

# **INNOVATIVE TECHNOLOGIES IN ENTREPRENEURSHIP EDUCATION: THE CASE OF EUROPEAN AND ASIAN COUNTRIES**

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## **ABSTRACT**

*The use of the outdated methods and technologies that do not meet the requirements to a modern specialist in the labor market is one of the most urgent problems of modern education. The purpose of the research is to describe the current condition of the Russian entrepreneurship education in terms of the use of innovative technologies. Besides, the research is aimed at identifying the deficiencies of their implementation process that can lead to the students' dissatisfaction with learning process and to the lack of their readiness for professional activity. The authors surveyed 210 four-year students of the following universities: Elabuga Institute of Kazan Federal University, I.N. Ulianov Chuvash State University and Mari State University (The Russian Federation). The purpose of the research is to evaluate to effectiveness of the innovative methods that have been introduced into education program of four-year students, to identify their deficiencies that can somehow influence the students' readiness for professional (in our case, entrepreneurial) activity.*

*The students demonstrated general dissatisfaction with the influence of innovative technologies in universities upon education quality. They mentioned a lack of innovative methods that have been applied in practice, the insufficient technical facilities of the classrooms. Besides, it has been identified that the change in the requirements to education on the part of economic sector of labor market led to the students' dissatisfaction with their professional skills. The result of the research can influence the innovative transformations in education in the following specialties: "Enterprise and Organization Economics", "Entrepreneurship", "Economics. International business". As a result of the research, the recommendations have been formulated that can be realized by virtue of the joint work of local authorities, administration of universities and teaching staff. It is recommended to modernize the technical facilities of universities (computer classrooms, the use interactive boards). Besides, introduction of innovative methods is very important, because they will significantly increase the students' readiness for practical activity. Such methods include case-technologies, "round tables", seminars in a form of debates. The list of the subjects at each faculty needs certain revision. More innovative disciplines must be introduced that directly relate to the students' professional activity with the emphasis upon practice.*

**Keywords:** Entrepreneurship Education; Innovation Economics; Emerging Educational Technologies, National Innovation Systems, Innovative Processes, Technical Facilities; Innovation Methodologies.

## INTRODUCTION

The national innovative systems in education of the majority of the developed countries logically correspond to the speed of the progress in science and technology. While the external international ties become more and more important (due to a greater influence of globalization upon economy and education), the influence of the national education system becomes fundamentally significant (Al-Husseini & Elbeltagi, 2018; Billig & Waterman, 2014; Lundvall, 2010).

The conception of “*innovative system*” is defined both on global and national levels, on the level of industrial sector, that of technologies or region. The conception was offered simultaneously by professors Bengt-Åke Lundvall, Christopher Freeman and Richard Nelson (Zoltán, 2000). In the opinion of the majority of scholars-teachers, the core essence of innovation is every change in education system that is initiated not for the sake of it, but with the intention of favoring this very aspect and system as a whole (Boahin & Hofman, 2012; Nicholls, 2018; Isaksen & Karlsen, 2010).

The experiments with new technologies expand the set of the teaching instruments that will allow increasing the effectiveness of innovative education. For example, three technologies that are called “*emergent education technologies*”, become more and more recognized by the teachers around the world. They include mass open online-courses, personalized learning and game-based learning. The case-technology became especially popular among the universities that are oriented towards entrepreneurship (Kaminstein & Child, 2013; Kassean et al., 2015; Spector, 2014).

Entrepreneurship education is also one of the important aspects of a successful introduction of innovative education. Education programs in the field of entrepreneurship are oriented towards providing the students with knowledge and skills that are necessary for the formation of entrepreneurial competencies and increasing their competitiveness in labor market (Duval-Couetil, 2013; Kuratko, 2005; Maloney, 2017). The main aim of entrepreneurship education is to develop all necessary entrepreneurial skills for establishing the performance specifics of big, middle and small companies that will be almost completely protected from the risks and will generate an expected level of profit on annual basis (Elmuti, 2012; Mowery & Sampat, 2006; Nabi et al., 2017).

Education of the economic students of various specialties under the conditions of a dynamically changing labor market and entrepreneurial field in general requires an exclusively innovative approach (O'Connor, 2013; Sánchez, 2013; Papagiannis, 2018). The first reason that conditions the demand for such kind of education is the emergence of the so-called innovation economics. During the last forty years, innovation economics became a separate research field at the intersection of various economic fields (Antonelli, 2007; Sangeeta, 2012; Traxler, 2018). Pedagogic literature describes a close connection between entrepreneurship education, venture entrepreneurship and entrepreneurial activity (Raposo, 2011; Werner & Backes-Gellner, 2009; Yu, 2018).

The significance of the national innovative systems is also based on the fact that this conception is regarded as a basis for a long-run national economic development (Kayal, 2008). The development of business education (initially, in the USA that were followed by Europe and

other countries) is associated with recognizing its contribution into fighting unemployment (Tomasetto & Carugati, 2017). A relevant example of such kind of education can be the experience of Greece. Difficult economic situation in the country is an important factor that necessitates the investigation of the role of education in the development of entrepreneurship. That is why; the national economic universities are oriented towards the development of innovative education and, consequently, entrepreneurship education (Papagiannis, 2018).

This approach is also popular in China. The system of entrepreneurship education is characterized by the scientific and system education and researches. One of the ways to evaluate the entrepreneurship education system is the relationships between all its components: business-models, programs, teachers' training, infrastructure, culture and the experience of the state itself. For example, an effective instrument for understanding this relationship is Triple Helix model (university-government-industry).

Online and remote learning became the main forms of innovative education in the world. The remote format allows to reduce the cost of education, the time costs and to educate more people (Širok, 2017; Askhamov et al., 2016). A lot of Asian countries (for example, Singapore, China and Indonesia) are moving away from the mass full-time education (Umami, 2018). Despite of the obvious advantages of the remote education, there are significant disadvantages that include the quality of education, hidden expenses, incorrect use of technology, interaction between teachers and students. All these problems can become an obstacle on the way of searching for a worthy working place, because the employers are skeptical in relation to a specialist who mastered education program in a remote format (Valentine, 2007).

Online-learning is rooted in traditional remote education. It became popular by virtue of its potential to ensure a more flexible access to education, to provide opportunity for education at the time that is convenient for a student, wherever he or she may live. Some models of online-learning use asynchronous communication facilities (e-mail, discussion forums, and news groups) to allow the users to study at a convenient time (Gerasimova et al., 2018). Synchronous technologies (web-broadcasting, chats, audio and video-technologies) are used for conducting the lectures and meetings with groups of students. But not all online-universities can be accredited (Means et al., 2009). This represents a significant disadvantage of online-learning.

There is the main problem of the innovative education development. The "innovative" status can be granted only to those universities that are actively and effectively involved in scientific work (Gladilina et al., 2018). It is generally believed that innovative universities must carry out the scientific work on a high level, combining it with modern education technologies (Drucker, 2011).

The next problem of innovative education is the teachers' qualification and competence. They are responsible for educational environment in a classroom. Productive innovations are initiated by a teacher, who, in his turn, demonstrates the ability and willingness to apply experimental and innovative methods (Falch, 2015). There are the examples that prove that the teachers' attempts to apply innovative methods were not always successful. Some scholars believe that the teachers are either incapable to realize innovations or do not have enough knowledge for this (Nicholls, 2018).

Thus, the problem of introducing the innovative technologies at the economic faculties of the US and European universities is not fully researched, because there are still no meaningful methods that would ensure their successful realization.

The purpose of the article is to characterize the condition of the national innovative system of the USA, Great Britain and Norway on the basis of existing programs and reforms.

Besides, the article is aimed at researching the condition of the Russian innovative education system at the entrepreneurial faculties. This will allow identifying its deficiencies and their main causes.

## METHODOLOGY

### Research Sample

On the basis of the above-mentioned purposes, the empirical research was organized and carried out. It included the survey of four-year students of the Russian state universities.

The first one is Elabuga Institute of Kazan Federal University (EI KFU). The students-participants of the survey study at the faculty of economics and management by the following specialties: economics by the specialty “*Accounting, Analysis and Audit*” (realization through the use of the remote education technologies), management by the specialty “*Organization Management*”, and management by the specialty “*Logistics and Supply Chain Management*”.

The total number of EI KFU students who took part in the research is 105.

The next participant of the survey is I.N. Ulianov Chuvash State University. The survey was carried out among the students of the following specialties: “*Enterprise and Organization Economics*” and “*International Economic Relations and Business*”. The number of the students-participants from this university is 53.

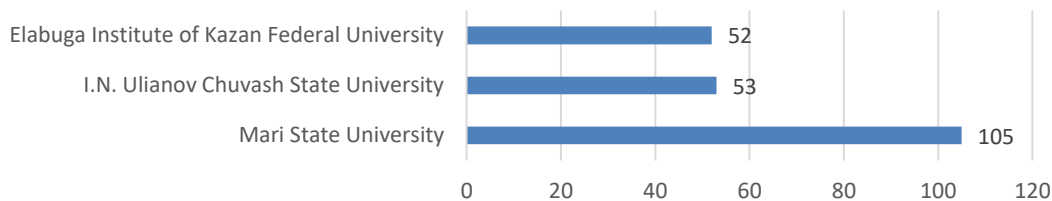
The last university that participated in the survey is Mari State University (Ioshkar-Ola). The students study at the faculty of economics by the specialty “*Enterprise and Organization Economics*”. The total number of the students from this university is 52.

The research sample consisted of 54% male and 46% female students aged between 20-21 years. The total number of the students in the survey is 210. 70% of respondents is formed by full-time students, whereas 30% by the students who study by the remote form. The possibility of error is nearly 3%.

### Research Structure and Content

The survey was conducted among the students of three Russian universities. But all of them are four-year students. The reason for the selection of this group is conditioned by the content of the whole block of questions. They are addressed to the students who are almost completely ready for entering the labor market. Senior students have a clear vision of their professional future and are able to create their own development plan. Besides, basing on their own experience, senior students are more sensitive to understanding the specifics of innovative projects. Some students are the members of the Student Council that is directly involved in the introduction of innovations in universities.

The survey was conducted through anonymous questioning. The questionnaire consists of 18 open and close-ended questions. The surveys were controlled by the deans of the faculties that participated in the research. They ensured the completeness and quality of the survey procedure, provided their help in data gathering and favored the contact with the students of remote education form. The latter group participated in the survey in electronic format (Figure 1).



**FIGURE 1**  
**THE NUMBER OF STUDENTS-PARTICIPANTS OF THE SURVEY**

The survey was carried out with the following purposes: to evaluate the students' readiness for the activity in their professional (especially, entrepreneurial) field, their readiness to promote and be involved in innovations, as well as their own evaluation of the condition of education and the degree of its innovativeness.

Close-ended questions form the main part of our survey (16 questions). The answer options included "Yes", "No", "Not sure". Besides, some questions offered to choose the answer options. All the questions can be divided into three blocks: general questions that are associated with learning process, questions about entrepreneurship and questions about innovative transformations.

The first block related to the general questions that were associated with learning process: What is your form of learning? It was followed by the question about the content of education program: Are you satisfied with the number of disciplines that relate to your specialty? The next question is associated with education programs: which education component prevails at your faculty: theoretical or practical one? General questions allowed us to obtain the main information about the respondents.

Besides, the first block includes the questions that relate to online-learning. Here is one of the questions: Would you be able to study by your specialty in online format? It was followed by the question: What is your attitude towards economic courses and universities? There were the following answer options to this question: positive/skeptic/neutral.

The second block of questions is devoted to entrepreneurial activity. Since questioning was carried out among the students of economic and entrepreneurial faculties, the introduction of these questions allowed to objectively evaluating the students' readiness for entrepreneurial activity. The first question was formulated in the following way: Do you plan to work by your specialty after graduating from university? It was followed by the question that was directly associated with one of the most important components of the innovative entrepreneurial system, namely, with entrepreneurship education: Is the notion "*entrepreneurship education*" familiar to you? The answers to this question allow evaluating the situation of entrepreneurship education among economic students. The next question relates to the training of the students for potential entrepreneurial activity: Being a senior student, can you regard yourself as being ready for entrepreneurial activity?

The third block is devoted to the introduction of innovative technologies in universities. It starts from the questions about the factors that influence the students' academic progress: What is the main factor that favors the academic progress of economic student? The next questions relate to the innovativeness level of the faculties: Can you regard the methods and technologies that are applied in your university as being innovative? Do you regard the amount of innovative technologies at your faculty (Internet access, computer classrooms, and electronic library systems) as being sufficient for successful learning?

The next question of the block relates to the methods that are used at the faculties: Which innovative methods and technologies were the most popular during your studying at university? The answer options include the main methods that are applied in universities around the world: case-study method (case-study technology), lecture-visualization, “*round table*”, seminar classes in a form of debates, “*problem*” seminar classes.

The last two questions of the final block are open-ended. Here, the students are provided with opportunity to ground their answer. The first question is devoted to the students’ readiness to perceive innovations in education in an adequate manner: Are you ready to change your way of thinking, work style and habits to allow the introduction of innovative methods into education? The second question related to the students’ willingness to participate in innovative process in university: Would you like to become a witness and participant of the innovative transformations at your faculty? Both answers needed to be grounded.

### **Expert Base of the Research**

The second group of participants was formed by the experts in the field of innovations. There were 10 experts in total, 6 women and 4 men. The expert group was represented by two business-coaches: an expert in the field of financial management and modelling of business processes, and a facilitator, the developer of business-games. The next expert-participant of the research is a candidate of pedagogical sciences, expert in the field of innovative technologies and education approaches and the author of a unique methodical guide on entrepreneurship education. The group of experts also included a federal trainer of the Association of Trainers of the Student Youth of the Russian Union of Youth, candidate of pedagogical sciences and associate professor of the department of interactive technologies in education, the head of the department of the scientific-research activity coordination “*Academy of Social Control*”, a certified mediator in business field. Significant help was provided by the following experts: the head of the center of higher and additional professional education, candidate of economic sciences and business consultant, and the leading member of the Center for Applied Economic Researches and Developments.

Besides, the expert group included the director of the scientific-education center “*Professional Competencies and Education in the field of Economics and Finances*”, doctor of sociological sciences and expert in the field of the youth policy. A significant contribution to the research was made by the head of the center of professional education “*Federal Institute of Education Development*”.

The creation of the questionnaire, its division into blocks according to the similarity of topics, the specification of questions, their maximum actualization and adaptation for the students became possible by virtue of their consultations.

### **Research Problems and Limitations**

Some limitations were identified during the research process. The main difficulty was associated with the formulation of the general conclusions on the basis of the data that were gathered. Some students who participated in the research study by the remote program that differs from the full-time form. That is why, it was impossible to obtain the answers to some questions from these students, because they related to the processes that took place in universities. However, the exclusion of this group was impossible, because education with the use of remote technologies is one of the main aspects of innovative education.

## Practical Value of Research

The results can be used to evaluate educational activity of the Russian universities and to check the economic students' readiness for entrepreneurial activity. Besides, they can be used to evaluate their satisfaction with introduction of innovations in their universities.

## RESULTS

Basing on the results of the research that was conducted among economic students, the following conclusions can be made. The majority of the members of experimental group are satisfied with the number of the field-specific subjects in the education program. This is proved by the answers of 85% respondents.

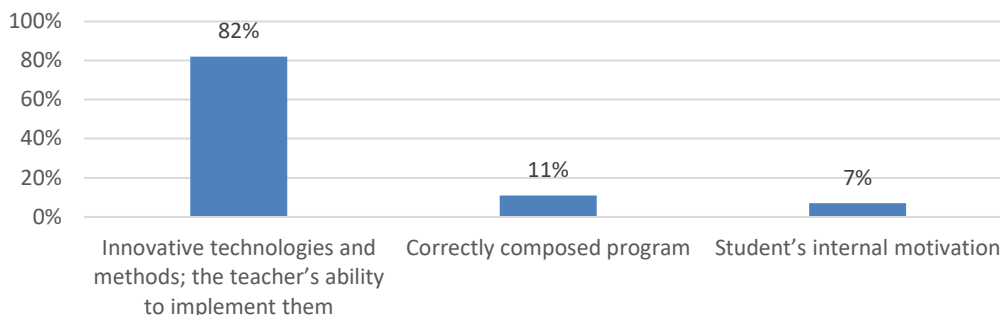
When answering the question about theoretical and practical components of the education program, 65% of respondents pointed to the prevalence of the theoretical component, whereas 35% believed that both components were equally represented. Characteristically, any of the participants didn't choose the option that related to the prevalence of practical component.

The research results allowed identifying the students' skeptic attitude towards online-learning. 72% of respondents noted that they wouldn't agree to study by their specialty in online format. When answering the question about their attitude to online-courses, 52% of the students expressed their skeptical attitude, 37% were neutral, whereas 11% of respondents positively evaluated this form of innovations. This emphasized the students' lack of trust in relation to the innovative education form that becomes an alternative to the full-time and remote formats.

The next block of questions revealed a range of problems that related to the formation of entrepreneurial competencies during the learning process. According to the results, four-year students have a rather clear vision of their future: 93% of respondents noted that they were planning their career within the field of their specialty, the rest 7% of respondents were not sure about the answer. More than 20% of the students stated that they were planning to associate their future with entrepreneurial activity. 72% of respondents do not plan to be involved in entrepreneurship, whereas 8% were not sure about the answer. However, the number of students who do not plan to become entrepreneurs is significantly higher than the number of those who do. This is proved by the analysis of the answer to the question on the readiness for entrepreneurship. The percentage of the answers to these two questions is nearly the same: 25% of the students emphasized their readiness, 70% regarded themselves as not being ready, whereas 5% of the students were not sure about the answer.

Such results are rather logical and proved by the answer to the next question that relates to the understanding of the notion of "*entrepreneurship education*". 60% of respondents stated that they were not familiar with it, 15% were not sure about the answer, whereas only 35% of respondents emphasized their awareness.

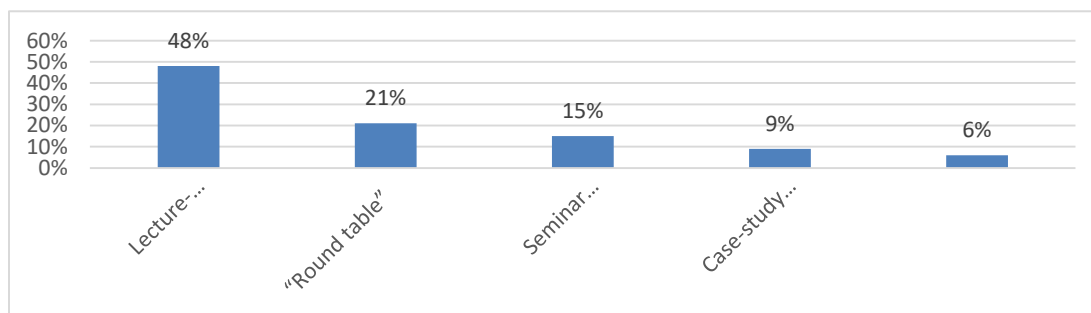
At the same time, the majority of the students are aware of the important role of innovative technologies in education. They note that innovative technologies and methods as well as the teacher's ability to implement them greatly influence the students' academic progress. This was proved by the answers of 82% of respondents, 11% of them emphasized the importance of a correctly composed program, whereas 7% pointed to the importance of the student's internal motivation (Figure 2).



**FIGURE 2**  
**THE RESULT OF THE ANALYSIS OF THE STUDENTS' ACADEMIC PROGRESS FACTORS**

66% of the students noted that they couldn't characterize the methods that were used in their universities as innovative, 5% were not sure about the answer, whereas 29% of respondents considered them to be innovative. The leading answers to the question about specific innovative methods that students encountered during their study included lecture-visualization (48%), "round table" (21%) and seminar classes in a form of debates (15%). Case-study method (case-study technology) and "problem" seminar classes turned out to be the most "unpopular" (9% and 6% correspondingly).

Moreover, only 33% of respondents regard the technological base of their universities (computer classrooms, Internet access, and electronic library systems) as being sufficient for learning. 58% of the students expressed their dissatisfaction, whereas 9% were not sure about the answer. These results can point to the problems that exist within the education system and to the outdated methods of its organization and transformation (Figure 3).



**FIGURE 3**  
**THE RESULT OF THE ANALYSIS OF METHODS THAT ARE USED IN THE UNIVERSITIES OF THE STUDENTS-PARTICIPANTS**

The analysis of the final block of questions provided the most detailed results, because the questions were open-ended in their character. The majority of the students (89%) emphasized their readiness to change their way of thinking, work style and habits in order to allow the introduction of innovative methods into education. The reasons for their readiness include the following: high demand for such specialists in labor market, guarantee of a successful entrepreneurial activity and competitiveness. Besides, 95% of respondents expressed their willingness to participate in innovative changes at their faculties. This is the highest indicator that was revealed during the research. The main motivation is conditioned by the fact that the



experience of introducing innovations will help the students in their future activity and will favor the development of the faculty and university in general (Tables 1-3).

<b>Table 1 BLOCK OF QUESTIONS NO 1</b>	
<b>Question</b>	<b>Answer options</b>
What is your form of learning?	Full-time/remote.
What component prevails in learning process at your faculty: theoretical or practical one? Underlie as necessary.	Theoretical/practical/both components.
Are you satisfied with the number of subjects in the program that relate to your specialty?	Yes/No/Not sure.
Would you agree to study online by your specialty?	Yes/No/Not sure.
What is your attitude to online-courses and economic universities?	Positive/skeptic/neutral.

<b>Table 2 BLOCK OF QUESTIONS NO 2</b>	
<b>Question</b>	<b>Answer options</b>
Do you plan to continue the activity by your specialty after graduating from university?	Yes/No/Not sure.
Is the notion “ <i>entrepreneurship education</i> ” familiar to you?	Yes/No/Not sure.
Do you regard yourself as being ready for entrepreneurial activity?	Yes/No/Not sure.

<b>Table 3 BLOCK OF QUESTIONS NO 3</b>	
<b>Question</b>	<b>Answer options</b>
Can you consider the methods and technologies that are used in your university to be innovative?	Yes/No/Not sure.
Which innovative methods and technologies were the most popular during your studying at university?	Case-study method (case-technology)/lecture-visualization/“ <i>round table</i> ”/seminar classes in a form debates/problem seminar classes.
Are you ready to change your way of thinking, work style and habits in order to allow the introduction of innovative methods into education? Please, provide reasons.	Your own answer.
Would you like to become a witness and participant of the innovative transformations at your faculty? Please, provide reasons.	Your own answer.

## DISCUSSION

The research problem is not completely new. Organizations and universities around the world carry out the surveys among the students in order to formulate current problems and tendencies of the national innovative education. The problem of effective introduction of the technologies and methods into innovative education is relevant both for the Russian system and for the systems of such countries as the USA and Norway. The Organization for Economic Cooperation and Development is especially active in conducting the researches in this field. It carries out the researches both in European countries, the USA and around the world.

A similar research was conducted by GUESSS (Global University Entrepreneurial Spirit Students' Survey). This is one of the biggest research projects in entrepreneurial field in the world. The researches were conducted during 2003-2016.

In 2016, the research was conducted in Montreal, Canada, at John Molson School of Business. All the students who attended JMSB participated in the research in electronic form. All of them were under 24 years old. The research showed that, in comparison to the results of the previous year, the number of the students who expressed their willingness to be involved in entrepreneurial activity, decreased (35% versus 38%). These results can be interpreted in comparison with the results of our own research within which the majority of the students (72%) expressed the lack of readiness to participate in entrepreneurship. Consequently, it can be concluded that the education of entrepreneurs in many countries needs to be restructured (Dawson, 2016)

Another research that was carried out by the Centre for Educational Research and Innovation in European countries also emphasized the main problem among those that were mentioned above. Despite of the great potential of the technologies for increasing motivation and education level, the influence of the digital technologies in education remains insignificant. The investments to the information and communication technologies in education institutions have not yet brought the expected results. Maybe, it is because the main attention is still focused upon reformation of the education system and creation of the adequate software and education programs (OECD, 2016). Thus, the results of the students' evaluation of the technical facilities are not unique and distinctive.

The main difference of our research from other researches in this field is its quantitative characteristics. The research involved 210 students of three Russian universities. This number is significantly smaller than the number of respondents of other researches. The reason for such difference is conditioned by the fact that the above-mentioned researches were conducted in a large-scale format and involved the students of various ages (for example, between 18-24 years old) from various countries (like the research that was conducted by OECD). Whereas our research was conducted separately (in cooperation with experts in the field of innovations).

The novelty and difference of our research is based on its manifoldness. The survey covered three different aspect of the modern economic education, namely, the students' readiness for professional activity, the evaluation and understanding of the innovative methods and technologies that have been introduced and qualitative evaluation of the education system at the faculties.

The USA are the world leader in the field of innovative systems in education. The remote education system emerged in Illinois state in 1874 (Racen, 2016). A rapid development of technologies allows to organize the process of remote learning in an efficient and successful way. Traditional universities face with their competitors. For example, the National Semiconductor University that was founded by the former poducer of semiconductors "*National Semiconductor*". The University offers education by the bachelor's and master's programs in association with traditional universities (Crainer, 2003).

One of the distinctive features of the US education is an active cooperation of business-schools and scientific-technological universities in the field of developments and commercialization of the latest technologies (e.g. Stanford, Harvard, University of Chicago и Massachusetts Institute of Technology). The innovations that are offered by business schools relate to the following fields: business organization that implies its structure and design, business practices, corporate management, etc. Moreover, Stanford University was the first to initiate

mass online-courses that allowed to embrace the audience of thousands students (Teubner, 1990).

Nowadays, the USA has three major state funding programs for small innovative enterprises: the Small Business Innovation Research Program–SBIR; the Small Business Technology Transfer Program–STTR; the Small Business Investment Company–SBIC. SBIR and STTR are special programs for the national small and middle business enterprises whose aim is to participate in the researches and developments that possess the potential for commercialization (Dasgupta, 2011). Thus, the government involves young and perspective graduates and senior students into entrepreneurial activity.

The second leader in innovations is Norway. In comparison to the majority of other countries, Norway is characterized by a high degree of economic openness. During the development of the Norwegian higher education system, the main problem was to create an integrated system that would be characterized by the variety of types and duration of courses. This would stimulate the students' mobility between institutions and learning types (Dysthe & Engelsen, 2011)

Over the last years, Norway has become one of the leading countries in terms of the availability of technologies in education institutions (Krumsvik, 2006). The main changes in Norway took place in 2002, following the major reform in the field of higher education "*Quality Reform*". It was a direct consequence of the Bologna process and included system changes. The need for its implementation was conditioned by the growth of demand for more qualified workers (Arnesen, 2000).

Traditionally, the majority of the Norwegian graduates obtained the work that corresponded to their qualification without any assistance on the part of the national employment service or higher education institutions. However, the growing rate of unemployment among graduates aroused the concern of universities. Many higher education institutions initiated special course and programs that taught the students to quickly and effectively find suitable work. As a rule, they provided information on the vacancies as well as the instructions on the procedure of applying for a certain position (Dysthe & Engelsen, 2011).

One of the newest innovative programs in Norway is "*Young Sustainable Impact Innovation Program 2018*". The students are offered to participate in the program in order to create a start-up that would favor economic development. The best students become the members of international teams that consist of 3 persons. The program is designed as online-course that needs to be mastered within 4.5 months. After that, a trip to Oslo is organized in order to meet with team members, investors and mentors. This program is aimed at attracting the best minds among economic students. It stimulates them to participate in entrepreneurial activity. Besides, it implies the use of the innovative education form, namely, online-learning that will be very convenient for the students from different Norwegian and world regions (Young sustainable impact, 2018).

The third leader in innovations is the Great Britain. A high level of competition in the market of education institutions leads to the need for development and maintaining of the programs that help to involve and keep qualified teachers and students who study on a fee-paying basis (Hewitt-Dundas & Roper, 2017)

An active British position in the international market of educational services stimulates the introduction of the innovative programs and refusal of the outdated ones. One of the characteristic features of the innovations in British education is cooperation between universities, enterprises and big companies. Besides, innovative education is characterized by the interaction

with international markets and by a high degree of business involvement. This allows introducing innovations into university programs in a more effective way, because they are composed in accordance with economic needs (Brown, 2009).

During 2016-2017, the British government offered “*Teaching Excellence Framework*” program. In fact, this is the evaluation of the quality of students’ learning in universities and other higher education institutions by the state. The implementation of the program is planned for 2020. TEF ratings will be based on the statistical data that will include the results of the survey of the students’ satisfaction and the employment rate among graduates. The indicators will be measured in the following directions: the quality of education, educational environment, the students’ results and their academic progress. This program will help to bring teaching process to the innovative level. Thus, the program stimulates the teachers to search for new methods and to increase their own qualification (Department for Business Innovations & Skills, 2016).

When evaluating the innovations in European countries, it should be noted that Austria, Ireland, Luxembourg, Belgium, France and the Netherlands are characterized as “*innovative followers*”. In comparison to the innovation leaders, the innovative indicators of these countries are lower, but they are higher than the average level in EU countries. Ireland and Austria are the most rapidly developing countries in this group. However, the research that was conducted in 2008 by the European Innovation Scoreboard, shows that the USA are still ahead of the EU in terms of innovations (Tarman, 2016).

Cyprus, Estonia, Slovenia, Czech Republic, Portugal, Greece and Italy are characterized as “*moderate innovators*”. Innovative indicators of these countries are lower than the average level in the EU. The lack of innovative technologies is in the direct proportion to the economic problems of these countries. A similar problem exists in the countries of the post-Soviet space. Possible reasons include crisis phenomena in economy, partial dependence on the Western economy, underdevelopment and low effectiveness of science, prevalence of the traditional and outdated education methods (Tarman, 2016).

## CONCLUSIONS

The total number of the participants of the research is 210 economic students. The research showed that the formation of the professional potential of a future graduate requires innovative changes in the structure and content of education programs. A significant part of the program of economic faculties is based on theoretical knowledge. This serves as a constraint for the development of innovative education system. This is illustrated by a significant discrepancy of the indicators that relate to the future professional activity: more than 20% of students noted that they planned to associate their future with entrepreneurial activity, whereas 72% of respondents do not plan (8% of students were not sure about the answer).

We can become convinced in the students’ openness for learning through the new technologies and methods that favor the formation of a specialist who possesses a qualitatively new professional level. The majority of the students (98%) emphasized their readiness to change their way of thinking, work style and habits in order to allow the introduction of innovative methods into education. Moreover, 95% of students are ready to directly participate in their implementation.

However, the main problem is the unsuitability of the education programs for training of such specialists. Generally, the students have an already formed vision of their future career, but they are still not ready to participate in entrepreneurial activity due to the insufficient education

level and absence of the practical skills. Thus, there is a discrepancy between the traditional education methods and forms and the current social-economic conditions of the society development that have generated a range of innovative processes.

The requirements of economic sector of the labor market in relation to education have changed (in our case, in business and entrepreneurial fields). There is a need for an individual who is able to consciously and independently define his/her activity, to self-regulate, to adequately evaluate potential risks and who will be extremely interesting for potential employers or potential business-partners. Training of such specialists is possible only through a qualitative introduction of entrepreneurship education technologies. At the same time, no innovative methods will be possible without the improvement of the technical facilities of universities. Only 33% of respondents regard the technical base of their universities as being sufficient for learning, whereas 58% pointed to their dissatisfaction with this aspect (9% were no sure about the answer).

The results of the research can be used by the administration of universities where the reproach was conducted. They will allow revising the programs in the following specialties: “*Enterprise and Organization Economics*”, “*Entrepreneurship*”, “*Economics*”, “*International Business*”. Besides, the results can stimulate to modernize technical facilities of universities, to introduce innovative methods (case-technologies, “*round tables*”, seminars in a form of debates) into learning process, to improve methodical developments and to introduce new subjects. These measures can be realized through the joint efforts of the local authorities, university administration and the teaching staff of faculties.

## REFERENCES

- Al-Husseini, S., & Elbeltagi, I. (2018). The role of knowledge sharing in enhancing innovation: A comparative study of public and private higher education institutions in Iraq. *Innovations in Education and Teaching International*, 55(1), 23-33.
- Antonelli, C. (2007). The economics of innovation: From the classical legacies to the economics of complexity. *Economics of Innovation and New Technology*, 18(7).
- Arnesen, C. (2000). Higher education and graduate employment in Norway. *European Journal of Education*, 35(2).
- Askhamov, A.A., Konyshva, A.V., & Gapsalamov, A.R. (2016). Use of e-resources of the learning environment in teaching mathematics to future engineers. *International Journal of Environmental and Science Education*, 11(5), 673-684.
- Billig, S.H., & Waterman, A.S. (2014). *Studying service-learning: Innovations in education research methodology*. Routledge.
- Boahin, P., & Hofman, W.A. (2012). Implementation of innovations in higher education: The case of competency-based training in Ghana. *Innovations in Education and Teaching International*, 49(3), 283-293.
- Brown, R. (2009). *The role of the market in higher education*.
- Crainer, S. (2003). Corporate views of university. *Management Skills and Development*.
- Dasgupta, M., Gupta, R.K., & Sahay, A. (2011). Linking technological innovation, technology strategy and organizational factors: A review. *Global Business Review*, 12(2), 257-277.
- Dawson, A. (2016). *Global university entrepreneurial spirit students' survey (GUESSS)*. Student entrepreneurship at the John Molson School of Business. Montreal, Canada, 2016 Report.
- Department for Business Innovations & Skills. (2016). *Success as a knowledge economy: Teaching excellence, social mobility and student choice, presented to parliament by the secretary of state for business, innovation and skills by command of her majesty*.
- Drucker, P. (2014). *Innovation and entrepreneurship*. Routledge.
- Duval-Couetil, N. (2013). Assessing the impact of entrepreneurship education programs: Challenges and approaches. *Journal of Small Business Management*, 51(3), 394-409.

- Dysthe, O., & Engelsen, K.S. (2011). Portfolio practices in higher education in Norway in an international perspective: macro, meso and micro-level influences, *Assessment & Evaluation in Higher Education*, 36(1), 63-79.
- Elmuti, D., Khoury, G., & Omran, O. (2012). Does entrepreneurship education have a role in developing entrepreneurial skills and ventures' effectiveness? *Journal of Entrepreneurship Education*, 15(1), 83-98.
- Falch, T., & Mang, C. (2015). Innovations in education for better skills and higher employability. *European Expert Network on Economics in Education*, 4-7.
- Gerasimova, V.G., Melamud, M.R., Tutaeva, D.R., Romanova, Y.D., & Zhenova, N.A. (2018). The adoption of e-learning technology at the faculty of distance learning of Plekhanov Russian University of economics. *Journal of Social Studies Education Research*, 9(2), 172-188.
- Gladilina, I., Yumashev, A.V., Avdeeva, T.I., Fatkullina, A.A., & Gafiyatullina, E.A. (2018). Psychological and pedagogical aspects of increasing the educational process efficiency in a university for specialists in the field of physical education and sport. *Espacios*, 39(21).
- Hewitt-Dundas, N., & Roper, S. (2017). Innovation in UK higher education: A panel data analysis of undergraduate degree programmes, *Research Policy*, 47(1), 121-138.
- Isaksen, A., & Karlsen, J. (2010). Different modes of innovation and the challenge of connecting universities and industry: Case studies of two regional industries in Norway. *European Planning Studies*, 18(12), 1993-2008.
- Kaminstein, D., & Child, J. (2013). *Innovations in education, knowledge, organization, and management: Building on the work of Max Boisot*.
- Kassean, H., Vanevenhoven, J., Liguori, E., & Winkel, D.E. (2015). Entrepreneurship education: A need for reflection, real-world experience and action. *International Journal of Entrepreneurial Behavior & Research*, 21(5), 690-708.
- Kayal, A.A. (2008). National innovation systems a proposed framework for developing countries. *International Journal of Entrepreneurship and Innovation Management*, 8(1), 74-86.
- Krumsvik, R. (2006). The digital challenges of school and teacher education in Norway: Some urgent questions and the search for answers. *Education and Information Technologies*, 11(3-4), 239-256.
- Kuratko, D.F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship: Theory and Practice*, 29(5), 577-597.
- Lundvall, B.A. (2010). *National systems of innovation: Toward a theory of innovation and interactive learning*, (2<sup>nd</sup> Edition). Anthem press.
- Maloney, W.F. (2017). *Revisiting the national innovation system in developing countries*. Policy Research Working Paper. World Bank, Washington, DC.
- Means, B., Toyama, Y., Murphy, R. (2009). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*.
- Mowery, D.C., & Sampat, B.N. (2006). *Universities in national innovation systems*. 8-17.
- Nabi, G., Liñán, F., Fayolle, A., Krueger, N., & Walmsley, A. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda. *Academy of Management Learning & Education*, 16(2), 277-299.
- Nicholls, A. (2018). *Managing educational innovations*. Routledge.
- O'Connor, A. (2013). A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes. *Journal of Business Venturing*, 28(4), 546-563.
- OECD (2016). *Innovating education and educating for innovation: the power of digital technologies and skills*. OECD Publishing, Paris.
- Papagiannis, G.D. (2018). Entrepreneurship education programs: The contribution of courses, seminars and competitions to entrepreneurial activity decision and to entrepreneurial spirit and mindset of young people in Greece. *Journal of Entrepreneurship Education*, 21(1), 1-21.
- Racen, L. (2016). *The evolution of educational innovation*. Brandman University.
- Raposo, M., & Do Paço, A. (2011). Entrepreneurship education: Relationship between education and entrepreneurial activity. *Psicothema*, 23(3), 453-457.
- Sánchez, J.C. (2013). The impact of an entrepreneurship education program on entrepreneurial competencies and intention. *Journal of Small Business Management*, 51(3), 447-465.
- Sangeeta, N.D. (2012). ICT and web technology based innovations in education sector. *Turkish online journal of distance education*, 13(4), 256-268.
- Širok, K., & Kakkonen, M.L. (2017). Innovations in education. *Southeast Finland University of Applied Sciences Ltd*, 51-60.

- Spector, M. (2014). Emerging educational technologies: Tensions and synergy. *Journal of King Saud University*, 26(1).
- Tarman, B. (2016). *Innovation and Education*, Gazi University.
- Teubner, G. (1990). *How the law thinks*. Selforganization: Portrait of a Scientific Revolution. Boston: Kluwer.
- Tomasetto, C., & Carugati, F. (2017). *Social influence and diffusion of innovations in education. Impact of e-Commerce on consumers and small firms*. Routledge.
- Traxler, J. (2018). *Distance learning-predictions and possibilities, challenges and future trends of distance learning*.
- Umami, I. (2018). Moderating influence of curriculum, pedagogy, and assessment practices on learning outcomes in Indonesian secondary education. *Journal of Social Studies Education Research*, 9(1), 60-75.
- Valentine, D. (2007). Distance learning: Promises, problems, and possibilities. *Online Journal of Distance Learning Administration*, 5(3).
- Werner, A., & Backes-Gellner, U. (2009). Entrepreneurial signaling via education: A success factor in innovative start-ups. *Small Business Economics*, 29, 173-190.
- Young Sustainable Impact (2018). Retrieved from <http://ysiglobal.com/program>
- Yu, C.W. (2018). Understanding the ecosystems of Chinese and American entrepreneurship education. *Journal of Entrepreneurship Education*, 21(2), 1-18.
- Zoltán, J.A. (2000). *Regional innovation, knowledge, and global change*. Routledge.