

## PROJECT-BASED UNIVERSITY: THEORETICAL INSIGHTS

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### Abstract

**Purpose:** To provide a review of projects as a social force for the optimization of universities and to set the research guidelines for the integration of information and communication technologies (hereinafter ICT) into the overall university entrepreneurship strategy.

**Methodology:** Using different techniques of the analysis of scientific literature trying to justify the transformation of the object of research – a university – from organization to project-based organization in Lithuania.

#### Findings:

1. To discuss the changing attitude towards the project management;
2. To promote the concept of a university as a project-based organization;
3. To propose alternatives for the entrepreneurship education of universities through the use of ICT.

**Research limitations/implications:** A general review provided in the article on the basis of the examples of good practices of foreign countries and insights of the Lithuanian scientists reveals the need for more detailed research on the subject analysed both nationally and internationally. There is an apparent need for broader theoretical and empirical research as well as the necessity for interdisciplinary discussions in order to get a better understanding of the subject and development of perspectives thereof in social sciences.

**Practical implications:** Even though the application of technologies is mentioned in the project management term itself – „Project management is the application of knowledge, skills, tools and technologies in the implementation of a project in order to meet the needs of all participants” (PMI, 2004) – however, detailed research on the integration of the ICT into the project management and university entrepreneurship strategy is very limited. A general review of a university as a project-based organization presented in the article defines the basis for research, the core of which was selected to be an impact of ICT on the promotion of entrepreneurship of higher education institutions.

**Originality/Value:** Given the constant change of innovations and market needs, a general review of a project-based university contributes to the performed modern research of a public management structure. Also, taking into consideration the prevalence of the ICT, the application, popularity and constant development thereof, the research was chosen deliberately because of the added value created by technologies and their impact on the sustainable growth of Europe. Thus the creation of a model for entrepreneurship education of universities is being initiated in Lithuania.

**Keywords:** Project-based organization, Project-based university.

**Research type:** general review.

## Introduction

In the face of globalization universities are going through a period of changes and transformations, which leads to the necessity to focus on on-going changes by forming modern structures of public management functions. According to Aydin Ugur (2009), it is impossible to move away from innovation and market needs in today's social reality, thus, the social organisation form of the society is gradually changing (Castells, 2005). The idea of the New Public Management (hereinafter – the NPM) – to apply the principles of private business in the public sector – is based on the overall quality management, flexible management and the idea of business culture (entrepreneurial power) – is being rapidly implemented in universities. One of the factors of the NPM changing traditional functional management in the 21st century is project management (Locker, Gordon, 2005), which has become one of the main tools for the implementation of a modern organization strategy over the last decade (Neverauskas, Zdanytė, 2011). The organization of both the public as well as private sector, which is project – oriented and implements its strategic goals with the help of projects, is a project organization (Srivannaboon, Milosevic, 2008). Even though higher education institutions of Lithuania are carrying out a number of projects, relatively little research has been conducted on their compliance with strategic goals of universities and the realization of the European Union's strategic goals by projects. Taking into consideration the fact that over the 2007 – 2013 period financial support in the amount of about 2.4 billion litas is planned to be allocated from the European Union (hereinafter – the EU) Structural Funds for the development of science and studies of Lithuania<sup>1</sup>, while during the 2014 – 2020 period the EU investments into youth are planned to be increased the most as compared to other areas of funding, thus, the number of projects carried out by higher education schools is likely to rapidly increase. Project management skills have become essential in striving for both the successful implementation of projects and increase in the value thereof, as well as for success of the entire organization (Lungys, 2006). The impact of the project (–s) on the overall welfare of the organization has become the most important of all (Ramanauskienė, 2010), while Neverauskas and Zdanytė (2010) illustrate the strategic importance of project managers and project team using a term „agents of change”.

Approach to the discipline of project management is expanding and at the same time the revolutionary change of the perception of project goals and their management can be noticed. The latest project management research associates project management with a social context, emphasizes the maximum control of environment affecting the performance results (Florescu (2012), Zekic, Luka (2012), Neverauskas and Zdanytė

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<sup>1</sup>Official website of the Ministry of Education and Science of the Republic of Lithuania for the Programme 2015. Access over the internet: <<http://www.programa2015.lt/index.php/lt/p/es-strukturine-parama-lietuvos-mokslui-ir-svietimui>> [viewed on 10-07-2012].

(2011). Pursuant to the Organizational Project Management Maturity Model (OPM3) proposed by the Project Management Institute, which includes the processes ensuring organizational strategic interests in the efficient and successful implementation of projects<sup>1</sup>, the Article emphasizes the contextuality of projects and their impact on the implementation of strategic goals of universities. The aim of this work: to provide a general review of projects as social force on the optimization of universities by highlighting the impact of information and communication technologies (hereinafter – the ICT) on entrepreneurship education of higher education institutions.

### **Defining a project-based university**

Higher education institutions play an important role in the process of the creation of a knowledge-based society. In order to adapt to market needs, universities are changing the centralized business model: they are implementing reforms and introducing advanced management principles. E. Butkus, G. Viliūnas (2006), R. Adomaitienė (2002), I. Bartkutė and L. Kraujutaitytė (2007) have been engaged in the research of management reforms of higher education institutions implemented in Lithuania and models of foreign countries and research of mechanisms for the improvement of the formation, implementation and management of higher education institutions. Given the fact that the implementation of reforms in foreign universities (such as universities of the United States of America, Great Britain, Finland, etc.) was started much earlier than in Lithuania, the issues examined in works of foreign scientists reveal the challenges that the Lithuanian higher education institutions are currently faced with. The works of researchers E. V. Groves, M. W. Pendlebury and D. K. Stiles (1997), who have been researching the Great Britain’s higher education institutions, could be distinguished here as those naming the lack of the strategic planning of universities as one of the factors slowing down the reforms. The research performed by S.Ch. Anyamele (2005) is important internationally, as she analyses the Finnish universities as entrepreneurial institutions, and is engaged in the research of the increase of the effectiveness, efficiency and accountability of higher education institutions. The Article is based on the necessity declared by S. Ch. Anyamele to continuously promote the university changes by applying flexible management and accountability structures, implementing strategic planning and looking for non-state funding opportunities (Anyamele, 2005). In the view of the fact that „in striving for quality and competitiveness, each modern organization must associate its operations with the strategic documents and provisions of development programs of the EU as well as the national ones” (Pilipavičius et al, 2011), project management in universities is becoming the key tool not only for the implementation of additional funding goals, but of strategic goals as well. Project management has been widely examined in scientific literature:

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<sup>1</sup> An Executive’s Guide to OPM3. A Guide to Strategic Success Business Improvement and Competitive Advantages. PMI. Access over the internet: <<http://opm3online.pmi.org>> [viewed on 17-08-2012].

1. Project management as a measure for increasing competitive advantage was examined by K. Jugdev and G. Mathur (2006), S. Srivannaboon and D. Z. Milosevic (2008);
2. In his research, A. Jaafari (2007) distinguished key features of a project organization and continues the study of project quality management;
3. S. J. K. Cicmil (1997) examined the factors of the efficiency of project management;
4. H. R. Kerzner (2013) examined the project management maturity models.

Still, one has to admit that priority is given to the analysis of private sector project management. For instance, D. Zekic and S. Luka (2012) stated that „Managing a company as a Project is a future that has already started”, and singled out the need for the „development of information systems for modern entrepreneurial – Project management”. Still, it has to be admitted that project management in the public sector and particularly in higher education institutions has not been studied thoroughly. However, initiatives of individual researchers, like the research of the assessment of project management maturity of universities conducted by E. Meilienė and R. Čiutienė (2010), are worth mentioning here. Usually, one of the areas of project management is chosen as a research object. The project management model is not analysed in full in a respective organization, which would not only contribute to the implementation of goals of a particular organization, but also to the national goals and goals set by the European Union. The need for research of organizations of the public sector as project organizations in Lithuania is also worth mentioning here. Given the above context, in accordance with the scientific literature analysis, the influence of universities on the increase of a potential of the state economy is considered to be possible through the adoption of innovative methods, implementation of flexibility, cooperation with business sector and increase of the efficiency of project activities. An advanced growth is a development of economy based on knowledge and innovations, which includes strengthening of knowledge and innovations, improvement of educational quality, growth of scientific research, use of the possibilities provided by information and communication technologies for entrepreneurship education<sup>1</sup>. This is confirmed by the theory of coexistence and coevolution of social technologies (Nelson, R. R. & Nelson, K., 2002), which states that social technologies not only help to realize the already created physical technologies, but also allows for the emergence of new physical technologies. According to the author (Nelson, R. R. & Nelson, K., 2002), the latter process has been determined by new forms of organization, cooperation and synergies. Given the exceptional importance of project management in modern world<sup>2</sup>, the necessity for entrepreneurship education in

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<sup>1</sup> Communication from the Commission COM(2010) 2020 final “Europe 2020 A Strategy for smart, sustainable and inclusive growth”. Access over the internet: <[http://ec.europa.eu/lietuva/documents/skelbimai/2020m\\_europa.pdf](http://ec.europa.eu/lietuva/documents/skelbimai/2020m_europa.pdf)> [viewed on 01-05-2012].

<sup>2</sup> The Mayor of the New York City Michael Bloomberg officially declared the 3<sup>rd</sup> of November 2005 to be an International Project Management Day, which, upon the initiative of the Project Management Institute (PMI), the United States – based international organization uniting project managements specialists, was

universities through the use of ICT in Lithuania is emphasized. Given the sensitive situation of the national universities, in the view of demographic and competitive aspects as well as on the basis of the performed review of scientific literature, the need for joining forces in search of a common solution at the national and international levels arises.

### **Impact of information communication technologies on entrepreneurship education of higher education institutions**

Androulla Vassiliou, European Commissioner for Education, Culture and Youth, states in her presentation on the planned EU funding for 2014 – 2020 that it is necessary to take into account the labour market needs and promote the cooperation and joint work of education institutions and employers by exchanging their good practice<sup>1</sup>. The action of the promotion of entrepreneurship of individual EU countries indicated in the European Commission’s report for 2012 highlight the necessity to join forces and seek for a common solution at the EU level. A call for the submission of proposals for projects in education for entrepreneurship, encouraging to create and test entrepreneurship incentives, indicator systems and programmes<sup>2</sup>, announced by the European Commission in 2012, only reaffirms the fact that the EU has not yet formed a common mechanism for the entrepreneurship education strategy, the implementation of which was started as of the beginning of the nineties. The report on the entrepreneurship education in higher education presented by the European Commission<sup>3</sup> indicates that the EU is lagging far behind the United States of America (hereinafter – the USA) on many aspects. The efficiency of the model applied in the USA is confirmed by the rating of the Times Higher Education World University Rankings 2012-2013<sup>4</sup>. The joint project of the highest ranking Universities of Harvard and Massachusetts<sup>5</sup> (which has recently been joined by other interested universities) can be considered as an example of the promotion of competitiveness and entrepreneurship education. Specifically, the online education project called edX demonstrated how enterprising universities join together and apply information and communication technologies (hereinafter – the ICT) in order to remain competitive in the global environment. It should be emphasized that in case of these

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commemorated not only in the USA, but also in many other countries around the world, where territorial PMI divisions are opened up. (Lungys, 2006).

<sup>1</sup> Official website of the European Commissioner for Education, Culture and Youth *Androulla Vassiliou*. Access over the internet: <[http://ec.europa.eu/commission\\_2010-2014/vassiliou/about/welcome\\_en.htm](http://ec.europa.eu/commission_2010-2014/vassiliou/about/welcome_en.htm)> [viewed on 15-03-2012].

<sup>2</sup> A call for proposals for Entrepreneurship education of the European Commission (2012/C 22/06). Access over the internet: <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:022:0010:0012:LT:PDF>> [viewed on 10-05-2012].

<sup>3</sup> Report “Effects and impact of entrepreneurship programmes in higher education”, Brussels, March 2012: Access over the internet: <[http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/files/education/effects\\_impact\\_high\\_edu\\_final\\_report\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/files/education/effects_impact_high_edu_final_report_en.pdf)> [viewed on 29-04-2012].

<sup>4</sup> The Times Higher Education World University Rankings 2012–2013 powered by Thomson Reuters <http://www.timeshighereducation.co.uk/world-university-rankings/2012-13/world-ranking>

<sup>5</sup> Article “U.S. universities still remain the best”, 16-03-2012, “Lietuvos žinios”.

universities as well as other leading universities, the ICT are integrated not only in the implementation of projects, but also in the achievement of strategic goals. Given the fact that in November 2011 the European Commission took an important step by setting up a working group on entrepreneurship education<sup>1</sup>, it is likely that entrepreneurship education through the use of ICT within the project limits will be given more attention in Lithuania and the European Union as a whole. Pursuant to the introductory general review of this Article, the analysis of universities as project-based organizations as well as the research of the application of ICT in entrepreneurship education projects carried out in universities of Lithuania are planned for in Lithuania in order to create a model for entrepreneurship education through the use of ICT in Lithuanian universities. The trends for the empirical study are being formed, the key structural parts of which include the following:

1. Analysis of a university as a project – based organization;
2. The research of the application of ICT in entrepreneurship education projects carried out by universities;
3. The creation of a model for entrepreneurship education with the help of ICT.

Based on the derived intervention scheme (resources – activities – results – effect), it is speculated that treating a university as a resource and entrepreneurship education - as an activity, it would be possible to create a university management model enhancing the entrepreneurship of universities. Empirical research model was developed in order to confirm such a speculation.

The initiative of the model of innovative entrepreneurship education of universities through the use of ICT is the outcome of recommendations for the use of 2014 – 2020 EU Structural Support, which emphasizes the lack of intervention logic. Therefore, for the ensurance of successful operations, the partnership of the public and private sector as well as developments of the technologies changing the overall culture of thinking and acting in modern society combined in the model for the exploitation of synergistic effect are identified as strategic goals of the new programming period.

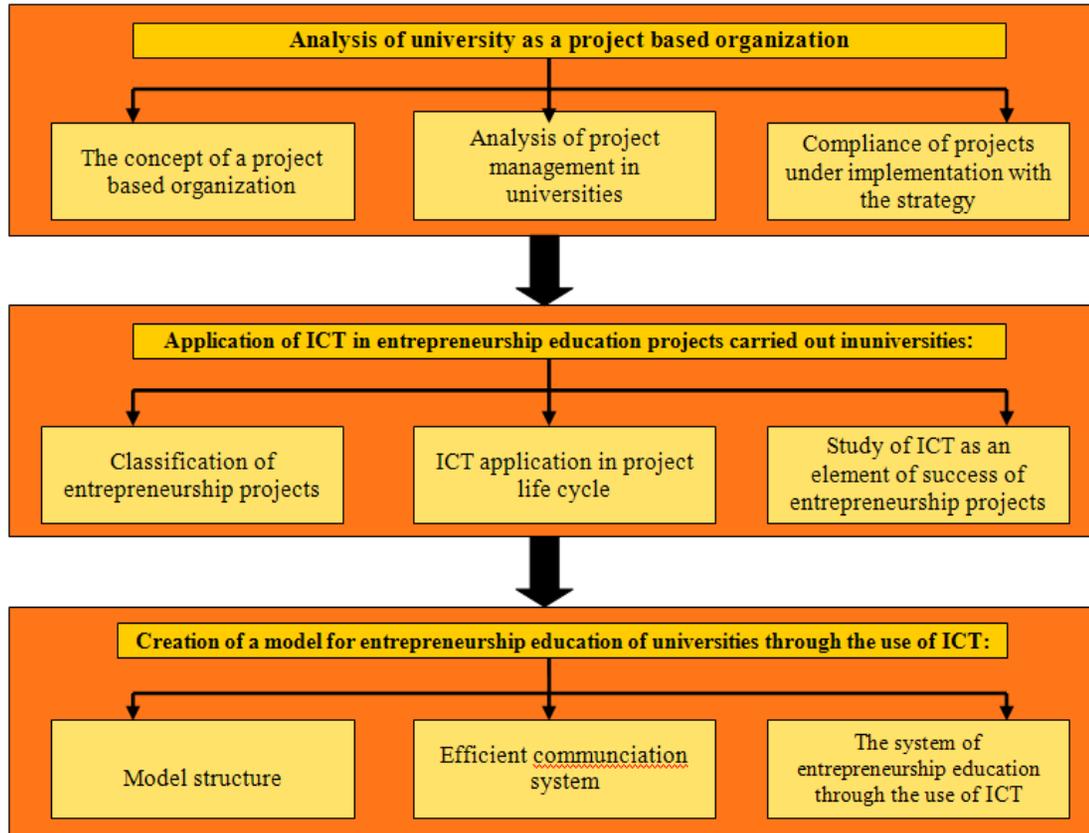
The idea of technologies is not born in the heads of individual inventors or geniuses working in a social vacuum, but it comes as a result of various social forces and processes (Williams & Edge, 1996). Given this fact, on the basis of the concept of „institutions as social technologies” (Nelson, R. R. & Nelson, K., 2002), the relation of entrepreneurship education projects carried out by higher education institutions with the ICT, the application and use thereof in project management is being emphasized. According to Fuller, a higher education institution as a place of generation of new ideas and knowledge justifies the concept of a university as a social technology (Fuller, 2003). Of course, in case of Lithuania, it is too early to apply the concept of a university as a social technology proposed by Fuller (2003), however, it cannot be denied that the current situation in

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<sup>1</sup>European Commission press release “Entrepreneurship education on the increase”. Access over the internet:

<<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/12/365&format=HTML&aged=0&language=LT&guiLanguage=en>> [viewed on 28-04-2012].

Lithuania does not form the policy of science, technologies and innovations, which in turn leads to the need for further research and applicability at the national level.



**Figure 1. Empirical research model**

## Conclusions

The example of the absorption of the EU funds portrays that the art of project management is still too difficult to master. Project management takes dominant positions in rapidly changing and globalized world, because it is a scheme of successful organization, which helps to achieve strategic organizational goals. Thus it is obvious that the perception of principles of this form of management and its application in universities through the use of ICT for the sake of strategic entrepreneurship education goals is a challenge in the sense of both scientific and practical application.

After the performance of review of scientific works analysing the issues of project management, key areas of research were distinguished, which revealed that most researchers chose the analysis of the private sector project management.

In order to provide a general review of projects as a social force for optimization of universities, the impact of information and communication technologies on the entrepreneurship education of higher education institutions is singled out.

In accordance with the derived intervention scheme (resources – activities – results – impact), treating a university as a resource by promoting entrepreneurship through the use of ICT as an activity, an empirical research model is being formed.

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