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THE NECESSITY OF BUILDING ENTREPRENEURIAL ECOSYSTEMS IN THE EDUCATIONAL SYSTEM OF SMALL POST-TRANSITION DEVELOPING ECONOMIES FOR THE FOURTH INDUSTRIAL REVOLUTION

NEOPHODNOST IZGRADNJE PREDUZETNIČKOG EKOSISTEMA U OBRAZOVNOM SISTEMU MALIH POSTTRANZICIONIH EKONOMIJA U RAZVOJU U DOBA ČETVRTE INDUSTRIJSKE REVOLUCIJE

Summary: *Youth unemployment rate in Bosnia and Herzegovina (BiH) is one of the largest in the world. A high percentage of unemployed and inactive young people is the result of on the one hand, insufficiently rapid economic development of small post-transition economies and on the other hand, the mismatch of supply and demand in the labor market. In the long run, reformed modern formal education at all levels, as well as non-formal education, particularly entrepreneurship and STEAM education, could make a significant contribution to economic growth and development of small post-transition developing economies, by strengthening the entrepreneurial ecosystem of educational institutions at all levels and the development of entrepreneurship. The goal of the research is, through the review of empirical studies, to analyze successful practices of applying entrepreneurship education and building the entrepreneurial ecosystem in primary, secondary and higher education and modeling strategic directions of curriculum reforms at all levels of the education system in small post-transition developing economies, with a focus on the reform of the education system of higher education in the Republic of Srpska and Bosnia and Herzegovina. We used historical method, method of classification, method of analysis and synthesis, and a case study. In the case study, on the example of the University of Banja Luka (UNIBL), we can conclude that UNIBL still does not have the characteristics of entrepreneurship university and that the reform of the University is necessary.*

Keywords: entrepreneurship education, entrepreneurial ecosystem, education reform, curriculum reforms

JEL classification: I21, I23, L26

Rezime: Stopa nezaposlenosti mladih u Bosni i Hercegovini jedna je od najvećih u svijetu. Visok procenat nezaposlenih i neaktivnih mladih posljedica je s jedne strane, nedovoljno brzog ekonomskog razvoja malih postranzicionih ekonomija i s druge strane, neusklađenosti ponude i tražnje na tržištu rada. U dugom roku, reformisano moderno formalno obrazovanje na svim nivoima, kao i neformalno obrazovanje, a posebno preduzetničko i STEAM obrazovanje, mogli bi da daju značajan doprinos ekonomskom rastu i razvoju malih postranzicionih ekonomija u razvoju, kroz jačanje preduzetničkog ekosistema obrazovnih institucija na svim nivoima i razvoj preduzetništva. Cilj istraživanja je kroz pregled empirijskih istraživanja analizirati uspješne prakse primjene preduzetničke edukacije i izgradnje preduzetničkog ekosistema u osnovnom, srednjem i visokom obrazovanju i modeliranje strateških pravaca kurikularnih reformi svih nivoa obrazovnog sistema u malim postranzicionim ekonomijama u razvoju, sa fokusom na reformu obrazovnog sistema visokog obrazovanja u Republici Srpskoj i Bosni i Hercegovini. Korišćen je istorijski metod, metod klasifikacije, metod analize i sinteze i studija slučaja. U studiji slučaja na primjeru Univerziteta u Banjoj Luci, možemo zaključiti da UNIBL još uvijek nema karakteristike preduzetničkog univerziteta i da je neophodna reforma Univerziteta.

Cljučne riječi: preduzetnička edukacija, preduzetnički eko-sistem, reforma obrazovanja, kurikularne reforme

JEL classification: I21, I23, L26

INTRODUCTION

According to Eurostat data from February 2019, the youth unemployment rate in the European Union (28) in 2017 amounted to 16.8%, and within the euro zone 18.8%. The youth unemployment rate is particularly high in Greece (43.6%), Spain (38.6%), Italy (34.7%) and Croatia (27%)¹. Youth unemployment is also one of the most pressing problems in the countries of the Western Balkans. The youth unemployment rate, at its highest level, amounted to 54.2% in Serbia (fourth quarter of 2014), 53.9% in Macedonia (2012) and 49.8% in Croatia (April 2013)². "According to the methodology of the World Labor Organization, the youth unemployment rate in Bosnia and Herzegovina is one of the largest in the world and it amounted to 67.5% in 2017" (World Bank, 2017, cited in Petković et al., 2018, p.10). Such a high percentage of unemployed and inactive young people is the result of on the one hand, insufficiently rapid economic development of small post-transition economies³ and on the other hand, the mismatch of supply and demand in the labor market. Small salaries and low-level capabilities of the economy to absorb new labor force is certainly an important reason for the outflow of young people from the Western Balkans countries. In recent

years, creators of public policies, as well as the professional community, see the solution to this problem in stimulating the development of the sector of micro, small and medium enterprises (Eurofound, 2016; Paunović, B., 2017; Paunović, G., 2017; Hisrich et al. 2016). In the long run, reformed modern formal education at all levels, as well as non-formal education, particularly entrepreneurship and STEAM education⁴, could make a significant contribution to economic growth and development of small post-transition developing economies, by strengthening the entrepreneurial ecosystem of educational institutions at all levels and the development of entrepreneurship.

Modern education is one of the most important preconditions for economic development. Entrepreneurship education at all levels of formal and non-formal education is an essential element of the entrepreneurial ecosystem in the developed economies of the world. Entrepreneurial ecosystems are defined as a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory (Stamp & Spigel, 2016). The era of automation necessitates the development of not only digital, but also social and emotional skills.

¹ https://ec.europa.eu/eurostat/statistics-explained/images/0/0a/Youth_unemployment_figures%2C_2007-2017_%28%25%29_T1.png, accessed on 21/02/2019.

² <https://tradingeconomics.com/country-list/youth-unemployment-rate?continent=europe> accessed on 25/08/2018.

³ Projected Real GDP Growth rate in 2019 is 4% in Serbia, 3.7% in Montenegro; 3.2% in BiH; 2.8% in Croatia, 1.6% in Macedonia (Source: International Monetary Fund, retrieved 20th February 2019 from <https://www.imf.org/en/Countries/>.)

⁴ STEAM education - STEAM is an educational approach to learning that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, dialogue, and critical thinking. - Susan Riley, Arts Integration Specialist, retrieved 22nd February 2019 from <http://elearning.tki.org.nz/Teaching/Future-focused-learning/STEAM>.



Development of creativity, innovation, analytical and critical thinking, communication, negotiation and decision-making skills are gaining in importance. These skills, an integral part of entrepreneurship competence, are developed through entrepreneurship education (Kisić & Petković, 2019). Entrepreneurship education is taken to cover all educational activities that seek to prepare people to be responsible, enterprising individuals who have the skills, knowledge and attitudes needed to prepare them to achieve the goals they set for themselves to live a fulfilled life... Entrepreneurship education leads to higher employability (European Commission, 2015). Economies based on natural resources and productivity are not dominant economies in the era of the fourth industrial revolution. The strongest world economies are economies based on knowledge and innovation. "The entrepreneurship ecosystem is strongest overall in the innovation-driven economies... In efficiency-driven economies (all former Yugoslavia states beside Slovenia) the constraining components are internal market burdens or entry regulations, R&D transfer, entrepreneurship education at school stage, government programs, government policies on tax" (GEM, 2018, p. 27). Formal and non-formal education systems that encourage the creativity of children and youth and that have developed entrepreneurial ecosystems, increase in future entrepreneurial intentions of pupils and students and thinking about self-employment as one of the career options (Petković, 2017). In early 2000, the Organization for Economic Cooperation and Development (OECD) recommended that all of its member countries should include subjects related to entrepreneurship at all educational levels (Carcamo-Solis et al., 2017). Do today's primary and secondary schools in the post-transition small economies as outcomes of education "produce" creative, skilled and motivated pupils who have applicable knowledge, practical skills and competence for integration into

the labor market or continuation of their education? Do universities in small post-transition countries, both public and private, have developed entrepreneurial ecosystems that allow students to demonstrate their full potential and to encourage them to seriously think about starting their own business during or after their education? These are research questions to which authors will seek answers in this paper. Studies of many authors confirm our assumption that schools in the era of the digital revolution do not follow faster technological, cultural, social and economic changes at the same pace.

Schreiner (2006, p. 57 as state Sagar, 2015, p. 9) analyzed data from more than 26000 students in 25 countries in Europe, Africa, Asia and South America and found that an explanation for students' dissatisfaction with school science is that it is perceived as too "theoretical, fact-oriented and fact overloaded, with little room for fantasy, creativity, enjoyment and curiosity. The school curriculum seldom addresses contemporary issues of [science and technology] in society. The subject is abstract and theoretical, and it contradicts common sense. It is perceived to be difficult and hard to understand, and consequently to demand much concentration and sustained hard work countries".

Schools and universities need to meet the challenges of the 21st century and to become a place in which pupils and students are encouraged to divergent thinking ("thinking in many directions") which leads to greater creativity, innovation, critical thinking, communication and problem-solving skills. All these skills are essential for the effective integration of graduate high-school students or graduate university students after the first cycle of studies into the labor market, in the digital era of the global world. The role of higher education and universities in recent decades has changed significantly. Universities around the world also play the third role, the role of entrepreneurial universities, along

with traditional roles of centers of education and research centers (Commission of the European Communities, 2007, according to Iglesias-Sánchez et al., 2016, as states Petković, 2017). Logical interpretation of the so-called “entrepreneurial university” refers to the development of university infrastructure necessary to help students to start their own business. Under the entrepreneurial infrastructure within the university, we mean organizational and sub-organizational units established to provide entrepreneurial support to students, such as business incubators, business accelerators, project management centers, career centers, practical training centers, technology transfer centers and centers for the commercialization of innovations and similarly (Petković, 2017). The goal of the research is, through the review of empirical studies, to analyze successful practices of applying entrepreneurship education and building the entrepreneurial ecosystem in primary, secondary and higher education and modeling strategic directions of curriculum reforms at all levels of the education system in small post-transition developing economies, with a focus on the reform of the education. We used historical method, method of classification, method of analysis and synthesis, and a case study.

The countries of the former Yugoslavia belong to small post-transition economies that, apart from Slovenia (OECD, 2016), still in their formal education system, despite the numerous reforms, draw

recidivism from the previous, socialist system. Can entrepreneurship education or education that refers to entrepreneurship education, as well as STEAM education, increase the entrepreneurial intentions of pupils and students in the future? In this paper we will try to give the answer to this question with the recommendations for modeling of the educational system adequate for the 21st century in higher education in small post-transition countries. In the first part of the paper, through a literature review, we will present the importance and possibilities of application of entrepreneurship education in the educational system. In the second, third and fourth chapter, we will describe and classify the most important elements of entrepreneurship education in primary, secondary and higher education institutions. In the fifth part we will present the results of the qualitative research of the case study of the public University of Banja Luka (UNIBL) whose research goal is to determine, through a detailed analysis of the current study programs in all three study cycles and existing centers of university infrastructure for extracurricular activities, how much the University of Banja Luka (UNIBL) is entrepreneurially oriented and at what level the entrepreneurial ecosystem in UNIBL campuses is established and if the University encourages students to self-employment as a career option. We conclude the paper with a discussion and conclusions.

1. LITERATURE REVIEW

In the European Union, the lower orientation of population towards entrepreneurship in relation to competitive economies of developed countries of the West and East was identified as a problem. According to studies, only 37% of Euro-

peans declare that they would like to be "self-employed", while this percentage in the United States and China amounts to 51% and 56%, respectively (European Commission, 2013, p.7). The future academic citizens in BiH are even more pes-



simistic. In a study on entrepreneurial intentions of students of the Faculty of Economics, University of Banja Luka, on a sample of 351 students, only 18.2% of respondents agree that they are more inclined to start their own business than to manage the business of others (Petković, 2017). Petković (2017) research confirms the results of previous studies (Langer et al., 2016; Keat et al., 2011) showing that there is a statistically significant connection between entrepreneurial intentions of students and their family heritage, i.e. the entrepreneurial environment in which they grew up. What is problematic here, in BiH, is the entrepreneurial heritage of the vast majority of respondents from our sample whose parents are not entrepreneurs (83.47% of the total number of respondents). The question is how to increase personal competences and motivation as an important predictor of entrepreneurial intentions of students whose parents are not entrepreneurs, and they are big majority in BiH. Economic policies of the small transition countries should focus on a long period of time, which is mostly not the case in BiH, as economic policies are adopted in the short term and on an annual basis (Petković, 2017). In a survey conducted in Sarajevo in BiH (Pašić Mesihović & Šestić, 2016), testing the Aizen's Theory of Planned Behavior (1991) on a sample of 91 students, they came to the conclusion that students with a higher level of control of their own behavior (self-efficacy) also show a higher level of entrepreneurial intention, while other model predictors, personal attractiveness and social norms have no statistically significant impact on the entrepreneurial intentions of stu-

dents. "Entrepreneurship as a competence is applied in all spheres of life. It allows citizens to develop themselves, to actively contribute to social development, to enter the labor market as employees or as self-employed, and to start or further develop ventures that may have cultural, social or commercial motive" (Bacigalupo et al., 2016, p. 10). From this approach it can be seen that the EU Expert Group defines education for entrepreneurship not only in the narrow sense as a process of preparation, education and training to create a business, but in a broader context, giving it the significance of key competencies⁵ as the process of developing the entrepreneurial mindset, entrepreneurial skills and personal qualities that have universal use.

The development of entrepreneurial potential of citizens and organizations has been one of the key objectives for the European Union and its member states for years, and entrepreneurship education is recognized as the most effective method. The view that "investing in entrepreneurship education is one of the investments with the highest return that Europe can make," is mentioned in Entrepreneurship 2020 Action Plan (European Commission, 2013).

There is a growing awareness of the potential of young people to launch and develop their own commercial or social ventures thereby becoming innovators in the areas in which they live and work. Entrepreneurship education is essential not only to shape the mindsets of young people but also to provide the skills, knowledge and attitudes that are central to developing an entrepreneurial culture (European Commission/EACEA/Eurydice, 2016).

⁵ "Key competences are often also called generic - because they are of a developmental character, general - because they are widely applicable, transversal - because they represent the capabilities that can be transferred to new situations, and, for the school context, interdisciplinary - because they evolve within the framework and integration of all subjects in public schooling, which makes them a common denominator for all curriculums." (Hammer-Marković, 2015, p.6)

Entrepreneurship education is about learners developing the skills and mindset to be able to turn creative ideas into entrepreneurial action. This is a key competence for all learners, supporting personal development, active citizenship, social inclusion and employability. It is relevant across the lifelong learning process, in all disciplines of learning and to all forms of education and training (formal, non-formal and informal) which contribute to an entrepreneurial spirit or behavior, with or without a commercial objective. (European Commission/EACEA/Eurydice, 2016, p.19)

Entrepreneurship Education (EE) is not a new concept. From the early 1980s in New Zealand and throughout the world, Western governments recognized that an entrepreneurial orientation may lead to economic growth, job creation, international competitiveness and technological advancement (Jack & Anderson, 1999; Audretsch et al., 2002; Ladzani & van Vuuren, 2002; Grebel et al., 2003; Vetrivel, 2010, as state Kirkley, 2017). "There is an increasing awareness that the entrepreneurial skills, knowledge and attitudes can be learned and in turn lead to the widespread development of entrepreneurial thinking and culture, of which benefit the individuals and society as a whole" (Bacigalupo et al., 2016, p. 5). It is really necessary, because we are witnessing dynamic changes of occupations in the labor market. New technologies open up new possibilities, raise productivity, and encourage growth. However, not all will be winners in this process, the adaptation will be necessary, but how long will it take and how much it will "cost" economically and socially, will depend primarily on the development of knowledge and skills of the population (Lund & Manyika, 2017). The positive effects will not happen by themselves, it is necessary to involve governments, the

business community, education system and all the structures of society in the right direction (Mourshed et al., 2013). The employees of the future will spend more time on activities for which the machines are less capable, such as people management, application of expertise and communication with others. They will be less involved with predictable physical activities, collection and processing of data, in which machines are already beyond human performance. The necessary skills and abilities will also shift, they will require more social and emotional skills and more advanced cognitive skills, such as logical thinking and creativity (Manyka et al., 2017; Lund et al., 2018). In accordance with the policies of the European Union, entrepreneurship should be included at all levels of education and through joint curricula (European Commission, 2005; 2008). So, we need a differently designed education appropriate for the XXI century. These changes are a serious challenge for existing models of education, as well as for common approaches to the economy in developing the skills of employees. In the following lines, we present through the literature review the assumptions of successful entrepreneurship education in primary and secondary schools and at the university level.

1.1. Entrepreneurship education in elementary school

Most prior research on entrepreneurship education has been performed in the university context, with only a few studies and cases reported at the elementary level to provide empirical evidence that entrepreneurship is teachable at all educational levels (Hannon, 2006 as state Carcamo-Solís et al., 2017). It is necessary to



start the entrepreneurship education as early as possible. In fact, there are studies that support the allegations that the education that has elements of entrepreneurial training, should be introduced in pre-school education. So, Weissbach (2008) believes that the entrepreneurship education in kindergartens is still a taboo topic for many experts, but there are many goals of pre-school education that are fully consistent with the objectives of entrepreneurship education, and they are:

- developing the capacity of children to solve problems,
- orientation towards solutions,
- creativity,
- courage and
- competition based on playing different roles.

The logical sequence in achieving the needs of entrepreneurship education in the early stages of the life of children and youth is the search for various forms of development of school curricula for entrepreneurship education in elementary and high schools (Petković & Milanović, 2017). Zsuzsanna (2008) lists a number of recommendations on the need and ways of introducing entrepreneurship education into the education system of the European Union countries. Among others, Zsuzsanna (2008) cites the recommendations of Brussels from 2006, where it is said that entrepreneurship education should be organized as a complementary training. In this way, different competencies could be developed at each level, such as (Zsuzsanna, 2008, p. 23, cited in Petković & Milanović, 2017, pp. 26-27):

- In elementary schools (7-11 years) - trainings help pupils to have more confidence in themselves, through making and accepting responsibility, through exploring their creativity by trying and making mistakes and learning about the resources of their local community.

- In junior high schools (11-15 years) - students develop core skills such as decision making, ability to work in a team, problem solving and forming networks.

The student mini-company is the most representative entrepreneurial experience in the elementary school context. The micro company is organized in the same way as real small and microenterprises and the underlying purpose is to give youngsters the opportunity to learn how to create, organize and manage a business (Carcamo-Solis et al., 2017). "For example, the experience of the creation of a micro-stationery in an elementary school in Quebec has been documented by Pepin (2011) as a positive and relevant way to learn how to become entrepreneurial". (Carcamo-Solis et al., 2017, p. 294)

An important role in establishing the "entrepreneurial" elementary schools is played by principals who need to have a tendency to proactivity, risk-taking and innovativeness, which are some of the key characteristics of entrepreneurially-oriented managers. They are leaders of change in schools who want to transform the schools from the "classical" ones into entrepreneurially oriented schools. Together with teachers and external educators from the real sector, students who actively participate in interactive and creative teaching methods, contribute to establishing a new "entrepreneurial" organizational culture.

Dealing at the same time with the educational process and the organizational structure and culture can avoid misfit between content and feature. Accordingly, in order for a school (especially an elementary school) to provide children with the opportunity to learn about entrepreneurship, learn to become entrepreneurial and to become an entrepreneur, cultural and structural changes within the school are also necessary. (Heilbrunn, 2010, p. 175)

Whether the elementary school is "conservative" or "energetic entrepreneurial" depends on combination of the school principal's proactivity, or the willingness to initiate actions within the school, and school innovativeness, the perceived amount of innovations implemented in school during a given time.

The influence of entrepreneurial orientation is analyzed from the perspectives of elementary and high school principals' personal job satisfaction, perceived contribution to the society and the perception of the social role/influence of principalship (Alfirević et al., 2018). The empirical findings show that the entrepreneurial orientation of schools and their principals in Croatia and BiH are closely inter-related. More enterprising principals are also more satisfied with their jobs, and they feel to be contributing to the society more. However, the same does not apply to their perceived social standing/status, which could be attributed to their intrinsic motivation, but such a conclusion needs to be verified by further research. The results of this study show that the entrepreneurial orientation(s) of schools and school principals should be considered as useful descriptors of individual and institutional behavior in the educational systems of South-East Europe (Alfirević et al., 2018).

Based on this analysis, our recommendation is that the first move that should be drawn in order to build the entrepreneurial ecosystem at the level of elementary school is work on the professionalization of managerial position of school principals and strengthening entrepreneurial and leadership skills and competencies of principals. This outcome can be achieved through targeted training for principals in the area of management and entrepreneurship and institutional certification of principals who will manage the elementary schools, which should be under the jurisdiction of certification bodies authorized by the relevant ministries.

1.2. Entrepreneurship education in high school

Modern high school whose final learning outcomes are motivated students armed with knowledge, skills and competences, ready to show the full potential of their creativity, innovativeness and critical thinking, able to work in teams, to express their ideas in languages other than their mother's tongue, who are IT and digitally "literate", who are ready to integrate themselves into the labor market as self-employed or as part of existing companies or institutions and organizations from the government and the third sector, does not depend only on the introduction of entrepreneurship education or education which has elements of entrepreneurship education into school curricula. It depends on the educated and motivated teaching staff ready to work "in a different way", on students who actively participate in interactive theoretical and practical teaching, on equipping schools with computer equipment, laboratories, school aids, on the availability of role models from the close environment and the willingness of all stakeholders outside the school to take an active part in school life. Here we primarily refer to entrepreneurs, non-governmental organizations, financial institutions, international organizations, universities and government institutions.

"The creation of an entrepreneurial community or an entrepreneurial school cannot be achieved solely by introducing entrepreneurship education. The formula for successful cultural adaptation to "Entrepreneurship" lies in participation, inclusion, sharing and support across all community stakeholder groups" (Kirkley, 2017, p. 18).

The study "Entrepreneurship Education: A road to success" on the basis of summarizing results of 91 studies from 23 countries, dealing with measurements of different effects of entrepreneur-



ship education (84 national studies and seven studies involving more countries) states (European Commission, 2015, p. 7):

The prevailing impression that came from the gathered evidence is that entrepreneurship education works. Students who have undergone entrepreneurship education programs start their own business more often, and their companies tend to be more innovative and successful than those run by people without this kind of education. The alumni of entrepreneurship programs have a lower risk of being unemployed, and more often they have stable jobs. Compared to their peers, they have better jobs and earn more money. To this it is also added that the effects of entrepreneurship education "tend to accumulate and accelerate: those who have participated in a number of entrepreneurship education programs had multiple benefits. Positive impact is not limited to students and alumni. Apart from the impact on an individual, evidence from the analyzed research also show a positive impact on educational institutions, economy and society.

The importance attached to entrepreneurship education and how it is developed in the framework of the European Union can be followed through documents initiated by the European Parliament and the Council and the European Commission. The European Commission for the first time pointed to the importance of entrepreneurship education in 2003, in the European Commission Green Paper on Entrepreneurship (European Commission, 2003). The foundation for the development of entrepreneurial learning in the EU as well as countries in the pre-accession phase was set in 2006 through the Recommendations of the European Parliaments and the Council on Key Competences for Lifelong Learning (European Parliament, 2006), where as one of the eight key competencies necessary for all members

of the knowledge-based society the "sense of initiative and entrepreneurship" was mentioned. Today, in practice, this competence is simply referred to as "entrepreneurial competence", but in the work on its development, it takes into account the broader approach that includes the "sense of initiative". Then, in 2008, the European Commission adopted the Small Business Act for Europe as a new strategic document in the field of small and medium-sized enterprises, which focused on the development of a lifelong entrepreneurial learning with the key competence of entrepreneurship (European Commission, 2008).

Entrepreneurship education has been given a significant role in achieving the main objectives of the strategic development of "smart growth" and "employment" defined in the document "Europe 2020 Strategy for smart, sustainable and inclusive growth", which was adopted in 2010 (European Commission, 2010). The Strategy emphasizes the need for entrepreneurship education to be included in the education system. As a result of that decision, a series of documents were adopted. First, in 2012, the report "Rethinking Education: Investing in skills for better socio-economic outcomes" was adopted, inviting all member states to provide young people with at least one opportunity for work experience in entrepreneurship during compulsory education (European Commission, 2012).

Then, in 2013, the Action Plan for Entrepreneurship 2020 was defined. The Action Plan foresees that all EU member states integrate entrepreneurial competence into curricula at all levels of education - primary, secondary, higher and adult education - by the end of 2015. In this document, the need for experiential learning is also emphasized, stating that every student needs to be provided with at least one opportunity in order to gain entrepreneurial experience within the compulsory education, which can be achieved in different ways: through participation in the work of a "student company" or by enabling stu-

dents to manage a specific project (European Commission, 2013).

The effort to establish and develop the entrepreneurial spirit and culture in the EU countries was confirmed in 2016, when the "New Skills Agenda for Europe" was adopted (European Commission, 2016).

"New Skills Agenda for Europe: working together to strengthen human capital, employability and competitiveness" was created in response to the problems that the Europe was facing with (youth unemployment, problems with the inclusion of immigrants, raising the competitiveness of the national economies). The Program states that:

... through education and training everyone should acquire skills necessary for personal development and implementation, social inclusion, active citizenship and employment. These skills include literacy, mathematical literacy, science and foreign languages as well as more transversal skills and key competences such as digital competence, entrepreneurship, critical thinking, problem solving (Commission Parliament and Council, 2016, p.5)

As can be concluded from the above, entrepreneurship as a competence and entrepreneurship education occupies a significant place in EU strategic documents, and member states have actively worked on the implementation of these strategies. However, it has been observed that at the national level within the EU there are different approaches, both in the development of entrepreneurship education and in the interpretation of entrepreneurship as a competence.

In an effort to reach a unique conceptual approach which should encourage the development of entrepreneurial competence at the European level, and to create a link between education and the business sector, the Joint Research Center of the European Commission in January 2015 began its work on the Study of entrepreneurial competence. As a result of this work in

2016 the Framework of Competences for Entrepreneurship was defined (EntreComp). This document defines and describes entrepreneurship as a competence, develops reference framework that describes components of entrepreneurship in terms of knowledge, skills and attitudes, and offers the appropriate instruments for evaluation and efficient development of this, as they state, key competence. In the context of the EntreComp study "entrepreneurship is understood as transversal key competence applied by both individuals and groups, including existing organizations in all spheres of life. It is defined as follows: The entrepreneurship is when you use your chances and ideas and turn them into value for others. The value that is generated may be financial, social or cultural." (Bacigalupo et al., 2016, p.9)

As we mentioned in the introduction, entrepreneurship education is not the sole factor in the successful establishment of a modern high school ready for all challenges in the era of the fourth industrial revolution. There are many factors to which studies on the success of schools point, giving them different importance, both at the level of the class and the school, as well as the community, and especially the educational system of the country. Thus, a meta-analysis of the researcher points to the following factors of success of schools as important:

- 1) development of thought of school in communion of its staff (especially principals and teachers)
- 2) culture of achievement, i.e. setting high expectations with the belief that all students can succeed, and teachers should help them in achieving that
- 3) professional development of principals and teachers
- 4) safety of the school environment, by promoting cooperation and respect among stakeholders



- 5) financial decentralization of schools and investment of resources where they achieve maximum effect
- 6) clear expectations about teaching, with planning sufficient time for teaching and learning
- 7) appropriate resources such as equipped library or quality textbooks, aligned with the school curriculum
- 8) frequent assessment of the progress of students due to the strengthening of their achievements and activities of school
- 9) strengthening partnerships between parents and schools, school networking and their cooperation with the local community
- 10) coherent educational policy measures and their implementation in practice
- 11) alignment of factors of success at the level of class, school and immediate and wider community. (Burušić et al., 2016; Scheerens, 2013, cited in Krce Miočić et al., 2016, pp. 23-24)

As in the case of elementary schools, we believe that in the process of building modern high schools it is necessary to start from the strengthening of managerial and entrepreneurial skills and competencies of principals of high schools, through a process of education and certification.

1.3. Entrepreneurship education in higher education and university entrepreneurial ecosystem

Educational systems that encourage students to initiate, to be proactive and innovative, directly influence students' entrepreneurial intentions (Lange et al., 2011; Mustafa et al., 2016 as state Petković, 2017). Therefore, the creativity of students as potential entrepreneurs should be encouraged and developed at the university.

Creativity can be fostered through a different approach to conceiving lectures and exercises in all subjects at the undergraduate and postgraduate studies, not exclusively in the subjects of entrepreneurial character, which is mostly the case at most universities today (Petković, 2017). The term ecosystem was originally coined by James Moore (1993) in an influential article published in the Harvard Business Review during the 1990s. He argued that the companies are not developed in a "vacuum" and he noted relationally embedded nature of how companies communicate with suppliers, customers and financiers (Moore, 1993). Stam (2015, p.1) states that, in its most basic sense, "entrepreneurial ecosystem is an independent set of actors that are managed in a way to allow entrepreneurial actions". Miller & Acs (2017) find that campuses actually need to be entrepreneurial ecosystems, in which the students, founders of companies, will be in focus. The differences will not be made regarding the different studies they attend, the focus would be solely on students who invest the most effort for the survival of their rapidly growing and newly created companies. In order for such an ecosystem to be sustainable, it is necessary that there are as many of the above elements and that they are of the good quality, i.e. as many courses and educations, funding sources, extracurricular activities and that students have freedom to choose their own path, options that they will use, how and when.

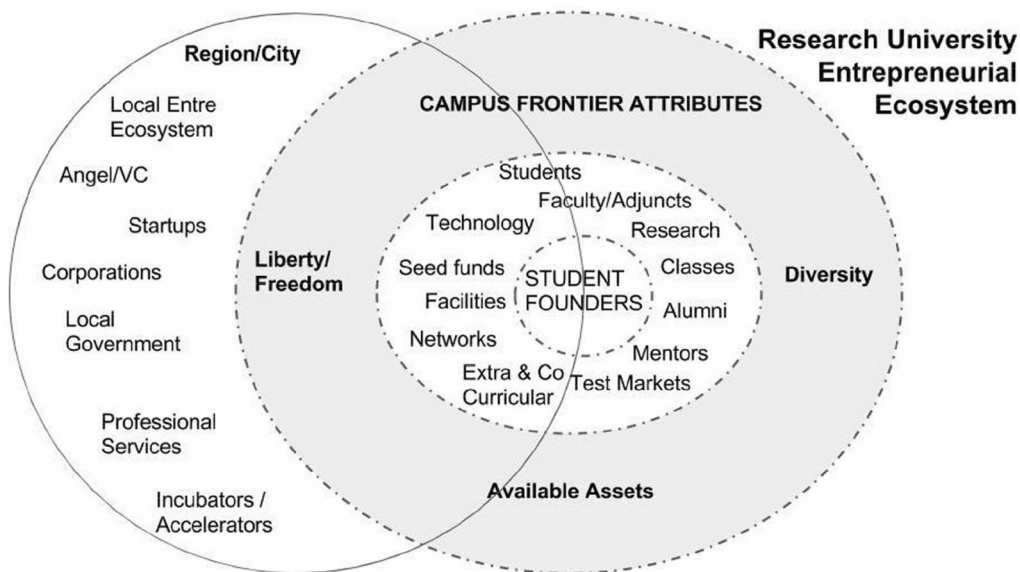


Figure 1. Research University Entrepreneurial Ecosystem

Source: Miller & Acs, 2017

The formation of spin-off companies from research organizations is seen as one of the most effective ways of commercializing new knowledge and technology (Bray and Lee, 2000; Brett et al., 1991; Davenport et al., 2002; Rogers et al., 2001 as state Rasmussen, Borch & Sørheim, 2008). „Spin-off firm is defined as a new venture based on university research” (Rasmussen et al., 2008, p.106). It is found that university spin-offs often commercialize early-stage inventions where existing companies fail to commercialize or show no interest in the technology (Matkin, 1990; Thursby et al., 2001 as state Rasmussen, Borch & Sørheim, 2008).

To what extent higher education institutions in small post-transition countries 'produce' graduate students ready to integrate into the labor market? Do educational systems encourage young

people to think about self-employment as a potential career option?

According to the evaluation of the Global Competitiveness Report (GCR) of the World Economic Forum, in 2018, as per the indicator 5.03 "The quality of the education system", out of a total of 137 countries, Albania is on the 42nd place, Slovenia on the 55th place, Montenegro on the 58th place, Serbia on the 93rd place, Croatia on the 112th place, and Bosnia and Herzegovina on the 131st place. The rating in this field is defined on the basis of Executive Opinion Survey in response to the question "In your country, how well the education system meets the needs of a competitive economy? (1 = not well at all; 7 = very well). The resulting score averaged around 3.3, which shows that young people do not come out of educational institutions adequately trained



to meet the demands of their first job (Schwab, 2018).

This judgment is also confirmed by the research that was conducted in 2016 by the European Commission in Serbia and South East European countries (Bartlett et al., 2016). The research referred to the position of graduates of higher education institutions in the labor market. The surveyed employers on a scale from 1 to 10 with an average grade of 5.9 assessed their satisfaction with the skills of their interns (foreign employers with 7.0, and domestic with 5.5). Only 55% of employers believe that graduates give "some" added value compared to those who did not finish college. It is noticeable that the employers in the high technology sector are less satisfied with the skills newly employed graduates than others. It is concluded that 82% of employers organize additional trainings for their new employees, even 92% of employers in the fields of high technology does this through formal trainings. Research has shown that rapid economic changes in transition, as well as global trends have led to new demands for skills, and that higher education institutions have not fast enough adjusted to that (Bartlett et al., 2016). As a result, there is a noticeable gap between skills which graduates possess and the necessary skills. Thus, the reform of higher education institutions is not in question. What is questionable is the form and speed of reforms.

Entrepreneurship education and training for students of all profiles can have positive effects on entrepreneurial intentions of students, as confirmed by numerous research (Fayolle & Gailly, 2013; Aloulou, 2016). Experiential education in various fields of entrepreneurship, which includes guest lectures of successful entrepreneurs, summer schools and the work of students on developing their own business ideas at universities with developed entrepreneurial ecosystems, proved to be a successful model of development of student entre-

preneurship. As an example, at the University of Chicago, and Miller state and Acs (2017, p. 89):

Breadth of Booth's offerings of entrepreneurship and innovation courses provides students with many gates of entry to the school's entrepreneurship ecosystem. In addition, the experiential nature of the courses allows students to interact with a diverse group of people and institutions on campus and off, and to gain entrepreneurial experience while in school.

The steady barrage of courses, activities, speakers, and networking opportunities, combined with connections to the venture investment system and the third largest metro economy in the USA, provides University of Chicago students who are would-be company founders with a wealth of choices, assets, and diverse people to engage with in pursuing an entrepreneurship path. This entrepreneurial ecosystem, with its on campus and off campus agents and institutions, has supported the development of many high-growth ventures in the last two decades (Miller and Acs, 2017, p. 90)

Top ranking world universities such as Stanford, Harvard, MIT, the University of Chicago have established entrepreneurial ecosystem and a large number of students, thanks to their professors and established centers of support to the development of entrepreneurship in university campuses, start their own businesses.

2. CASE STUDY: ENTREPRENEURIAL ECOSYSTEM OF THE UNIVERSITY OF BANJA LUKA

Although in the literature review, in theoretical-respective part of the paper, we have presented all three levels of formal education with a focus on entrepreneurship education and non-formal entrepreneurship education, in the empirical-perspective part, using the method of case study we will analyze the level of development of the entrepreneurial ecosystem of the University of Banja Luka (UNIBL) and look for an answer to the question: In which way the universities in small post-transition countries in the 21st century should be reformed? From Gering's (2004, p.341) perspective, a case study is "an in-depth study of a single unit (a relatively bounded phenomenon) where the scholar's aim is to elucidate features of a larger class of similar phenomena". As it was done in Miller and Acs (2017) research, in our case presented, the research university, UNIBL and its organizational unit, Faculty of Economics will serve as the primary unit of analysis so that various features of this contemporary experience may be explored. The case study used following primary methods for data collection:

- 1) 123 study programs at all three cycles at the University of Banja Luka analysis. Study programs are analyzed in the context of which curriculum has entrepreneurship and management courses as compulsory or elective and how many ECTS each subject contains.

- 2) Desk analysis of existence and functioning key departments and entrepreneurship development and student support centers at the UNIBL.

The research included all members of UNIBL, more precisely 16 faculties and one academy. We analyzed all available new and current study programs and their curricula on the first, second and third cycle studies. In the figures there are totally 123 study programs, of which 64 refer to the first cycle, 71 to the second and 12 to the third cycle. We analyzed 57, 49 and 17 study programs in the first, second and third cycle studies, respectively, published on websites of these organizational units. In the academic year 2018/2019, 13,370 students were enrolled on UNIBL, out of which 11,690 students in the first cycle studies, 1,459 students in the second cycle studies and 221 students in the third cycle studies. UNIBL employes and hires 1,859 professors, associates and non-academic staff⁶. On Webometrics ranking list⁷, UNIBL is positioned at 3,416th position in the world (second-ranked in BiH after the University of Sarajevo, which is ranked at 1,785th place).

It is important to note that all curricula were not fully available. However, in this research we have covered the vast majority of new study programs and modules that were available for enrollment in the academic year 2017/2018. In general, we noticed a trend of including "entrepreneurial"

⁶ Official data on the number of employees and active students of the University of Banja Luka in the academic year 2018/2019.

⁷ <http://www.webometrics.info/en/Europe/Bosnia%20and%20Herzegovina%20>, accessed on 27th February 2019. In January 2019, about 28,000 universities were ranked.



subjects in the new study programs, which was not the case in the previous, so-called "old" programs. Nevertheless, statistics are more in favor of "managerial" subjects than those that are strictly related to entrepreneurship. We also observed that the observed subjects were mainly presented to students in the higher years of the first cycle studies, that is, mostly in the third and fourth year, as well as in the second cycle. By analyzing, we found that the representation of entrepreneurial subjects in the first, second and third cycle studies, roughly amounts to 21%, 14% and 8%, respectively. Although the inclusion of entrepreneurial subjects in higher study cycles is certainly praiseworthy, we believe that it is especially important to do the same at the first study cycle module, bearing in mind that most students finish their education at that level.

One of the aspects that we have considered is the "relative importance" of the observed subjects, which implies the number of ECTS points assigned to each subject. We noticed that the number of ECTS points in these subjects varied considerably from one faculty to another. Adding to this the fact that some of them are compulsory, while others are elective, we finally decided to exclude these indicators from the analysis.

Furthermore, the research includes the compulsory professional practice as an indicator of how students are supported and to which extent they are enabled to gain real, practical knowledge, skills and experience before graduation. In doing so, we encountered several problems, such as the following facts: not all faculties have clearly indicated what is implied by practice, and what by classes of practical training (classes in laboratories and the like); unavailability of information about whether the practice is compulsory and part of the curriculum in a way whether the practice is organized by faculties or students are required to organize practice

for themselves; inconsistency as to whether the practice is credited in terms of ECTS points, etc. Due to all the above shortcomings, we decided to exclude these indicators from the final analysis.

We believe that the main reason for underrepresentation of subjects from the field of entrepreneurship lies in the fact that entrepreneurship is still considered as mere establishment and management of micro, small and medium-sized enterprises, while it actually involves much more. In the first place, these are: innovativeness, proactivity and risk-taking. In fact, the inclusion of entrepreneurial subjects in higher education should be seen as a representation of a completely different, but the modern way of thinking and view to the world, a completely different mentality, which is much more than teaching students how to manage SMEs. This is exactly why we highly recommend and support these faculties as well as the academy to include entrepreneurial subjects in the curricula of all modules, as compulsory.

Although curricula are not the only element of university entrepreneurial ecosystem, it is necessary to point out that they are one of the most important and the first step towards its establishment. Of all the components of university entrepreneurial ecosystem, curricula are the only ones that inevitably affect all students, as opposed to others who can be in some way avoided.

Faculty / Academy	Number of study programs in three study cycles			Number of modules in three study cycles			Number of modules in three study cycles that include entrepreneurship subjects		
	I	II	III	I	II	III	I	II	III
Academy of Arts	3	3	N/A	10	5	N/A	0	0	N/A
Faculty of Architecture, Civil Engineering and Geodesy	3	4	3	5	8	3	0	0	N/A
Faculty of Economics	1	1	1	4	5	4	4	5	3
Faculty of Electrical Engineering	3	3	1	6	3	1	6	N/A	N/A
Faculty of Mechanical Engineering	5	5	N/A	5	5	N/A	1	1	N/A
Faculty of Medicine	4	N/A	N/A	4	N/A	N/A	0	N/A	N/A
Faculty of Agriculture	3	4	3	6	11	5	1	9	1
Faculty of Law	1	1	1	1	8	1	0	0	N/A
Faculty of Natural Sciences and Mathematics	8	7	N/A	15	12	N/A	1	0	N/A
Faculty of Mining	1	1	N/A	2	5	N/A	0	0	N/A
Faculty of Technology	4	2	1	7	8	1	3	0	N/A
Faculty of Security Science	1	N/A	N/A	1	N/A	N/A	0	N/A	N/A
Faculty of Political Science	4	4	4	4	6	6	0	1	0
Faculty of Physical Education and Sport	2	1	N/A	2	4	N/A	0	1	N/A
Faculty of Philology	6	6	1	6	6	2	0	0	0
Faculty of Philosophy	6	6	2	6	6	2	0	0	0
Faculty of Forestry	2	1	N/A	2	1	N/A	2	0	N/A
TOTAL	57	49	17	86	93	25	18	17	4
	123			209			39		

Table 1. Representation of the subject Entrepreneurship in study programs of UNIBL

Source: Authors

In Table 1 we have shown the representation of entrepreneurship subjects by each member of the University of Banja Luka. In doing so, we can clearly see that three of them have involved these subjects in all modules of the study programs of the first cycle studies. These are, as follows: Faculty of Economics, Faculty of Electrical Engineering and Faculty of

Forestry. However, only two faculties, Faculty of Economics and Faculty of Agriculture have study modules that, in all three cycles in their curriculum contain entrepreneurship subjects as compulsory or elective subjects. None of the members of the University has included subjects in the field of entrepreneurship in all study programs, nor modules.



Faculty/Academy	Centers of support
University of Banja Luka	Center for Entrepreneurship and Technology Transfer
Academy of Arts	Office for International Cooperation
Faculty of Architecture, Civil Engineering and Geodesy	Office for International Cooperation
Faculty of Economics	Center for Project Management and Entrepreneurship Center for Entrepreneurship, Innovations and Revitalization of the company E-lab Student Alumni and Career Center Postgraduate Studies Office Council for Cooperation with the economy Office of Professional Practice Office for International Cooperation
Faculty of Electrical Engineering	ICT Academy
Faculty of Mechanical Engineering	N/A
Faculty of Medicine	Center for Specialized Studies and Continuing Education Medical Specialist Center
Faculty of Agriculture	Republic Experimental Educational Center Institute of Horticulture Institute of Field Crops Institute of Agroecology and Soil Institute for Animal Husbandry Institute of Agricultural Economics and Rural Development Institute of Domestic Animals Reproduction Center for Scientific and Research Work of Students of the Faculty of Agriculture
Faculty of Law	Criminal Forensic Legal Clinic Legal Clinic for Human Rights Legal Clinic for Civil Rights
Faculty of Natural Sciences and Mathematics	Professional Practice
Faculty of Mining	N/A
Faculty of Technology	Institute for Technological Research
Faculty of Security Science	N/A
Faculty of Political Science	Institute for Social Research
Faculty of Physical Education and Sport	Institute for Sports
Faculty of Philology	Language Center
Faculty of Philosophy	N/A
Faculty of Forestry	N/A

Table 2 - Centers of support to the development of entrepreneurship at UNIBL and its members

Source: Authors

Table 2 presents the available centers and institutes of support to students and academic staff, available on UNIBL, which are presented on the official websites of the organizational units. The

only faculty within UNIBL which took first steps towards the establishment of its own entrepreneurial ecosystem that we present in the following scheme is the Faculty of Economics.

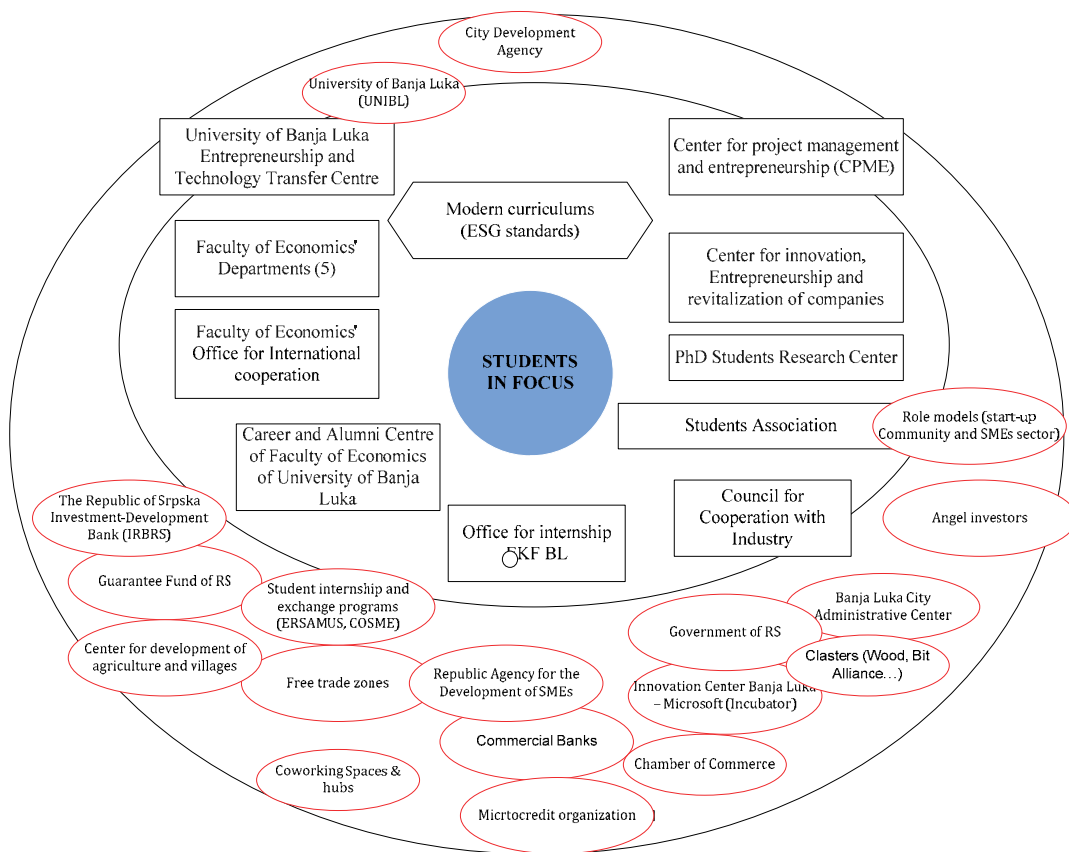


Figure 2. Entrepreneurial ecosystem of the Faculty of Economics of the University of Banja Luka
(Source: Authors)

Building skills and competences of students for self-employment or easier integration into the labor market is the expected result of establishment of the entrepreneurial ecosystem of the Faculty of Economics.

UNIBL consists of strong technical and natural science faculties, such as the Faculty of Electrical Engineering, Faculty of Mechanical Engineering and Faculty of Technology, as well as the Faculty of Natural Sciences and Mathematics.

However, our analysis has shown that none of the above-mentioned faculties have subjects in the field of entrepreneurship as compulsory or elective subjects and their ecosystem cannot be considered entrepreneurial, as is the case with the Faculty of Economics, which has made visible progress in the establishment of entrepreneurial ecosystem. There are numerous growing startups in Banja Luka, which were founded by our students. Some of them are DVC Solutions, Qlab, Mania Marketing, mainly startups in the field of information and communication technologies and digital marketing. An analysis of the degree of development of the entrepreneurial ecosystem of UNIBL has shown that UNIBL cannot yet be considered entrepreneurially oriented. The exception is the ecosystem of the Faculty of Economics, which is on the right path to building an entrepreneurial ecosystem. However, although the level of development of the entrepreneurial ecosystem at

the Faculty of Economics is exceptionally high in relation to other organizational units, i.e. faculties within UNIBL, the Faculty of Economics cannot be considered fully entrepreneurially oriented. In the research of entrepreneurial intentions of students of the Faculty of Economics in Banja Luka (Petković, 2017), personal characteristics and motivation are the predecessor of entrepreneurial intentions of students, while there is no statistically confirmed link between entrepreneurial intentions of students and the so-called entrepreneurial university. It is the results of the research carried out on the sample of 351 students of the Faculty of Economics (Petković, 2017) which confirmed that students still do not see the Faculty of Economics as an entrepreneurial ecosystem and that it is necessary to continue the already initiated building of the entrepreneurial ecosystem of the Faculty of Economics and the University of Banja Luka.

3. DISCUSSION AND CONCLUSIONS

Educational systems that encourage students to initiate, to be proactive and innovative, directly influence students' entrepreneurial intentions (Lange et al., 2011; Mustafa et al., 2016, as states Petković, 2017). Therefore, the creativity of students as potential entrepreneurs should be encouraged and developed at the university. Creativity can be fostered through a different approach to conceiving lectures and exercises in all subjects at the undergraduate and postgraduate studies, not exclusively in the subjects of entrepreneurial character, which is mostly the case at most universities today (Petković, 2017). There are also other opinions. Nevertheless, Feld (2012, p.38) is skeptical about the effectiveness of university entrepreneur-

ship programs because "they are located in the business school, which is exactly the wrong place for them ... They should be juxtaposed with the students and professors creating new innovations.... in engineering, computer science, life science departments ..."

In many entrepreneurial programs the focus is most often on learning how to write a business plan (Johannisson et al., 1998). However, it is necessary to shift the focus from business planning to some other activities that may be crucial for the future entrepreneurship programs (Hamidi, Wennberg & Bergling, 2008). Souitaris, Zerbini Al-Laham (2007) surveyed 124 engineering students who attended the entrepreneurship program

at one of the UK and one of the French universities, and found that their entrepreneurial intentions increased, moreover they found that many students had key moments of inspiration that radically changed their "hearts and minds" and made them think of becoming entrepreneurs. Hamidi et al. (2008) also stated in the results of their own research that in addition to the fact that entrepreneurship education had positive effects on entrepreneurial intentions, the creativity of students had the surprisingly strong effect on entrepreneurial intentions, while the influence of parents or friends of entrepreneurs had no effect on students. "The data suggest that Chicago students, the NVC process, and the University of Chicago environment and networks have played a key role in the creation of multiple high-growth student firms" (Miller & Acs, 2017, p.91). The synergy between engineering and entrepreneurship is a prerequisite for the development of innovative fast-growing technological endeavors. While the University of Chicago has no engineering, Stanford and MIT have. According to the special Eurobarometer survey, Entrepreneurship in the EU and beyond, published in 2012, just less than a quarter (23 %) of EU respondents said they had taken part in a course or activity at school relating to entrepreneurship, defined as turning ideas into action and developing one's own project. Younger respondents were twice as likely to have taken part in an entrepreneurship course. (European Commission/EACEA/Eurydice, 2016, p. 9).

In the research conducted on the sample of 44 entrepreneurs in BiH in 2016, it is important to mention that the empirically rejected correlation between entrepreneurship attitudes and entrepreneurial opportunity recognition leads to the conclusion that entrepreneurship education within and out of formal education systems in BiH insufficiently develops and strengthens entrepreneurship attitudes of its participants (Baručić &

Umihanić, 2016). It is in a line with results obtained from research conducted in 2016 at the University of Banja Luka, Faculty of Economics on the sample of 351 students (Petković, 2017) where the first auxiliary research hypothesis that states "*personal traits and motivation considerably influence entrepreneurial intentions of students*" was confirmed, but not the second one that states "*entrepreneurial university*" encourages active students to start their own business" and the third one that states "*the social environment, above all the family, but also peers, school, media and developed institutions supporting the development of entrepreneurship positively influence the entrepreneurial intentions of students*", which is not a big surprise, since the institutions of entrepreneurial infrastructure in BiH are not sufficiently built (Hisrich et al., 2016), the transition has not been successfully completed (Trivić & Petković, 2014) and higher education institutions and study programs in BiH have not been fully reformed in line with European Standards and Guidelines for Quality Assurance in the European Higher Education Area (European Association for Quality Assurance in Higher Education, 2015). The results of these two studies confirm the initial assumption that the entrepreneurial ecosystem of universities in BiH is not sufficiently developed nor it represents the supporting environment that will motivate and support students in their intention to start their own businesses or to form spin-off companies with their professors in which they will commercialize their innovations.

Since the academic year 2017/2018 the Faculty of Economics introduced compulsory practice for students of the fourth year with 2 ECTS points per semester. The professional practice is organized through the Office of Professional Practice that has developed procedures and has direct contact with companies and institutions. As a support to the Office of Professional Practice, Career and Alumni Center and the Council for Cooperation with Economy have also been established. In the



academic year 2018/2019, 99 students of the 4th year of study performs their practice in 44 companies and institutions. Starting from the academic year 2019/2020 compulsory practice will be introduced from the 3rd year of study, and in the academic year 2020/2021 students will attend compulsory practice from the second year of study. After only one year of student practice, during the course of the study, 10 students received permanent employment, while a number of students started their own business. Encouraged by these results, we will continue with the construction of an entrepreneurial ecosystem at the Faculty of Economics through the reform of curricula in which the representatives of the real sector will participate and strengthen institutions and centers for the support to the student development, which will through non-formal education acquire additional skills and competences for the 21st century. The 8 key competences are the following: *Communicating in a mother tongue*: ability to express and interpret concepts, thoughts, feelings, facts and opinions both orally and in writing; *Communicating in a foreign language*: as above, but includes mediation skills (i.e. summarizing, paraphrasing, interpreting or translating) and intercultural understanding; *Mathematical, scientific and technological competence*: sound mastery of

numeracy, an understanding of the natural world and an ability to apply knowledge and technology to perceived human needs (such as medicine, transport or communication); *Digital competence*: confident and critical usage of information and communications technology for work, leisure and communication; *Learning to learn*: ability to effectively manage one's own learning, either individually or in groups; *Social and civic competences*: ability to participate effectively and constructively in one's social and working life and engage in active and democratic participation, especially in increasingly diverse societies; *Sense of initiative and entrepreneurship*: ability to turn ideas into action through creativity, innovation and risk taking as well as ability to plan and manage projects; *Cultural awareness and expression*: ability to appreciate the creative importance of ideas, experiences and emotions in a range of media such as music, literature and visual and performing arts.

Further directions for future studies that would be used to measure the effects of the establishment of the entrepreneurial ecosystem of the Faculty of Economics and the University could move towards a longitudinal study of performance monitoring and built student competencies that in the focus of the reformed University.

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