Title: Some results of the research conducted at the University of Silesia in the framework of the international research network IRNet

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SOME RESULTS OF THE RESEARCH CONDUCTED AT THE UNIVERSITY OF SILESIA WITHIN THE FRAMEWORK OF THE INTERNATIONAL RESEARCH NETWORK IRNET

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Abstract: This article presents a number of results of the research conducted within the European IRNet Project: International Research Network for study and development of new tools and methods for advanced pedagogical science in the field of ICT instruments, e-learning and intercultural competences. In the research described a tool was used to retrieve data on students' beliefs and expectations about ICT-enhanced learning, and their emerging needs for intercultural development. The expected result was an analysis of the students' views and attitudes towards various educational processes within the scope of their academic study, entailing ICT, intercultural and professional competences.
The study targets students from Poland and from other partner countries. The retrieved data in the research have allowed to explore the state of the art in ICT-, learning- and intercultural competences. On top of that, cross-cultural analyses will be conducted and will be compared with results, received by partners from other countries. At a later stage of project research (Work Package 2 - Work Package 7 (www.irnet.us.edu.pl) recommendations for Higher Education in the included countries will be formulated.

Keywords: e-learning, international research network IRNet, IT, e-learning and global competences, survey, educational process

INTRODUCTION

Contemporary societies are marked by new global trends - economic, cultural, technological, and environmental shifts that are part of a rapid and uneven wave of globalization. The growing global interdependence that characterizes our time calls for a generation of individuals who can engage in effective global problem solving

and participate simultaneously in local, national, and global civic life. Put simply, preparing our students to participate fully in today's and tomorrow's world demands that we nurture their global competence. (Mansilla V. B,. & Jackson A. 2014:)

1. IRNET PROJECT CONCEPT

It is evident that without an active implementation of innovative forms and methods of education, and above all, distance learning at all levels of education these objectives cannot be successfully achieved. At the same time we should identify the existing problem - the fact that e-learning methodology is not yet fully developed and specified, both within the EU and in Ukraine, Russia and Australia. One of the answers to these challenges has been IRNet project. **IRNet -** *International Research Network for study and development of new tools and methods for advanced pedagogical science in the field of ICT instruments, e-learning and intercultural competences.* The project is financed by the European Commission under the 7th Framework Programme, within the Marie Curie Actions International Research Staff Exchange Scheme. Grant Agreement No: PIRSES-GA-2013-612536 Duration of the project: 48 months1/01/2014 – 31/12/2017.

Developing and implementation of a system designed to develop IT competences of contemporary specialists, in particular future teachers, current teachers, leaders, based on the systematic use of selected Internet technologies, such as some LCMS systems (as Moodle), Massive Open Online Courses, "virtual classroom" technology, social media, other selected Web 2.0 and Web 3.0 technology positively contributes to the development of skills in the area of IT and intercultural competences. The IRNet project aims to set up a thematic multidisciplinary joint exchange programme dedicated to research and development of new tools for advanced pedagogical science in the field of ICT instruments, distance learning and intercultural competences in the EU (Poland, the Netherlands, Spain, Portugal, Slovakia) and Third Countries (Australia, Russia, Ukraine). The programme will strengthen the existing collaboration and establish new scientific contacts through mutual secondments of researchers. The main objectives of the project are: 1. to exchange expertise and knowledge in the field of the innovative techniques of education between the EU and Third Countries and suggest effective strategies of implementing new tools in their profession; 2. to analyse and evaluate social, economic, legal conditions, as well as methodologies and e-learning techniques being developed in the European Union and Third Countries involved.

The IRNet project aims to set up a thematic multidisciplinary joint exchange programme dedicated to the development of new tools for advanced pedagogical science in the field of ICT instruments, distance learning and intercultural competences in the EU, Australia, Ukraine and Russia. The programme will strengthen existing collaboration between EU partners, and 2 third country institutions of higher education through mutual secondments of researchers.

A more detailed concept of the project is described in the Project application and on the project web-site (IRNet Project Application, www.irnet.us.edu.pl)

2. THE FIRST STAGE PROJECT RESULTS IN THE FRAMEWORK OF WP2 AND WP3 IMPLEMENTATION

2.1. Research methods and instruments

During our research study the following methods, research techniques and tools have been used: Quantitative methods: 1) pedagogical monograph (research papers), 2) method of individual cases, 3) method of diagnostic survey. Qualitative methods: 1) depth interview, 2) qualitative analysis of the text (documents), 3) observation. Techniques of educational research: 1) observation, 2) interview, 3) questionnaire, 4) study and analysis of documents, 5) content analysis. The main research tools: 1) interview questionnaire, 2) questionnaire, 3) survey, 4) observation tools, 5) development of the subject dictionary, 6) research trip and visiting a partner university, 7) meeting, (video)conference, seminar, workshop, etc.

This paper describes only a part of the research conducted at the University of Silesia in Katowice. The students from different faculties and specializations participated in this research. The University of Silesia conducted the survey at the Faculty of Ethnology and Sciences of Education, among students of the humanistic specialization: Integrated Primary Education and Kindergarten Education, Kindergarten Education with Child's Development Early Support, Social-Cultural Animation with Cultural tourism, Integrated Primary Education and Pedagogical Therapy; in total 105 students took part in the survey, available on . https://el2.us.edu.pl/ankiety/index.php/198896/lang-pl

Generally, within the IRNet Project, more than 1000 students from partner universities (http://www.irnet.us.edu.pl/partners) are scheduled to take part.

2.2.Research Results Analysis

Results of the survey allow for the development of a picture of today's student in the context of educational inquiry, network activities as well as in the framework of intercultural competences development. The analysis of the data obtained at the US shows that contemporary students are active Internet users. The analysis of responses to similar questions, proposed as answers by Polish students, relating to such questions as *Evaluate to what extent you personally use the information available for students on the University (Faculty) website*, gave the following results*: I often learn a lot of new, interesting and important information for myself (48,57%), I rarely use this information. I find important information in other sources (51,43%). The next* question was *What kind information is primarily important for you as a student. What would you like to see on the website of the university (faculty) in the section for students?* The list of expected messages and information is long and varied – ranging *from "Grants for students (information*

about the Erasmus, etc.)" and "About my specialization" to "Information about the absences of teachers (Information about canceled classes)" and "All kinds of information about conferences, rector hours, canceled classes, organized events for students". The analysis of responses to questions related to main kinds and sections of information for students on the University website (faculty) that they consider most important (Multiple-answer questions) shows that the students are interested in the following information: *- employer Information and suggestions for work (66,67%), Invitation to participate in events (conferences, meetings) (60,95%), Gallery and reports from recent events (32,38%), Resources for distant learning and other educational resources (40,00%).* Analysis of responses to questions *"Where do you learn about planned university events and activities most often?" (Single-answer questions)* showed that a kind of a source such as *a University website was chosen by (24,76%) of those surveyed, University page on the social network by (41,90%), Personally from other students – by (26,67%), Personally from teachers – by (6,67%).* What, in your opinion, makes the University (Faculty) website attractive for students? Typical answers include: *Layout & Design (The simple structure), transparency, updating important information, good communication, interesting colors, interesting pictures, useful information, Photo Gallery (Gallery of events), Information on class schedule (information about events), other.*

The analysis of the answers to the question: *How do you use the social networks pages of your university (faculty) (Single-answer questions)?* shows that *12,38% students comment the social network pages of their university, 11,43% - add their content (photos, videos, etc.), Just read and watch - 76,19%. The results of* answers to the question: *What are the main purposes you reflect your activities as a student on your personal pages in social networks (awards, achievement, participation in activities, studies)* (Single-answer questions) are: *Show my achievements to teachers - 18,10%, Show my achievements to other students - 51,43%, Show my achievements to potential employers - 30,48%. The next questions were directed on analyses of an active participant of online communities (groups in social networks) of your university (faculty) (Single-answer questions). The answers were as follows: to actively participate in groups 1-3 (commenting, adding content - photos, videos, links, etc.) - 38,10%, to actively participate in three or more groups (commenting, adding content - photos, videos, links, etc.) - 12,38%, Do not participate or act just as a "spectator" 49,52%.* The next question explored the level of importance, for students, of the teachers' activities on the university site (Department) and the University pages in social networks (Single-answer questions). The students' responses were divided as follows: it is interesting what teachers do - 39,05%, Activity of teachers motivate my activity - 28,57%, Activities of other students are especially important for me - 32,38%.

Several of the questions related to the students' access to Internet and number of hours use the Internet. 100% of the students have access to the Internet (in their homes – 95, in the hostel – 3%, hot-spot connections -2%). How often do you use the Internet: 100% use every day (44,76% - 1 or 2 hours every day, 3-4 hours -

29,52%, 5-7 hours - 20,95%, 8-12 hours - 1,90%, >12 hours - 2,86%. If you have access to the Internet, with what aim do you use it most frequently? (Multiple-answer questions) - to search for course materials, to advance your own knowledge (79,05%), to participate in the e-learning course(s) (41,90%), to contact friends (e-mail, social network, programme messenger) (72,38%), for entertainment (on-line games, free surfing, watching movies) (45,71%), for file sharing (P2P) (15,24%), to develop your interests, passions (42,86%), 1 person declared that they use the Internet for work (Figure 1).
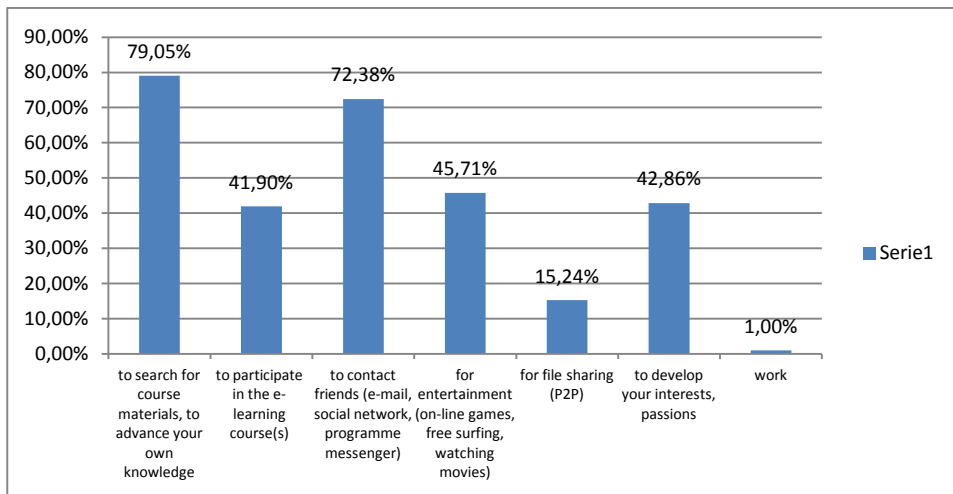

Figure 1. The most common purpose of the use of the Internet by students

Source: own research, 2014

Table 1.

Percentage distribution of answers of students from US in the group of questions aimed at identifying the preferred method for students to obtain information about educational and extra-curricular activities

Question	US
Evaluate to what extent you personally use the information available for students on the University (Faculty) website:	
I often learn a lot of new, interesting and important for myself	48,6%
I rarely use this information. I find important information in other sources.	51,4%
What kind information is primarily important for you as a student? What would you like to see on the website of the university (faculty) in the section for students?	
Curriculum timetables, cancellation of classes, schedule, bulletin board	35%
Events (conference, rector hours, organized events	25%

for students)	
Information and contacts of teachers	17%
International internships, grant, collaboration with foreign partners	4%
Science, competitions	4%
Scholarship	2%
Examination dates, colloquiums	5%
Photos	3%
I don't know	5%
Where do you often learn about planned university events and activities most often:	
University website	24,8%
University page on the social network	41,9%
Personally from other students	26,7%
Personally from teachers	6,7%

Source: own research, 2014

Table 2.

Percentage distribution of answers of students from US in the group of questions aimed at identifying the attractiveness criteria of an information and communication resource for a student as a representative of young consumers and producers of content

Question	US
Which sections of information for students on the University website (faculty) do you consider most important?	
Employer information and suggestions for work	66,7%
Invitation to participate in events (conference, contests)	61%
Photo gallery and reports on past events	32,4%
Resources for distant learning and other educational resources	40%
What, in your opinion, makes the University (Faculty) website attractive for students?	
Design and interface	28%
Information, news	41%
Communication	1%
Photographs	15%
Teachers' achievements	2%
I do not know	8%
Add your content (photos, videos, etc.)	3%
Just reading and watching	0%
Transparency	2%

Source: own research, 2014

Table 3.

Percentage distribution of answers of students from US in the group of questions aimed at detecting the level of student communication activity in a virtual environment

Question	US
How do you use the social networks pages of your university (faculty):	
Commenting	12,4%
Add your content (photos, videos, etc.)	11,4%
Just reading and watching	76,2%
What are the main purposes you reflect your activities as a student on your ınal pages in social networks (awards, achievement, participation in activities, 2s):	
Show my achievements to teachers	18,1%
Show my achievements to other students	51,4%
Show my achievements to potential employers	30,5%
Are you an active participant of online communities (groups in social networks) of university (faculty):	
Actively participate in groups 1-3 (commenting, adding content - photos, videos, links, etc.)	38,1%
Actively participate in three or more groups (commenting, adding content - photos, videos, links, etc.)	12,4%
Do not participate or act just as a "spectator"	49,5%

Source: own research, 2014

Table 4.

Percentage distribution of answers of students from US in the group of questions, related to students' attitude towards teachers' activity in the information and communication environment

Question	US
How important for you are your teachers' activities on the university site (Department) and the University of pages in social networks?	
It is interesting what teachers do	39,2%
Activity of teachers motivate my activity	28,6%
Activities of other students are especially important for me	32,2%

Source: own research, 2014

Table 5.

**Percentage distribution of answers of students from US in the group of
questions reflecting students' educational strategies**

Question	US
If you have access to the Internet, with what aim do you use it most frequently?	
To search for course materials, to advance your own knowledge	79,5%
To participate in the e-learning course(s)	41,9%
To contact friends (e-mail, social network, messenger)	72,4%
For entertainment (on-line games, free surfing, watching movies)	45,7%
For file sharing (P2P)	15,2%
To develop your interests, hobbies	42,9%
Looking for interesting materials on the Internet, you use most frequently:	
Search systems, for example, Google	84,8%
Wikipedia	53,3%
Electronic catalogues (bibliographical references and data bases)	21,9%
References to other web sites, placed on the pages	27,6%
Social networks	21,9%
Reliable and well-tested portals	33,3%
Blogs	6,8%

Source: own research, 2014

Table 6.

**Students' opinion about most effective submission of final work assignments
for checking to the instructor**

Questions	US
What methods of transferring the final works for checking to the instructor do you consider the most effective?	
By email	71,4%
By portable (external) means of information storage (for example a flash-memory stick)	23,8%
By means of the distance learning platform, for example the Moodle system or similar ones (Forum, Tasks, etc.)	31,4%
Cloud services	9,5%
Social networks	83,8%
Traditional paper forms (press, photo-copying)	27,6%
Orally during the classes	5,7%

Source: own research, 2014

Table 7.

Students' opinion about the method which they in fact use most often to submit their assignments to the teacher for correction

Questions	US
Which method do you in fact use most often to forward your assignments to the teacher for correction?	
By email	66,7%
By portable (external) means of information storage (for example a flash-memory stick)	31,4%
By means of the distance learning platform, for example the Moodle system or similar ones (Forum, Tasks, etc.)	21,0%
Cloud services	4,8%
Social networks	5,7%
Traditional paper forms (press, photo-copying)	43,8%
Orally during the classes	9,5%

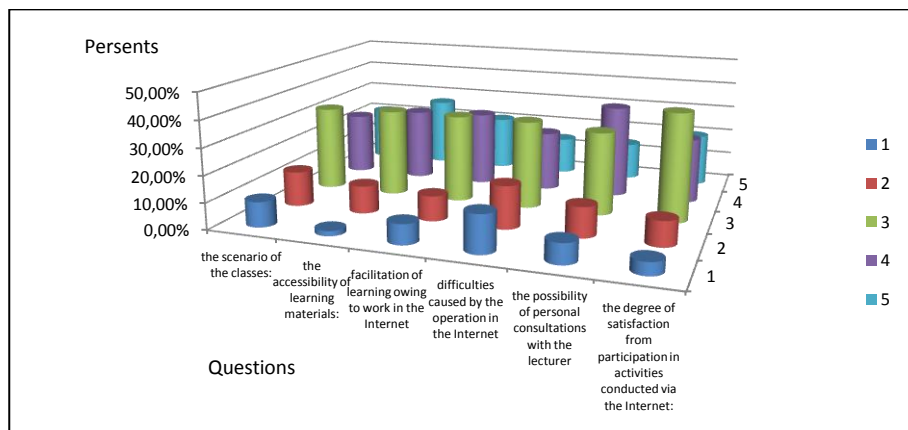*Source: own research, 2014*

Figure 2. Assessment in the scale of 0-5 where 5 is the top score (the question for students who participate in distance courses)
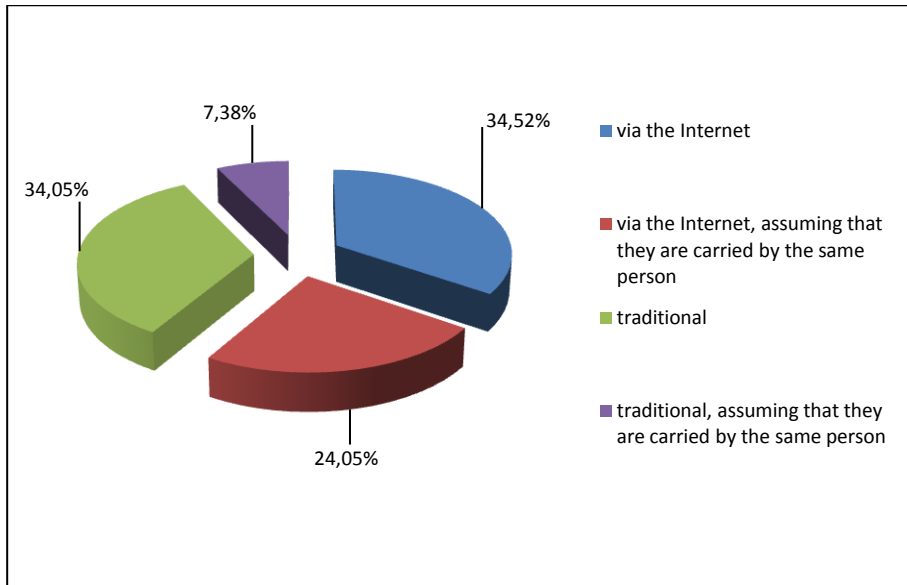
Source: own research, 2014

Figure 3. Students' preferences concerning types of classes

Source: own research, 2014

Two questions concerned methods of submitting final work for checking to the instructor that is considered the most **effective.** Answers were as follows: ***by email - 71,43%,** by portable (external) means of information storage (for example a flash-memory stick) - 23,81%, by means of the distance learning platform, for example the Moodle system or similar ones (Forum, Tasks, etc.) - 31,43%, cloud services - 9,52%, **social networks - 83,81%,** traditional paper forms (press, photo-copying) - 27,62%, orally during the classes - 5,71%.*

The answers to the second question "Which method do you in fact use most **often** to submit your assignments to the teacher for correction?", not covered by the answers to the previous question, show the following results - *66,67% students use email as a method for sending assignments, by portable (external) means of information storage (for example a flash-memory stick) - 31,43%, by means of the distance learning platform, for example the Moodle system or similar ones (Forum, Tasks, etc.) - 20,95%, cloud services - 4,76%, social networks - 5,71%, **traditional paper forms (press, photo-copying) - 43,81%,** orally during the classes - 9,52%*

Within the framework of the international project IRNet a questionnaire for academic teachers has been developed, which is conducted at the US as well as in other partner universities for developing a complementary study and comprehensive conclusions concerning students' and teachers' IT competences, their expectation regarding an quality education offer and capabilities, prospects of competitiveness on the labor market and the successful functioning in society of global competence.

CONCLUSIONS

It has been estimated that the e-Learning market in Europe is developing at an annual rate of 30%. This is a significantly higher growth rate than that experienced by traditional university courses, many universities are now heavily committed to developing, and are involved in delivering, e-learning programmes.

The causes of these changes have included moves in the economy, increased global competition, technological change and demographic trends all of which demand flexible and multi-skilled workers. In turn this flexibility, on the part of workers, is viewed by employers as promoting competitiveness, economic growth and guaranteeing employment. (Simmons J. 2006:)

Based on recent research, conducted by the author and collaboration with the project participants drawn up a conceptual framework was drawn up for joint future research. Part of this is described in WP3-WP7 of the IRNet project application and on the Project website. At the same time, the study conducted is being influenced by its own results as they become available, rapid developing of IT technologies - detailed content, methods as well as tools of further research are undergoing changes. Current achievements and conclusions will be presented in the next publications.

Acknowledgments

REFERENCES

IRNet Project website <www.irnet.us.edu.pl> (accessed 20 August 2014)

Kommers, P., Smyrnova-Trybulska, E., et al. *2014 First outcomes of WP2 research carried out within the framework of the IRNet project – international scientific network* In: Distance Learning in Applied Informatics, 10th International Scientific Conference, Conference Proceedings, Štúrovo, Slovakia, Sc. Editors: Milan Turčáni, Martin Drlík, Jozef Kapusta, Peter Švec, May 5 – 7, 2014, Constantine the Philosopher University in Nitra, Nitra, Slovakia, 2014, PP. 357-372, ISBN 978-80-7478-497-2

Mansilla V. B. & Jackson A., 2014: *Educating for Global Competence: Preparing Our Youth to Engage the World.* Council of Chief State School Officers' Ed Steps Initiative & Asia Society Partnership for Global Learning [online] at *http://asiasociety.org/files/book-globalcompetence.pdf* (accessed 30 August 2014)

Simmons J. 2006: E-learning and earning. The impact of lifelong e-learning on organisational development [online] at http://www.eurodl.org/materials/ contrib/2006/Jane_Simmons.htm (accessed 30 August 2014)

Smyrnova-Trybulska E, Ogrodzka-Mazur E., Gajdzica A., Noskova T., Pavlova T., Yakovleva O., Morze N., Kommers P., Sekret I. *Research Instrument to Study Students' Beliefs about eLearning, ICT, and Intercultural Development in their Educational Environment in the framework of the IRNet project,* In: Information and Communication Technology in Education (ICTE-2014) Conference Proceedings, Ed. Katerina Kostolanyova and Jana Kapounova, University of Ostrava, Rožnov pod Radhoštěm, 2014 pp. 254-263. ISBN: 978-80-7464-561-7

Smyrnova-Trybulska E., 2013: *'E-learning & Lifelong Learning'*, In: E-learning & Lifelong Learning, Monograph Sc. Editor Eugenia Smyrnova-Trybulska, University of Silesia, Studio-Noa, pp. 115-132, 583 p. ISBN 978-83-60071-66-3

Smyrnova-Trybulska E., Cubo S. D., Pinto P., Malach J., 2014: *'The General Concept of Analyses And Implementation Of The Legal, Ethical, Human, Technical And Social Factors of ICT and E-Learning Development In Several European Countries – International Research Network'* In: Innovation in Higher Education, Editor: Marina Romaniucha, DSTU, 2014 [In publishing]