency for adults to start training for improving their professional qualifications, as well as for getting a higher degree for the job promotion;
- Broad promotion of the Internet resources of the educational project, without specific skills and serious money inputs, doesn't guarantee a big number of their users, especially if the target audience come from the computer and web-marginalised territories;
- Bad management of the teaching/learning process with the use of ICT may become stressful both for a teacher and a students;
- A lot of factors define the quality of the course and its future applicability by the students.

The results gained were proven by the experiences of other teachers in Ukraine, that's why the further scientific work may lay in search of the modes of prosumers philosophy development in terms of a teacher and a student specifics. Next, there is also a need of developing the creativity in ICT use both by teachers and students, development of their critical thinking and self-managing learning skills. Our society has been fundamentally changed by the impact of the Internet which means that increasing instability of employment and professions may be reduced by the development of people competences in enhancement of the emerging knowledge society of sharing.

Acknowledgements

The authors would like to thank the European Bank for Reconstruction and Development (EBRD) and Food and Agriculture Organization (FAO) for the opportunity to participate in the two stages of the project "Successful Grain Agribusiness in a Small Area" (2014-2016), supported by "Central European Initiative". The received statistical and empirical data gathered a valuable data base for the analysis and empirical conclusions presented in this publication.

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