
JOINT DEGREE PROGRAM: THE PERSPECTIVE OF EMPLOYERS

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Abstract

Purpose — *the purpose of this article is to extend discussion towards the need and importance of joint degree programs in modern universities, introducing the perspective of the employers toward this question.*

Design/methodology/approach — *the research was conducted to analyze the demand of joint degree programs from the perspective of employers, identify weak and strong aspects, opinion and demand for graduates of such programs. To achieve this purpose, a combination of theoretical and empirical methods was chosen: document analysis (previous studies, statistics) was conducted and an online qualitative survey was organized.*

Findings — *The analysis of articles, studies and statistics points out the challenges and threats faced by universities nowadays, forcing higher education institutions to find new ways to raise the quality of studies and raise the interest of employers to choose graduates from MRU, as well as the satisfaction of employers with their choice of employees. Theoretical analysis pointed out these challenges and requirements for the modern employee, summarised the challenges in preparation of IT field specialists. The conducted research results showed that the diploma of joint degree programs would not be treated as an advantage of possible employee from the perspective of employers in case some important aspects will not be taken into consideration*

by program creators. On the other hand, undeniably there are strong sides, such as knowledge in the fields of foreign language, international experience, innovativeness and creativeness of employees that would be treated as an advantage in the process of selection for positions of any technical support related positions.

Research limitations/implications — employers, whose business activities are closely related to information technology, have been invited as experts. In addition, these experts have a good understanding of the specifics of joint degree programs. The received answers can be analyzed as qualitative research results, results can be only achieved by performing an overview of experts' opinions.

Practical implications — evaluation of respondents' choices shows that more than half of employers that surveyed the joint degree program do not see an advantage. However, their indication of the shortcomings is related more to physical circumstances and developments, while highlighting the advantages associated with the program content and trained student competencies. In addition, a majority of respondents confirm that the labour market is in need of students who graduated from the joint programs. The opinion survey carried out must be taken in formulating education policy and university policy.

Originality/Value — though joint degree and double degree is kind of new trend in high education, the social implications and importance have not yet been widely investigated, the strong and weak sides were not validated by scientific research methods. This article extends to students opinion research with new data giving insights to employers opinions on the same question and even looks for the points were those opinions are the same and on which aspects it implements EU and Bologna process goals.

Keywords: social technologies, business informatics, joint degree, higher education, employers' attitude.

Research type: research paper and viewpoint.

1. Introduction

“To compete in the global market, Europe needs to generate higher quality and more innovative products and services. Higher productivity is essential to maintain our social model. New jobs and new skills are emerging, as technology, innovation, demographic change and climate strategies generate new demands. Downturn and exit strategies are accelerating economic restructuring. This will affect the type of skills needed.” (European Centre..., 2010).

Modern education cannot be separated from labour work. During an analysis of the Bologna process' — the main initiative on European Higher education harmonization — prime purposes, it is clear that together with initial structural changes in the higher education institutions, major attention is paid to harmony of science and market demands.

Nowaday the tendency is big competition among international and regional functions of higher education. International cooperation in higher education is encouraged, but the functions of regional higher education at the same time are rather atrophied: although the higher education schools mostly are using public funds, their activities are no longer directed to the public, which, after all, funds most activities of higher education institutions (*Švietimo mainų paramos fondas*, 2010).

In another document, based on international experts' insights about the future of higher education (MOSTA, 2013), it is said that intensive progress in various spheres of modern society initiated changes as well as new challenges for society and the higher education system. This situation promotes review of its creators' roles. The main factors contributing to a review of higher education for future development directions and trends are demographic changes, technological progress, changing and emerging economies. The challenge of the demographical process is about the rapidly changing structure of the world's population, the more developed regions (Europe and North America) are confronted with a low birth rate and aging problems. Similar trends have been observed in Lithuania. Meanwhile, in developing countries (Africa, Latin America, part of Asia) the population is increasing. These changes gradually distort the relationship between education supply and demand, it is becoming clear: the ratio of education providers and students is no longer the future needs of society, higher education will need to adapt to the changing age of students and respond to the learning needs of older persons. When we talk about technological progress, we mean increasing abundance of knowledge, and to receive it on a daily basis is becoming easier. An infinite variety of knowledge presents a discussion on how not to lose and keep the traditions, maintain identity, to be visible and competitive. All of this is important to assess the understanding in university decision-making in determining a participant — a student. Finally, with the economic downturn and the moving of the manufacturing process to the lower cost of labour in developed countries, youth employment was reduced. For higher education it becomes especially important to be able to provide qualified professionals who are able to easily adapt to the changing environment and impart knowledge in such a way that they are focused on long-term market and society. In order to overcome these challenges and turn them into opportunities for sustainable development in higher education, it is important to be able to change, grow and work together. Today's challenges require identification of the mission of higher education and its functions society, to assess the need to change the paradigm of study and higher education roles.

An educated work force is one of the most important prerequisites for achieving economic growth. However, a work force with a high level of education does not necessarily accelerate economic growth. The added value of education, teaching and studies depends not only on the level of education, but it depends as well on the learners themselves and the workplace (profession) where later that knowledge is realised. Therefore, improvement of compatibility between achieved education and requirements for knowledge and competencies in the work place increases the labour productivity (BGI Consulting, 2010). Higher employee education compatibility with

the requirements in the workplace leads to higher wages and meets the professional interests of the employee, as well as it is mainly the reason for the overall satisfaction of the labour force with the choice of education and vocational path (Covers *et al.*).

Goals and objectives for labour market forecasting are highly transformed along with the social and economic challenges and the changing political agenda. Due to the deep internationalization of markets, rapid technological change, economic restructuring and the transformation of the requirements of the labour market, the standard human resource planning model is no longer sufficient. This increases the importance of the labour market demand and supply compatibility in the qualitative aspect (qualifications content). Future analysis and prognosis has to be based on identification of qualifications (competences, knowledge and skills) essential for individuals to be able to successfully participate in the labour market and meet the needs of the economy. This dimension of research and forecasting is one of the components to ensure the quality of education and vocational training. Quality is ensured by formulating education programs and teaching methods, suitable and coordinated with for both existing and future labour market challenges (BGI Consulting, 2010).

Raising quality and attractiveness of studies requires major changes in universities. Universities failing to undertake these changes — for lack of motivation, inability to act or lack of resources — will create an even bigger handicap for themselves, their graduates, and countries (Commission of the European Communities, 2005). In order to meet the above requirements and to offer attractive programs, Mykolas Romeris University (further MRU) carried out several projects aimed at ascertaining what are the possibilities for implementing joint management and technology programs, where students could study not only in Lithuania, but also in foreign universities and receive at least two university diplomas. Among these studies, was a project-run feasibility study on demand of joint degree programs, part of which is introduced in this article.

The novelty and relevance mentioned above, lead us to the purpose of this article — to extend discussion toward the need and importance of joint degree programs in a modern university introducing the perspective of the employers toward this question, to analyze the demand of joint degree programs and graduates of such programs, to identify weak and strong aspects. To fulfill this purpose was chosen combination of theoretical and empirical methods: a document analysis (previous studies, statistics) conducted and online qualitative inquiry organized.

2. Theoretical Background

Analysis of the main objectives of the Bologna process (such as joint Higher Education area, a high level of education for both European citizens and foreign students, promotion of European education system competitiveness and attractiveness, highly skilled professionals trained in the European labour market, teachers and students mobility, Higher Education transparency and increasing flexibility) clearly show the general direction of the internationalization of education at various levels: mobility

of teachers and students, development of competencies required in modern European countries, higher education institutions active interaction and so on. (*Švietimo mainų paramos fondas*, 2010). Partially the Bologna Process' objectives may be connected to trends of mass higher education, including — greater emphasis on the needs of the market. Elite higher education emphasized liberal arts and prepared specialists only in some exclusive professions, such as lawyers, clergy, and medicine. The purpose of mass higher education is to meet the needs of the market and develop a variety of professions (Želvys, 2005).

There haven't been many scientific studies made on the question of dual, double or joint degree programs. Especially the lack of knowledge in the national context is felt. Though the authors of one related study confirm that:

“The analysis shows that efforts to establish joint degrees are relevant to most objectives of the Bologna Process: joint degree cooperation will boost the development of joint quality assurance, the recognition of degrees and qualifications across the European Higher Education Area, the transparency and convergence of higher education systems, student and staff mobility, the international employability of graduates, the European dimension of studies and the attractiveness of European education. The overall effect of a programme is greater than the sum of its parts. Each partner institution covers that part of the joint programme for which it is most competent and technically advanced, with the result that the same resources achieve a far greater impact.” (Tauch, Raughvargers, 2002).

Internationalization is directly connected with multilingualism. Language proficiency is a crucial factor for the employee to consider all of Europe and even the world as a place for job search. Foreign language is one of the competitive business factors. Acquired linguistic competence would increase employment and career opportunities for today's job market. Multilingual professionals are an integral part of the modern labour market (Žegunienė at al., 2012). The EU has launched a variety of multilingualism in the field of business-related issues (language requirement, choice, benefits, lack of language skills, etc.) researches. One of the first studies that the European Commission ordered is Europe-wide study called ELAN: Effects on the European Economy of Shortage of Foreign Language Skills in Enterprise. The aim was to find out what effect to the economy of Europe has the lack of language skills. The study surveyed nearly 2,000 companies from 27 EU Member States and 2 Candidate Countries. The conclusion was that 11% (195 participants in the study of small and medium-sized companies) did not contract only because of a shortage of language and cultural skills (ELAN, 2006). The study found a clear language and export performance relationship. It is concluded that export performance depends on a number of key elements of language management: a strategic approach to multilingual communication, employees for whom the foreign language is the mother tongue or who have language skills and recruitment of interpreters and translators. The study also confirmed the importance of English as the global language of business. Among the most important languages was mentioned Russian which, in addition to German and Polish languages, in Eastern Europe is used as a lingua franca, as well as French, which

is spoken in many parts of Africa. The survey revealed that almost half of the surveyed companies plan to expand into new foreign markets, enhancing the need for language (SEC, 2008). Lithuanian Higher education institutions must pay attention not only to the objective that every Lithuanian citizen would know their mother tongue and two other foreign languages at the appropriate level, but also one of the EU's objectives — to promote linguistic diversity. Language strategies should become a top management level. Companies should invest in language training, recruitment of foreign-speaking people for whom the language is their mother tongue to ensure effective communication via the Internet in different languages.

The Bologna Declaration identified what tools will be used for the creation of a common European Higher Education Area: the choice of readable and comparable degree system based on two cycles of higher education through the introduction of a credit system by promoting student and faculty mobility, quality assurance in higher education and the general strengthening and expanding European higher education idea. This gives a strong background to move forward. In summary, the study (*Švietimo mainu paramos fondas*, 2010) highlighted the heterogeneous and often controversial labor sector representatives' attitude toward higher education in Lithuania and in Europe as well as no interest in problems of higher education and the Bologna process. The study showed that, overall, employers are quite positive about high school graduates' knowledge, practical skills and core competencies corporate compliance with the requirements. Many believe that the candidate must have professional experience of other employers' guidance and good social skills. According to the survey results, it is argued that for this reason, higher education and business representatives focused on the necessary competencies, which can boost employment opportunities and improving trade performance. The general competencies include the ability to learn, make decisions, work in teams, analyze and organize information, communicate in a foreign language. Educational institutions must allow not only improving existing competencies, but also providing the opportunity to learn languages and to develop multilingual competence. It is recognized that language learning is a lifelong task. The data showed that for employers it is important that a potential employee have a Lithuanian higher education diploma (several times more important for public sector employers), but it does not seem significant to many if the issued diploma is from EU universities. The responses indicate that the majority of employers are focused on complex candidate features. On the aspect of internationalization it is clear that for the respondents much more important is professional experience abroad, though most of them were positive about studying abroad. Studying abroad for employers in particular contribute to quality education, the formation of advanced mentality, return to Lithuania to introduce new ideas, as well as in enterprises. Employers who do not agree with the benefits of study abroad, who express skepticism, often associate it with the notion that those who go abroad will not return (*Švietimo mainu paramos fondas*, 2010).

No less important is to clarify what are the needs of the market and how future students take into account those needs. According to MOSTA review (MOSTA, 2012 B, MOSTA, 2012 C), among the top ten most popular graduate programs are

exclusively social sciences (economics, law, political science, psychology, creative industries, transport engineering economics and management) and medical sciences. To summarize the change of accession preferences over the last three or four years, it can be said that social sciences are still popular, although gradually dropping. The popularity of biomedicine, technology, physical sciences rises a little. Meanwhile, according to the Lithuanian Labour Exchange barometer in 2013 (*Lietuvos darbo birža*, 2013) in the first quarter, computing professionals (programmers and computer systems specialists) are among the highest demand for specialists and lawyers; administrators, and economists — medium or low demand specialties.

Such statistical information confirms that future insights made by Association Infobalt were correct (Association Infobalt Lietuva, 2011). The survey made by the Association showed that in the coming years demand for information and communication technology (ICT) professionals in the market will far exceed supply — till the end of the period of 2011–2016, a shortage of about 6,000 professionals is expected. According to the Department of Statistics numbers given in the study, over the last five years the number of employees in the field of IT services grew by about 30 per cent. The INFOBALT study also forecasts that demand for ICT professionals will grow by 2016 to about 21,000 professionals. Meanwhile, the evaluation of accession to the Lithuanian higher education institutions shows that up to 2016 they will be able to develop only about 15,000 professionals. Having in mind the increasing mobility of workers and IT professionals, the gap may be even larger. With information technology more deeply penetrating into every area of life, demand for IT professionals will continue to grow, confidently confirms Mindaugas Glodas, CEO of Microsoft Lithuania (Association Infobalt Lietuva, 2011). According to him, future IT professionals will have a very interesting challenge — to make information technology more actively used to deal with the most acute problems of the economy, manufacturing, education, government, medicine, environmental protection, or any other field. It is even clearer what a big challenge for higher education institutions is set up and how important it is to solve it: attract and prepare good specialists, plus have knowledge that should be not purely computer science, but interdisciplinary.

Due to the same Association Infobalt Lietuva study (Association Infobalt Lietuva, 2011), despite the fact that every year Europe experiences economic difficulties and the unemployment rate reaches a record high, the number of available jobs for IT professionals is increasing. IDC forecasts that in the EU countries in 2015 the number of vacancies in the IT field can reach from 100 000 to 700 000. The European Commission's Digital Agenda, states that the ICT sector directly accounts for 5 percent GDP in the EU, its market value — 660 billion per year and a contribution to overall productivity growth is even higher. After this evaluation of the ICT sector to global competitiveness of the country, Lithuania is facing a serious challenge, because with 1.8 percent employees in the ICT sector, the country lags behind the EU in terms of ICT professionals in proportion. Meanwhile, the EU average is nearly twice as high — 3.2 percent.

“Globalisation confronts the current as well as the future employment market with new challenges, from an economic as well as a social point of view: companies are

operating internationally across Europe, and business, knowledge transfer, as well as social interaction has long spread across territorial boundaries” (Bosch, 2009). It is evident that self-contained distribution of labour resources in the labour market has a lot of weaknesses. The multi-faceted nature of the labour market and the stage of inflexibility factors on both the supply and the demand side of the labour market, may lead to large-scale long-term incompatibility (i.e., the mismatch between employer needs and offer labour market).

The prognostic research for the need for new qualification content is an integral part of the labour market forecasting system, which is mainly based on the results of the phases defined before. To conduct a qualitative research of qualification content is a very broad task because, ideally, every professional, continuing education and study orientation of the program is the object of this research and forecasting group interest. Most often the prognostic research is accomplished by institutions providing education, vocational training and studies services and (or) institutions responsible for quality assurance of education, vocational training and education system supervisory authorities, ensuring common standards of quality and trend-setter of teaching or the curriculum development guidelines (*Jungtinės tarptautinės...*, 2012).

3. Research Methodology

The purpose of research — to analyze the opinion of employers about IT related — social technologies and business informatics — joint degree master programs and evaluate the influence of different factors on the opinion of respondents.

Research methodology.

Expert opinion as a forecasting method used in almost all studies. This is the least standardized approach. But from the point of view of methodology, quality of prediction is highly dependent on the particular qualifications of the experts’ opinion and opinion usage because of its vagueness. The expert opinion may rely on a combination of different sources of information: expert experience, expert’s obtained statistical information, etc.

For the purposes of this study, as experts have been invited employers whose business activities are closely related to information technology. In addition, these experts have a good understanding of the specifics of joint degree programs.

The survey (questionnaire) was chosen to complete the research. Two questionnaire sheets were provided online at www.manoapklausu.lt — in English and Lithuanian. Both questionnaires (English and Lithuanian) were identical.

The research was conducted in September and October 2011.

The analysis of the results performed with statistical methods, calculations performed with the help of SPSS. Received in total were 15 expert’s answers. These answers can be analyzed as qualitative research results, results are only an overview of opinions.

The reliability of the questionnaire was evaluated by coefficient *Cronbach α*. First of all was analyzed matrix of primary characteristics $X[n \times N]$, where n — number

of respondents, N — the number of created statements (questions). The coefficient *Cronbach* $\alpha = 0.642$, p -level = 0.000. This leads to conclusion that statements are reliable and appropriately measure the information. Kendall concordance coefficient calculation ($W = 0.647$, p -level = 0.000) shows compatibility of respondents' opinions.

Questionnaire for employers (in English)

4 expert's answers received. Structured information:

1. *Enterprise size*: all respondents represent medium-sized enterprise (50–250 employees).

2. *Enterprise activities*:

Services — 1, education, science — 3.

3. *Activities relation to IT*:

IT is a supplied product — 2 respondents, IT is used in the daily processes — 2 respondents.

All respondents agreed that joint degree program diploma would be an advantage if they hired a person for the company.

Questionnaire for employers (in Lithuanian)

11 expert's answers received. Structured information:

1. *Enterprise size*: Large enterprise (over 250 employees) — 1 respondent, small enterprise (from 10 to 50 employees) — 3 respondents, very small enterprise (less than 10 employees) — 7 respondents.

2. *Enterprise activities*:

Manufacture — 1 respondent, services — 10 respondents.

3. *Activities relation to IT*:

IT is a supplied product — 4 respondents, IT is used in the daily processes — 7 respondents.

We also asked if joint degree diploma is an advantage in case the company is hiring an employee. 5 respondents gave ositive, 6 respondents gave negative answer.

4. Results and Findings

First of all experts were asked *what they found positive about joint degree programs*. Analysis of answers shows that as main advantages were mentioned the knowledge of foreign language (12 respondents), international and intercultural experience (12 respondents), promotion of creativity and innovativeness (10 respondents), combination of IT field knowledge with other fields (supplementary qualifications) (9 respondents).

Respondents from Lithuania as well as foreign respondents do not consider that the joint program develops the capacity to make decisions and provide a better theoretical training. Lithuanian respondents are convinced that the joint degree program allows to use modern teaching methods. Less than half of all respondents believe that the joint program will help to organize the practice-oriented studies.

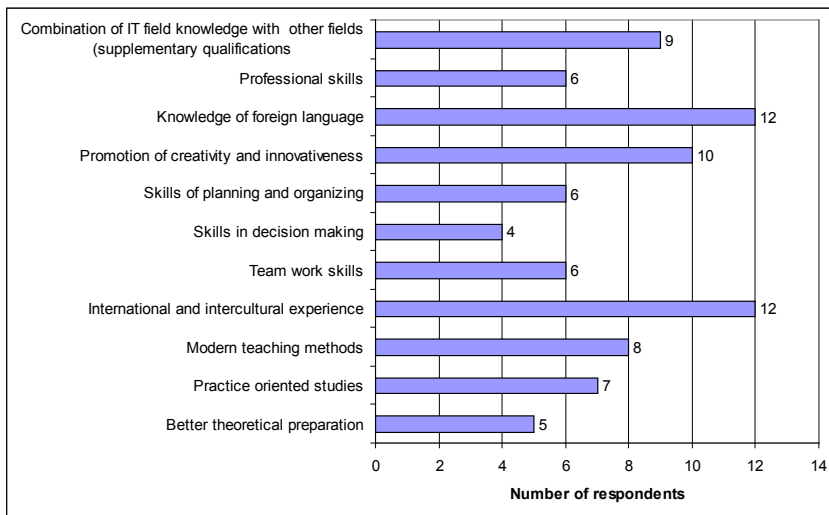


Fig. 1. Generalized answers to question “What are the advantages of joint degree programs?”

Though answers of this questions shows, that joint degree program can meet both requirements of Bologna process (it requires internationality) and requirements of employers (they wish employees would know foreign languages, would have international and intercultural experience).

The next question given to the experts was *what the negative sides of joint degree programs they found*. Most of them could mention at least some of the negative aspects, only two of them did not find any negative aspects. Summarized answers are presented in the table below:

Table 1. Answers of respondents to question “What are the disadvantages of joint degree programs?”

Nr.	Disadvantage	Number of experts
1.	No disadvantages	2
2.	Additional expenses	1
3.	More difficult to study	1
4.	More difficult to combine study process as the market requirements differ	1
5.	Disjuncture from family	1
6.	Lack of flexibility	2
7.	Probability will stay to work abroad	1
8.	Preparation and adaptation is needed	1
9.	Theoretical knowledge is not the key aspect — the most important is practice	1

Another important aspect to analyze is the possibilities to realize your theoretical knowledge in practice. That is why we asked our respondents — where could work students after finishing Joint degree Business Informatics master program. The answers are summarized in Table 2.

Table 2. Answers of respondents to question “Where could work students after finishing Joint degree Business Informatics master program?”

No.	Activity	Number of experts
1.	Project manager	4
2.	Business systems analytics	3
3.	System architect	5
4.	IT personnel manager	1
5.	Programmer	2
6.	Technical (financial) analyst	1
7.	Any IT related field	1
8.	Business systems engineer	1
9.	Technical maintenance and support	1
10.	Service development	1
11.	System maintenance and support	1

In comparison, we also asked where could realize their knowledge students from joint degree master program Social technologies with the IT related management degree.

Table 3. Answers of respondents to question “Where could work students after finishing Joint degree Social Technologies master program?”

No.	Activities	Number of experts
1.	System architects	2
2.	IT management	2
3.	Computerized management systems	1
4.	Communication with clients	4
5.	Market analyst	1
6.	Project manager	2
7.	Program creation and analysis	2
8.	IT system sale	1
9.	Efficient management of the company’s activities in virtual	1
10.	Creation of new services	1
11.	Business systems analysis	1
12.	Marketing development	1

The respondents answered that most probable graduates of Business Informatics will find work as System architect, Project manager, Business systems analytics or Programmer, while graduate from Social Technology program might apply for

any position related to Communication with clients as well as System architects, IT management, Project manager or Program creation and analysis. To look back to top required positions at the moment (Association Infobalt Lietuva, 2011; *Lietuvos darbo birža*, 2013), there is a demand for this field specialists.

As inquiry was composed to compare two IT field programs — one with specific informatics, another, with specific management knowledge — we also asked the opinion of employers, which one would be more popular among students.

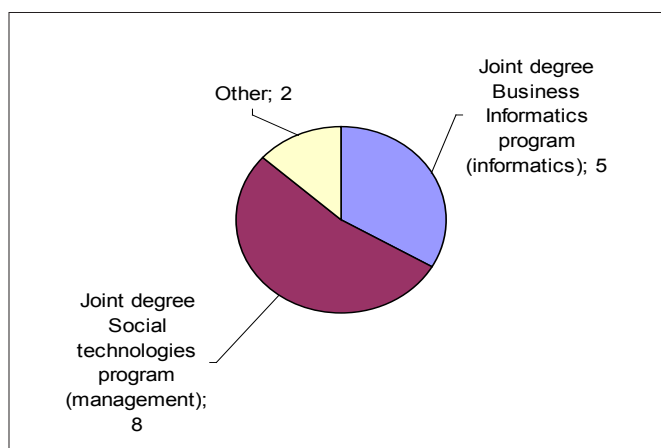


Fig. 2. Generalized answers to question “Which program in your opinion will be more attractive and would be more popular?”

The opinion of respondents also confirmed the general tendency, as they thought Social Technologies program would be more attractive for students comparing to Business Informatics program (MOSTA, 2012 B, MOSTA, 2012 C)

More inspirations about the aspects that should be taken into consideration while developing new joint degree program was given from answers to question “*Is there a demand for students who finished Joint degree program in Business informatics or Social Technologies?*”

Though answers say more positive than negative aspects, while creating this program should be taken into consideration following: subjects have to be organized as much as possible in problem-based learning and practice-oriented mode, probably even include practice as a part of a program. Another important aspect to take into consideration — cooperation with employers as well as good public relations campaign on spreading information about this type studies not only to attract students, but also to give essential knowledge for employers.

Table 4. Answers of respondents to question “Is there a demand for students who finished Joint degree program in Business informatics or Social Technologies?”

No.	Answer	Number
1.	Yes	7
2.	Yes, if the student has practical skills	2
3.	Yes, it is very progressive and useful program	1
4.	Informatics are already studying in global context. Social technologies requires joint degree program, because different countries has a different understanding and experience how to create and develop social technologies and cooperation with other education organizations would enrich it with different experience.	1
5.	Because of lack of interdisciplinary studies they are very interesting. Problem with such programs is that they are not recognized by employers if programs are not adequately presented to them. Promotion activities (to potential students and employers) for such studies are of crucial importance for success.	1

The successful solution to employment problems of young professionals is possible if the employer’s interests coincide with the interests and outcomes of the prospective employee. Therefore, it was decided to compare the expert (employers) opinion with opinions of the students concerning the positive qualities of the joint degree programs.

In parallel with expert study, was conducted a survey of Lithuanian and foreign students about the possibilities of the same two programs (Bilevičienė, Paražinskaitė, 2012). The study was conducted from 2011–08–18 to 2011–09–18, and second attempt from 2011–11–20 to 2011–12–01. Analysis was performed using statistical analysis methods, calculations were performed using SPSS statistical package. Study population was unknown, it was impossible to calculate the required sample size. The advantageous stochastic selection was chosen and the sampling error evaluated. Based on the sampling error calculation result ($\Delta = 0.08 < 0.1$) this is an allowable sampling error and the results can be considered reliable. Factorial analysis of these data was made on question “What are the advantages of joint degree programs?” The results were tested by KMO and Bartlett’s test, the result ($KMO = 0.643$, $p\text{-level} = 0.000$) showed that data is suitable for factorial analysis. Analysis by criteria of *Kaiser* and *Catell scree* excluded two main factors, which explain 44.7% of total factors’ dispersion. The matrix of factors’ weights helps to describe the factors affecting attractiveness of the study programs.

Table 5. Rotated matrix of factors for question “What are the advantages of joint degree programs?”
 (Note: Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization, a rotation converged in 3 iterations).

	Factor	
	1	2
Possibility to study in some different universities	0.564	0.232
Higher study quality	0.095	0.611
Improvement of foreign language skill in the study field	0.740	0.042
Lecturers and colleagues from different countries of the world (internationality)	0.784	-0.037
Opportunity to know new cultures, to live abroad	0.448	0.370
Other	-0.204	-0.373
Better possibilities for employment	-0.084	0.824

The first related factor is internationality. This factor is related to variables the *Possibility to study in some different universities*, *Improvement of foreign language skill in the study field*, *Lecturers and colleagues from different countries of the world (internationality)*, *Opportunity to know new cultures, to live abroad*. The second factor is quality of employment and it is related to variables *Higher study quality* and *Better possibilities for employment*.

The previous study on joint degree programs and inquiry with students (Bilevičienė, Paražinskaitė, 2012) showed that joint degree programs are relatively attractive for both international and national students. The most attractive feature of these programs is possibility to study and live abroad in a different culture. And only about a half of respondents mentioned it as a better education possibility. Though the biggest part of respondents from Lithuania believed they would face financial problems and were afraid of cultural differences. The results of the research in the context of nowadays higher education problems suggest that joint degree programs might be attractive both for students from Lithuania and abroad because of the internationality aspect, but internationality is as well aspect of attractiveness for employers.

5. Conclusions

1. Modern education cannot be separated from labour work. During analysis of main Bologna process — the main initiative on European Higher education harmonization — purposes, it is clear that together with initial structural changes in the higher education institutions, a big attention is paid to harmony of science and market demands. On the other hand, there are several factors contributing to a review of the higher education for the future development directions and trends and they are

demographic changes, technological progress, changing and emerging economies. Raising quality and attractiveness of studies requires major changes in universities. Universities failing to undertake these changes — for lack of motivation, inability to act or lack of resources — will create an even bigger handicap for themselves, their graduates, and countries. New initiatives (as joint degree programs) might be an answer to question how challenges turn into opportunities.

2. Joint degree programs are also compatible with EU official requirements programmed first of all in Bologna process as well as main tools and support for implementation are programmed in it. These objectives are high level education for both European citizens and foreign students, promotion of European education system competitiveness and attractiveness, highly skilled professionals trained in the European labor market, teachers and students mobility and these tools are : the choice of readable and comparable degree system based on two cycles of higher education through the introduction of credit system by promoting student and faculty mobility, quality assurance in higher education and the general strengthening and expanding European higher education idea. Moreover, EU sets up a trend — multilingualism and a purpose to promote linguistic diversity. And the accomplished studies confirm the importance of this to business.

3. Joint degree program process is a relation among some sides: university as supplier, student as a client and employers as a market. Employer's opinion is very important in this situation. Previous scientific studies at Lithuania shows that employers are quite positive about high school graduates' knowledge, practical skills and core competencies corporate compliance with the requirements. Though they believe educational institutions must allow not only improving existing competencies, but also providing the opportunity to learn languages and to develop multilingual competence. It is recognized that language learning is a lifelong task. On the aspect of internationalization is clear that for the respondents it is much more important professional experience abroad. Though most of them were positive about studying abroad as studying abroad for employers in particular contribute to quality education, the formation of advanced mentality, return to Lithuania to introduce new ideas, as well as in enterprises

4. Due to MOSTA (Research and Higher Education Monitoring and Analysis Centre in Lithuania) analysis students prefer social sciences and the market analysis shows that demand for IT specialists are growing in Lithuania as well as in whole Europe. Moreover, the future IT professionals will have a very interesting challenge — to make information technology more actively used to deal with the most acute problems of the economy, manufacturing, education, government, medicine, environmental protection, or any other field. It is even clearer what a big challenge for higher education institutions is set up and how important is to solve it: attract and prepare good specialists, plus having knowledge that should be not purely computer science, but interdisciplinary.

5. The generalization of qualitative analysis of Lithuanian and foreign experts' opinions about joint degree programs, suggests that more than half of the employers in the joint degree program should not see an advantage. Nevertheless, respondents saw the benefits of joint programs such as foreign language, International experiences with other countries, Such studies are to encourage innovation and creativity, IT knowledge

coordination with other areas (additional qualification). Recruiters sees more of the drawbacks of such programs as the extra cost, more complex learning process, likely to go abroad, isolation from family and so on. However, it should be noted that the alleged deficiencies are related more to the physical circumstances and developments, while highlighting the advantages associated with the program content and trained student competencies.

6. The survey showed that joint degree programs meet both some of requirements of Bologna process (it requires internationality) and requirements of employers (they wish employees would know foreign languages, would have international and intercultural experience). Though respondents do not consider that the joint program develops the capacity to make decisions and provide a better theoretical training. Lithuanian respondents are convinced that the joint degree program allows to use modern teaching methods. Less than half of all respondents believe that the joint program will help to organize the practice-oriented studies. The question about the negative aspects of the programs does not show any more significant divergence among proposed answers.

7. As theoretical and survey results confirm demand for such joint degree programs, following recommendations for program creators can be made: organize subjects as much as possible in problem-based learning and practice-oriented mode, probably even include practice as a part of a program. Another important aspect to take into consideration — cooperation with employers as well as good public relations campaign on spreading information about this type studies not only with a purpose to attract students, but also to give essential knowledge for employers.

8. The results of the research in the context of nowadays higher education problems suggest that joint degree programs might be attractive both for students from Lithuania and abroad as well as for employers because of the programs' internationality aspect.

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JUNGTINĖS STUDIJŲ PROGRAMOS: DARBDAVIO PERSPEKTYVA

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Santrauka. Šių dienų švietimas neatskiriamas nuo darbo rinkos. Pagrindinės aukštojo mokslo harmonizavimo Europoje priemonės – Bolonijos proceso – analizė rodo, kad, be es-

minių struktūrinių pokyčių, universitetuose daug dėmesio turi būti skiriama mokslo ir rinkos poreikių dermei.

Šis tyrimas buvo atliktas siekiant išsiaiškinti darbdavių požiūrį ir jungtinių programų Verslo informatika bei Socialinių technologijų vadyba absolventų galimybes bei poreikį rinkoje, identifikuoti stipriąsias ir silpnąsias puses, pratęsti ir papildyti studentų nuomonės apie jungtines studijų programas tyrimą iš darbdavio perspektyvos. Tyrimo naujumas tas, kad jungtinės bei dvigubo laipsnio programos yra naujovė švietimo srityje ir nėra daug studijų, analizuojančių jų stiprybes, silpnūybes, galimybes, grėsmes. Tikslu buvo siekiama derinant teorinį ir empirinį metodus. Atlikta teorinė dokumentų (straipsnių, mokslinių studijų bei statistinių duomenų analizė) ir parengta internetinė kokybinė apklausa darbdaviams.

Straipsnių, mokslinių studijų bei statistikos analizė rodo, kad kylantys iššūkiai ir grėsmės aukštajam mokslui skatina išsilavinimą teikiančias institucijas ne tik kelti teikiamų švietimo paslaugų kokybę, bet rasti tam naujus būdus, kaip ir rasti būdus sudominti ir pritraukti studentus į siūlomas studijų programas. Labai svarbu sukelti ir darbdavių susidomėjimą ir norą darbinti tokių studijų programų absolventus bei rūpintis, kad vėliau darbdaviai būtų patenkinti tokiais absolventais. Teorinės ažvalgos metu paaiškėjo, kokie yra pagrindiniai iššūkiai ir kokie reikalavimai bendri bei specifiniai IT srities darbuotojams, kokie iššūkiai kyla universitetui norint parengti tinkamus darbuotojus.

Atlikta kokybinė apklausa parodė, kad daug svarbiau nei jungtinis diplomas darbdaviui yra savybės, kurias, manoma, tokio pobūdžio studijos sustiprintų: tai užsienio kalbos mokėjimas, tarptautinė patirtis, inovatyvumas ir kūrybiškumas. Taip pat akivaizdu, kad baigę programas tokie darbuotojai galėtų pretenduoti į šiuo metu ypač reikalingų specialistų pozicijas. Taigi jungtinės IT srities studijų programos yra ne tik suderinamos su ES bei Bolonijos proceso reikalavimais, bet taip pat tenkintų ir darbo rinkos reikalavimus. Darbdaviai išvelgia tokių programų trūkumų, tokių kaip papildomos išlaidos, sudėtingesnis mokymosi procesas, tikimybė likti dirbti užsienyje, atskirtis nuo šeimos ir pan. Tačiau reikėtų atkreipti dėmesį, kad nurodomi trūkumai labiau susiję su fizinėmis aplinkybėmis ir pasikeitimais, tuo tarpu akcentuojami privalumai susiję su programos turiniu ir lavinamomis studentų kompetencijomis.

Taigi nors atliktas tyrimas turi savų apribojimų dėl nedidelio ekspertų skaičiaus, tai nuomonių apžvalga, į kurią reikėtų atsižvelgti formuojant švietimo politiką, universitetų strategijas bei kuriant jungtines studijų programas.

Raktiniai žodžiai: socialinės technologijos, verslo informatika, jungtinės studijų programos, aukštojo mokslo institucija, darbdavio požiūris.