ORIGINAL SCIENTIFIC PAPER UDK: 005.336.5 005.961:005.914.3 DOI: 10.5937/EKOPRE1808147K Date of Receipt: December 2, 2017

Svetlana Kisić

Belgrade Business School and Economics Institute, Belgrade

Saša Petković

Faculty of Economics, University of Banja Luka

ENTREPRENEURSHIP EDUCATION AIMED AT DEVELOPING THE SKILLS FOR THE FOURTH INDUSTRIAL REVOLUTION

Preduzetničko obrazovanje u funkciji razvoja veština za četvrtu industrijsku revoluciju

Abstract

New technologies are leading to changes in business models. Skills needed to perform most jobs are changing profoundly. Their acquisition and development are becoming crucial for the success and modernization of the labour market offering new forms of flexibility and security for job seekers, employees and employers. The era of automation necessitates the development of not only digital, but also social and emotional skills. 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. In today's world, this form of education is approached not only in the narrow sense, as a process of preparing for business creation, but also in a wider context, as a process of developing entrepreneurial mindset and skills and personal qualities that have universal application. There are several approaches, methods and models of entrepreneurship education. Serbia does not yet have a clearly defined strategy for developing this type of education. Aimed at providing recommendations for the selection of optimal solutions, an assessment study of the effects of the "Student Company" method of entrepreneurship education, recognized globally as a model of good practice, was carried out within our education system. The research has shown that, according to the assessment of 175 teachers involved in the programme, the "Student Company" method also gives excellent results in our country. This speaks in favour of its inclusion in all secondary schools in Serbia as an informal type of education.

Keywords: entrepreneurship education, skills, labour market, Student Company, mini-company, education, Serbia.

Sažetak

Nove tehnologije dovode do promena modela poslovanja. Veštine potrebne za obavljanje većine poslova se značajno menjaju. Sticanje i razvoj veština postaju ključni za uspešnost i modernizaciju tržišta rada kako bi ono moglo pružiti nove oblike fleksibilnosti i sigurnosti za one koji traže posao, zaposlene i poslodavce. U eri automatizacije pored neophodnosti razvoja bazičnih digitalnih veština kod svih, i naprednih digitalnih veština za određenu grupu radnika, rastu potrebe za razvojem socijalnih i emocionalnih veština. Razvoj kreativnosti, inovativnosti, analitičkog i kritičkog mišljenja, komunikativnosti, veštine pregovaranja, odlučivanja, emocionalne inteligencije dobijaju na značaju.

Navedene veštine predstavljaju sastavni deo preduzetničke kompetencije i razvijaju se kroz preduzetničko obrazovanje. U svetu se danas tom obrazovanju ne pristupa samo u užem smislu, kao procesu pripremanja za kreiranje biznisa, već u jednom širem kontekstu, kao procesu razvoja preduzetničkog načina razmišljanja, preduzetničkih veština i ličnih kvaliteta koji imaju univerzalnu upotrebu. Postoji više pristupa, metoda i modela preduzetničkog obrazovanja. Srbija još uvek nema jasno definisanu strategiju razvoja ove vrste obrazovanja. Sa željom davanja preporuka za izbor optimalnih rešenja, sprovedeno je istraživanje procene efekata jednog od metoda preduzetničkog obrazovanja, "Učeničke kompanije", u okviru našeg obrazovnog sistema. Ovaj metod, koji se bazira na iskustvenom učenju i realizuje se u srednjim školama, na globalnom nivou je prepoznat kao model dobre prakse. Istraživanje je pokazalo, prema oceni 175 nastavnika koji više godina učestvuju u realizaciji programa, da metod "Učenička kompanija" i kod nas daje odlične rezultate. To govori u prilog uključivanja ovog modela, kao neformalnog oblika obrazovanja, u sve srednje škole u Srbiji.

Ključne reči: preduzetničko obrazovanje, veštine, tržište rada, Učenička kompanija, mini kompanija, obrazovanje, Srbija.

Introduction

We are living in the times of the Fourth Industrial Revolution. Set in motion by the synergetic effect of the advance of new technologies, the ways of production, consumption, service provision, and communication are undergoing transformation. Overall mobility is on the rise, from the movement of capital to knowledge to people.

As all revolutions do, this too brings about disruptions of the existing systems that need adaptation. One of the first fields to take the blow is the labour market.

The surge of new technologies and trends is leading to a conversion of business models, as well as a change in the division of labour between workers and machines, bringing about the transformation of the present job profiles. As a direct result of these changes, the kinds of skills required to perform most jobs will profoundly shift.

New technologies are opening up new opportunities, raising productivity, and stimulating growth. However, not everyone will be the winners in this process, as adaptation is called for, and how long it will take and what the "price" to be paid economically and socially is going to be will primarily depend on the buildout of the knowledge and skills of the population [32]. Positive effects will not come about on their own; it is imperative to mobilise governments, the business community, the education system and all the structures of the society in the right direction [40]. In the short run, imbalances will emerge; on the one hand, armies of the unemployed will arise, especially among the youth who are particularly at risk, whereas, on the other hand, companies will not be able to cover their needs for people with specific knowledge and skills.

The existing models of education that offer profiled "skill sets" for specific occupations will not be able to respond to demands of time. Having in mind that, according to estimates, current students will have to switch several occupations by the end of their career in order to adapt to the labour market demands [33], that there are no longer clear boundaries among professions and the dynamics of technological development is progressively creating new occupational categories, it is obvious that changes in the concept of education will be unavoidable. "Skill acquisition and development are essential for the

performance and modernisation of labour markets in order to provide new forms of flexibility and security for job seekers, employees, and employers alike" [14, p. 2]. In the light of the aforementioned, entrepreneurship education assumes a particularly significant role.

Skill shift – Automation and future of the workforce

According to the forecasts, by the year 2020 there will be a shortage of 85 million people with high and medium-level qualifications worldwide [39]. In a survey conducted by Mourshed and associates [39], 57% of the employers interviewed stated that they could not find suitable entry-level hires, 27% reported that they were not able to fill vacancies because they could not find applicants with the right skills, one third said that the employees' lack of skills was causing major problems, through creating additional costs, reducing the quality of work or increasing working time spent.

When asked if the graduates were adequately prepared for the labour market in Europe, only 35% of employers and 38% of students agreed, while 74% of education providers were confident that they were. These answers point to an evident gap in the labour market supply and demand, which education providers have not yet fully perceived [39].

This assessment is confirmed by the findings of the research carried out by the European Commission in Serbia and the countries of Southeast Europe in 2016 [3]. The research studied the position of higher education graduates in the labour market. The surveyed employers in Serbia rated their satisfaction with the skills of their new graduate employees 5.9 on a scale of 1 to 10 (with foreign employers rating them 7.0, and domestic employers 5.5). Only 55% of employers are of the opinion that graduate recruits bring "some" added value compared to their non-graduate employees. It is noticeable that employers in the high technology sector are less satisfied with the skills of their new graduate recruits in comparison to other employers. It was noted that 82% of employers provide supplementary training for their new graduate recruits, with as many as 92%

of employers in high technology areas conducting it through formal training.

These are just the imbalances the presence of which is already felt; however, the question arises as to the degree the future impact of the implementation of new technologies will have on the requirements of the labour market for certain skills and knowledge.

The expected "gap" between the existing skills and the skills required of the future workforce was the subject of a survey carried out by Lund and associates [32] and launched at the end of 2017, polling more than 1,500 respondents from different sectors of the economy and society. At the beginning of 2018, the findings of a survey involving about 300 executives at companies with more than \$100 million in annual revenues were published. When asked about how important "addressing potential skills gaps related to automation/digitization within their workforces" was, 62% of executives said they believed they would have "to retrain or replace more than a quarter of their workforce between now and 2023". Over 70% of executives in Europe and 64% in the United States of America see addressing this problem as a top ten priority [32, p. 3].

Given the wave of new technologies and trends disrupting business models and the changing division of labour between workers and machines transforming current job profiles, the vast majority of employers surveyed for this report expect that, by 2022, the skills required to perform most jobs will have significantly changed. According to the World Economic Forum's estimates, the global average skills stability—the proportion of core skills required to perform a job that will remain the same—is expected to be about 58%, meaning an average shift of 42% in required workforce skills over the 2018–2022 period [51, p. 11].

What are the forecasts and the types of knowledge and skills that will be required to do business in the future?

It is anticipated that a significant part of human activities will be automated in the near future [25], [33], [13]. The scope and dynamics of automation will vary across countries depending on the level of their technical and economic development, the education level of the workforce and the ability to manage the social effects that these changes will bring about. It is estimated that at the

global level 15% of human activities will be automated by 2030 [33]. In Europe, this percentage is supposed to range from 25 to 45% by 2025 [13].

Workers of the future will be spending more time on activities that machines are less capable of, such as managing people, applying expertise and communicating with others. They will be spending less time on predictable physical activities, collecting and processing data, in which machines already exceed human performance. The required skills and abilities will also shift towards more social and emotional skills and more advanced cognitive abilities, such as logical thinking and creativity [33], [31].

It is estimated that 8 to 9% of the workforce, or 2.66 billion people globally, will be in new occupations yet unknown to us today, and that as many as 75 to 375 million people will likely need to transition to new occupational categories and upgrade their skills [33].

The question of what the skills needed for the future are has become a subject of intensive research with the aim of timely preparing the workforce for the jobs of the future.

According to The Future of Jobs Report 2018 [50], "skills continuing to grow in prominence by 2022 include analytical thinking and innovation as well as active learning and learning strategies. Sharply increasing importance of skills such as technology design and programming highlights the growing demand for various forms of technology competency identified by employers surveyed for this report. Proficiency in new technologies is only one part of the 2022 skills equation, however, as 'human' skills such as creativity, originality and initiative, critical thinking, persuasion and negotiation will likewise retain or increase their value, as will attention to detail, resilience, flexibility and complex problem-solving. Emotional intelligence, leadership and social influence as well as service orientation also see an outsized increase in demand relative to their current prominence" [50, p. ix].

The networking site LinkedIn conducted a survey in 2018 with the aim of determining the 10 skills that will be most in demand as of 2019. They have divided the skills into soft and hard, and according to that research, the top 5 soft skills that will be required by companies are creativity, persuasion, collaboration, adaptability and time management. On the hard-skill side, cloud computing was

top, with engineers in demand as more and more services and data migrate to the cloud. Artificial intelligence came next, followed by analytical reasoning, since companies need to make decisions based on the myriad of data that's now accessible to them. People management came fourth, followed by user experience design – the process of making all these new technologies accessible and easy for humans to interact with. According to the analysis, 2019's employers are looking for a combination of both hard and soft skills, with creativity topping the list of desired attributes.

In their Skill shift: Automation and the future of the workforce report [4], researchers at the McKinsey Global Institute have provided particularly analytical and workable answers to the questions as to what will be the coming shifts in the demand for workforce skills and how work will be organized within companies, as people increasingly interact with machines at the workplace.

They have devised a new taxonomy of 25 workforce skills, grouping them into five categories: physical and manual, basic cognitive, higher cognitive, social and emotional, and technological. Based on the quantification of time spent on 25 core workplace skills today and in the future for the United States and five European countries, with a particular focus on five sectors: banking and insurance, energy and mining, healthcare, manufacturing and retail, they have made an assessment of the evolution of the demands for certain skills by 2030 (Figure 1).

To understand the nature and magnitude of the coming skill shift, they have taken, as they say, "a business-oriented approach" to defining skills. They have included both intrinsic abilities (for example, gross motor skills and strength, creativity, and empathy) and specific learned skills, such as those in advanced IT and programming, advanced data analysis, and technology design. This allowed them to build a comprehensive view of the changing nature of workforce skills and provide a sufficient level of detail to motivate concrete actions and interventions.

In the findings of the survey they state the following: While advanced technological skills are essential for running a highly automated and digitized economy, people with these skills will inevitably be a minority. However, there is also a significant need for everyone to develop basic digital skills for the new age of

automation. We find that basic digital skills are the second fastest-growing category among our 25 skills—after advanced IT and programming skills. They increase by 69 percent in the United States and by 65 percent in Europe. Our executive survey indicates that workers in all corporate functions are expected to improve their digital literacy over the next three years, and especially employees in functions including sourcing, procurement, and supply-chain-management. Accompanying the adoption of advanced technologies into the workplace will be an increase in the need for workers with finely tuned social and emotional skills—skills that machines are a long way from mastering [4, p. 11].

The research also shows that workers of the future will spend significantly more time deploying social and emotional skills than they do today. In aggregate, between 2016 and 2030, demand for these social and emotional skills will grow across all industries by 26 percent in the United States and by 22 percent in Europe. Among all the skill shifts in the analysis, the rise in demand for entrepreneurship and initiative taking will be the fastest growing, with a 33 percent increase in the United States and a 32 percent rise in Europe. Other social and emotional skills, such as leadership and managing others, also showed strong increases [4, p. 11].

It is obvious that economists, other researchers, and organizational practice experts use different definitions when discussing workforce "skills"; however, based on the aforementioned research, there are certain unambiguous conclusions that might be drawn. Automation and new technologies lead to growing skills instability, and adapting to changes calls for substantial endeavours aimed at the development of knowledge and skills of the population. All research studies emphasize the importance of soft skills or social and emotional skills as they are referred to in some of them. The LinkedIn Learning Editor, Paul Petrone, wrote in a blog that "the rise of AI is only making soft skills increasingly important, as they are precisely the type of skills robots can't automate". Creativity, innovation, analytical thinking, critical thinking and decision-making, adaptability, emotional intelligence, leadership, collaboration, persuasion and negotiation, time management, all play a particularly significant role.

The question that may be raised is how to develop these skills.

Not going into deeper analysis on different types of classification, nor into further discussion about which of the listed skills are skills and which ones are abilities, we may unequivocally assert that all of them are important components of entrepreneurship competence and are developed through entrepreneurship education. Therefore, today entrepreneurship education needs to be approached and viewed in a wider context, as education

essential for personal development and self-realization, education that will enable the individual to adapt to dynamic changes in the labour market and be an active member of society.

The European Union's approach to entrepreneurship education

The development of entrepreneurial potential of citizens and organizations has been one of the key

Figure 1: The assessment of the evolution of the demands for certain skills by 2030

			United States, all sectors			Western Europe, all sectors		
Category		Skill	Hours worked in 2016, billion	Change in worked by		Hours worked in 2016 billion	Change in l worked by 2	
×	Physical and manual skills	General equipment operation and navigation		-24			-27	
		General equipment repair and mechanical skills		-9			-11	
		Craft and technician skills		-2			-21	
		Fine motor skills		-8			-15	
		Gross motor skills and strength		-9			-10	
		Inspecting and monitoring skills		-20			-25	
0	Basic cognitive skills	Basic literacy, numeracy, and communication		-6			-8	
		Basic data input and processing		-19			-23	
②	Higher cognitive skills	Advanced literacy and writing		-10			-8	
		Quantitive and statical skills		-2				2
		Critical thinking and decision making			17		1	8
		Project management			2			3
		Complex information pro- cessing and interpretation			18		1	18
		Creativity			40		1	30
(5)	Social and emo- tional skills	Advanced communication and negotation skills			27		1	26
		Interpersonal skills and empathy			30		1	21
		Leadership and managing others			33		1	27
		Entrepreneurship and initiative-taking			33		Ī	32
		Adaptability and continuous learning			24		1	24
		Teaching and training			14		1	8
	Techno- logical skills	Basic digital skills			69		1	65
		Advanced IT skills and programming			91		1	92
		Advanced data analysis and mathematical skills			25		1	22
		Technology design, engin- eering, and maintenance			31		1	20
		Scientific research and development			28		1	25

Source: [4, p. 9].

objectives for the European Union and its members for many years, and entrepreneurship education has been recognized as the most effective method for achieving that objective. The view that "investing in entrepreneurship education is one of the highest return investments Europe can make" has been expressed in the Entrepreneurship 2020 Action Plan [18, p. 5].

One of the problems that has been identified within the European Union is an overall lower enthusiasm of the population towards entrepreneurship, compared to the competitive economies of the developed countries of the West and East. According to the research, only 37% of Europeans state that they would like to be "self-employed", whereas the percentages for the United States and China are 51% and 56% respectively [18, p. 7].

The Entrepreneurship Competence Framework states that "there is a growing awareness that entrepreneurial skills, knowledge and attitudes can be learned and in turn lead to the widespread development of entrepreneurial mind-sets and culture, which benefit individuals and society as a whole" [2, p. 5].

This view is based on the results of numerous research studies aimed at measuring the effects of applying specific entrepreneurship education models.

Summing up the results of 91 studies from 23 countries which dealt with various impacts of entrepreneurship education (84 national research studies and seven transnational projects involving several countries), the Entrepreneurship Education: A road to success study states that "the prevailing impression that emerged from the evidence collected is that entrepreneurship education works. Students participating in entrepreneurship education are more likely to start their own business and their companies tend to be more innovative and more successful than those led by persons without entrepreneurship education backgrounds. Entrepreneurship education alumni are at lower risk of being unemployed, and are more often in steady employment. Compared to their peers, they have better jobs and make more money."

Furthermore, entrepreneurship education effects "tend to cumulate and lead to acceleration: those who participated in a higher number of entrepreneurship education measures benefited more over time. The positive

impact is not restricted to students and alumni. Besides impact on the individual, evidence from the examples reviewed for this study also shows impact on educational institutions, the economy and society" [7, p. 7].

The importance attached to entrepreneurship education and the scope of efforts directed at its development in the European Union can be traced through documents developed by the European Parliament, the Council and the European Commission.

The European Commission first pointed out the importance of entrepreneurship education in 2003 in its Green Paper – Entrepreneurship in Europe [23]. The basis for the development of entrepreneurship learning in the EU and pre-accession countries was set out in 2006 through the Recommendation of the European Parliament and of the Council on Key Competences for Lifelong Learning [22] (European Parliament and Council, 2006), where one of the eight key competences necessary for all members of a knowledge-based society is defined as the "sense of initiative and entrepreneurship". Today, in practice, this competence is simply referred to as "entrepreneurship competence", but in the work on its development, a broader approach that includes the "sense of initiative" is also taken into account. Further on, in 2008, the European Commission adopted the Small Business Act for Europe as a new strategic document in the field of small and mediumsized enterprises which focuses on the development of lifelong entrepreneurial learning with entrepreneurship as a key competence [21].

Entrepreneurship education has been given a significant role in the process of achieving the main objectives of strategic development, "smart growth" and "employment" defined in the Europe 2020: A strategy for smart, sustainable and inclusive growth document, adopted in 2010 [20]. The Strategy emphasizes the need for entrepreneurship education to be embedded in the education system. As a result of this decision, a number of documents have been issued. First, the Rethinking education: investing in skills for better socio-economic outcomes report was adopted in 2012, urging all EU Member States to provide young people with at least one practical entrepreneurial experience during their compulsory education [17].

Later on, in 2013, the Entrepreneurship 2020 Action Plan was defined. It expected all EU Member States to ensure that the entrepreneurship competence was embedded into curricula across all levels of education – primary, secondary, higher and adult education – by the end of 2015. This document also underscores the need for experiential learning, stating that before leaving compulsory education each student should be offered an opportunity to have at least one practical entrepreneurial experience, which may be accomplished in various ways: through participation in running a mini-company or by enabling students to manage a specific project [18].

Endeavours aimed at establishing the development of entrepreneurial spirit and culture in the EU countries were reaffirmed in 2016, when A new skills agenda for Europe was adopted [14].

A new skills agenda for Europe: Working together to strengthen human capital, employability and competitiveness was created in response to the problems that Europe faces (youth unemployment, problems with the inclusion of immigrants, raising the competitiveness of national economies). The Programme states that:

formal education and training should equip everyone with a broad range of skills which opens doors to personal fulfilment and development, social inclusion, active citizenship and employment. These include literacy, numeracy, science and foreign languages, as well as transversal skills and key competences such as digital competences, entrepreneurship, critical thinking, problem solving or learning to learn, and financial literacy [14, p. 5].

It is obvious that both entrepreneurship as a competence and entrepreneurship education hold a prominent role in the EU strategic documents, and member states have been actively working on the implementation of these strategies. However, it has been observed that there are different approaches at the national level within the EU, both to the development of entrepreneurship education and the interpretation of entrepreneurship as a competence.

In an effort to reach a unified conceptual approach that would incentivize the development of the entrepreneurship competence at the European level, and create a link between the educational and the business sector, the European

Commission's Joint Research Centre started work on the Entrepreneurship Competence Study in January 2015. As a result of this work, the Entrepreneurship Competence Framework (EntreComp) was defined in 2016. This document defines and describes entrepreneurship as a competence, specifies a reference framework that delineates the components of entrepreneurship in terms of knowledge, skills, and attitudes, and provides appropriate tools for the assessment and effective development of this, in their own words, key competence. In the context of the EntreComp study, "entrepreneurship is understood as a transversal key competence applicable by individuals and groups, including existing organisations, across all spheres of life. It is defined as follows: Entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social (FFE-YE, 2012)" [2, p. 9].

This definition focuses on the creation of value, regardless of the type of value or context, and covers all domains in the value creation chain. It also refers to creating value in the private, public, non-governmental sector or any other hybrid combination. Thereby, it covers all types of entrepreneurship.

"Entrepreneurship as a competence applies to all spheres of life. It enables citizens to nurture their personal development, to actively contribute to social development, to enter the job market as employee or as self-employed, and to start-up or scale-up ventures which may have a cultural, social or commercial motive" [2, p. 10].

This approach clearly demonstrates that the EU expert group defines education for entrepreneurship not only in the narrow sense as a process of preparation, education and training for creating a business, but also in a wider context, giving it a prominent role of a key competencel and seeing it as a process of developing an entrepreneurial mindset, entrepreneurial skills and personal qualities that have universal application.

^{1 &}quot;Key competences are often also called generic – because they are of a developmental character, general – because they are widely applicable, transversal – because they represent abilities that can be transferred to new situations, and, in the school context, interdisciplinary – because they are developed within a framework involving an integration of all subjects during schooling, making them a common denominator across all the curricula and syllabi" [6, p. 6].

Goals, principles and methods of entrepreneurship education

Entrepreneurship education encompasses "all educational activities that seek to prepare people to be responsible, enterprising individuals who have the attitudes, skills and knowledge necessary to achieve the goals they set for themselves to live a fulfilled life" [16, p. 3]. The aim of entrepreneurship education is to develop entrepreneurial competences. They are defined as a combination of knowledge, skills and attitudes related to entrepreneurship. Within entrepreneurial competences, we may distinguish skills such as analytical thinking, goal setting, teamwork, negotiation, presentation, leadership skills, motivation, decision-making, time management, etc. [27], [14]. [9]. In terms of attitudes, we speak of creativity, sense of initiative, need for achievement, risk-taking tendency, self-efficacy, locus of control [37], [38], [1], [27]. As far as knowledge is concerned, it pertains to the understanding of the role of entrepreneurs, as well as to the knowledge of relevance for carrying out entrepreneurial activities (planning, budgeting, making calculations, and a number of other areas of knowledge important for successful running of company functions). The basic and at the same time indispensable level of knowledge to be acquired should ensure the "financial literacy" of participants [27], [9].

The past few decades have seen an increase in activities aimed at development and implementation of entrepreneurship education across all educational levels in Europe. In a multitude of existing programs, three approaches to this type of education can be clearly distinguished [27]. The first approach may be termed "education about entrepreneurship". In this type of programmes, entrepreneurship is studied as a societal phenomenon. Set against the background of economy and innovation, this theoretical approach explores who becomes an entrepreneur and what motivates entrepreneurs and analyzes the factors influencing entrepreneurial processes. The second approach, which may be called "education for entrepreneurship", focuses on acquisition of skills and knowledge relevant to starting a new company. The central elements in such teaching include acquiring knowledge and training in setting up a budget, developing a business plan, marketing strategy, and a plan for organizing business operations, and reflecting on the motives for setting up a business. The third approach, "education through entrepreneurship", uses the entrepreneurial process as a method or tool for achieving a specific set of learning objectives. These processes vary from specific entrepreneurial activities aimed at developing a company or working on case studies, or participating in activities that combine practical and theoretical learning and/or collaboration between schools and the business community. This approach is based on experiential learning.

The first two approaches ("about" and "for") recognize a close connection between entrepreneurship and the economic development theory. The third approach ("through") is broader and encompasses the competence to "perceive new opportunities" and put them to work in different social areas.

Apart from the differences in content, as far as entrepreneurship education is concerned there are also differences in the methods used: formal, non-formal and informal.

Within the educational system (the formal method), entrepreneurship can be implemented as a separate course in the curriculum, as a part of or a topic within other courses (the integrated approach), or in a problem-oriented way as part of the syllabi of several related courses (cross-curricular approach).

Two thirds of European countries have embedded entrepreneurial learning at the level of primary education. The most dominant are the transversal, horizontal and cross-curricular approaches based on learning outcomes. In primary education, half of the countries have had learning outcomes defined, and they are mainly related to attitudes towards entrepreneurship, as well as transversal entrepreneurial attitudes. There are no countries working on practical entrepreneurial skills at the primary school level [16], [6].

At the secondary school level, entrepreneurship education has, in one form or another, been introduced in all countries. Approximately two thirds of countries have opted for the integrated and cross-curricular approaches, with somewhat greater representation of the former. In some countries, entrepreneurship is taught as a separate course; in these cases, entrepreneurial learning is encompassed

in a variety of ways: as a separate compulsory course, as one of the elective courses or as part of an economic group of courses.

When it comes to entrepreneurship education, universities have now taken on a special position. In addition to their standard role in the development of science and education, their importance in the development of innovativeness, and indirectly the competitiveness of the economy and economic development, is now being emphasized. In this respect, we may now come across ideas about the development of the "entrepreneurial university", "entrepreneurial ecosystem at faculties", etc. [42], [45], [41]. Universities can no longer be isolated bastions devoted to theoretical research, as their linking to and collaboration with the economy become imperative for their sustainability, on the one hand, and for successful economic development of the country, on the other.

Studies of the impact of entrepreneurship education across methods and educational levels have shown that the greatest effects of entrepreneurship education are achieved by means of experiential learning and its implementation at lower educational levels [48], [49]. A particularly important period seems to be the secondary school. Bearing in mind the scarcity of time and money as resources and the difference in the effects of specific programmes, it is essential to choose the most efficient method and programme. Research studies worldwide have shown that informal types of education lead to particularly good effects in the field of entrepreneurship education and the best model of good practice is the "mini-company" or the "Student Company" model [12], [17], [16].

The Directorate-General for Enterprise and Industry of the European Commission has recognized this programme as the best method of entrepreneurship education for students.

The "mini-company" method encompasses all three approaches to entrepreneurship education ("about", "for" and "through"), i.e., it brings together the theoretical and practical approach and is realized in collaboration between the educational and business sector.

The "mini-company" is the most widespread method used in the majority of European countries. Approximately 350,000 students participate in this programme in Europe

on a yearly basis (JA Europe 2017). Some European countries have embedded the "Student Company" programme2 as an option in their curricula, whereas in other countries, the programme is offered through extracurricular activities or national programmes.

Research conducted in several countries has shown that this programme leads to successful achievement of short-term outcomes in forming positive attitudes towards entrepreneurship and developing entrepreneurial skills [26], [27], whereas the long-term effects may be observed in higher start-up rates, higher employability, better career development [11], [10], [1], [48].

The goal that the EU aims to achieve is to provide all young people with at least one practical entrepreneurial experience before leaving compulsory education, and the establishment of a mini-company is considered one of the most effective practical entrepreneurial experiences available for schools [17], [15].

The United Kingdom is one of the European countries with the longest history of implementing the "Student Company" programme (the Young Enterprise programme). Upon 50 years of running this programme, a survey was conducted on a sample of 371 Alumni showing that the participants of this programme are 26% more likely to run their own business than their peers, that their companies have a higher turnover (with 12% of the enterprises earning more than 500,000 pounds, compared with 3% of businesses in the control group), employ more people than other comparable companies (11% employing 51 to 100 people, versus 9% in the control group), were more resilient in surviving the recession crisis period (49.6% increased sales during the crisis, and 30% developed new products), are highly diversified, innovative, etc. [1].

Following 10 years of the implementation of the "Student Company" programme in Sweden, a research was carried out with the aim of assessing the impact of the programme and the cost-effectiveness of this type of education. The study was conducted in the period from 1990 to 2007 on a sample of 166,603 participants

² The "Student Company" programme is encountered under different names in different countries. Although several terms are widely used, such as mini-company, student company, young enterprise, they all refer to the same programme (author's remark.)

of the programme from 1980 to 2007 and a control group of 221,530 respondents who were not involved in the programme. The findings showed that programme participants launched their own business at the beginning of their career in 20% more cases compared to the control group and did it a year earlier on average. The companies started by programme participants created 130,000 jobs annually over the 20-year period. Furthermore, those companies had on average a 20% higher income compared to the control group companies, their "survival span" being longer and contributing more to the budget revenues. When employed in other companies, they advanced faster and the companies employing them also grew faster [48].

Numerous studies that have observed its short-term effects have confirmed the significance of the impact the "mini-company" method has on the development of entrepreneurial competences of its participants [27].

These results provide strong enough arguments for serious consideration of the prospects for a wider implementation of the "Student Company" programme in the educational system in Serbia.

Entrepreneurship education in Serbia

When it comes to the analysis of the state of entrepreneurship education in Serbia, what may be asserted is that, although there is growing awareness of the need for the development of entrepreneurship education in Serbia, the actual work on its development has not gone far yet.

The need for developing enterprising disposition, skills and knowledge has been expressed in a number of laws and strategic documents (Law on the Education System Foundations, 2009; Law on Primary Education, 2013; Law on Secondary Education, 2013; Law on Adult Education, 2013; National Youth Strategy, 2005; Strategy for Development of Education in Serbia 2020, 2012; Strategy for the support to development of small and medium-sized enterprises, entrepreneurship and competitiveness for the period from 2015 to 2020, 2015, etc.). However, a comprehensive framework for the implementation of entrepreneurship education across educational levels and profiles has not been defined yet.

Entrepreneurship education has so far been implemented as a separate course only in secondary vocational schools since 2004/2005. It is on the list of compulsory vocational courses with an annual course load of 62 to 64 hours and is taught in the final year. The main objectives of entrepreneurship education are to enable students to acquire basic entrepreneurial skills and knowledge, to develop positive attitudes towards entrepreneurship, as well as to prepare them to actively seek employment or self-employment. The subject is predominantly taught by teachers of general, general vocational and vocational courses who attended a two-day training programme with an emphasis on active teaching methods [44].

Furthermore, the Ministry of Education, Science and Technological Development runs various programmes and projects related to entrepreneurship which are being or have been carried out with the support of different development partners (such as the German and Norwegian governments, USAID, corporations, NGOs) [6]. However, these are mainly pilot projects limited in scope and duration (including only a certain number of schools, defined by type of school or territorially). Systematic attempts to incorporate entrepreneurship into curricula for primary schools, grammar schools, secondary arts schools are still underway.

As far as entrepreneurship education in Serbia is concerned, it may be noted that continuous development and a clearly defined concept have so far been provided only through informal programmes implemented by the Junior Achievement organization in Serbia.

The Junior Achievement Serbia organization is part of the global Junior Achievement Worldwide (JAW) network, founded in 1919, which encompasses 121 countries across all continents and represents the world's largest entrepreneurship education programme attended by more than 10 million students annually.

The implementation of this programme in Serbia started in 2005 with the establishment of the Junior Achievement organization. Since then, more than 60,000 students from 286 primary and secondary schools from all over Serbia have been enrolled in its education programmes in the field of entrepreneurship and financial literacy. Through a combination of theoretical and practical,

hands-on teaching, mentoring programme, organization of competitions and fairs, these students are offered an opportunity to learn the principles of business operations and are at the same time encouraged to develop their entrepreneurial competencies.

The programme is carried out in schools with the assistance of mentor teachers who have previously undergone training, developed and licensed by Junior Achievement Worldwide and certified by the Ministry of Education, Science and Technological Development of the Republic of Serbia. At the same ime, volunteers from the business community are also involved in the work with students and actively contribute to this youth education venture through mentorship, lectures and participation in juries at competitions. It is important to emphasize that the implementation of this programme, both worldwide and in Serbia, is financially supported by the business sector.

In 2013 and 2014, the European Commission declared the Junior Achievement organization in Serbia national winner in the field of entrepreneurship promotion, as well as runner-up at the European level. Long-standing active advocacy of the importance of entrepreneurship education in Serbia has resulted in the introduction of Junior Achievement activities into current strategies and action plans of the Ministry of Economy, Ministry of Education, Science and Technological Development and Ministry of Youth and Sports. The programmes have been accredited by the Ministry of Education of the Republic of Serbia and are listed in the catalogue of programmes approved by the Institute for the Improvement of Education.

Through a variety of practical activities, the Junior Achievement Serbia educational programme provides students with the opportunity to gain managerial and organizational skills, teamwork and cooperation abilities, as well as the opportunity to boost their career ambitions.

The programme focuses on encouraging students' innovation and creativity, entrepreneurship, experiential learning, along with developing skills that contribute to employability and economic and financial literacy.

In order to improve the quality of the programme, Junior Achievement is continuously working on the expansion of the network of teachers and further development of the competencies of the teachers already involved. Programmes aimed at secondary schools can be implemented as a part of the curriculum in all schools that have entrepreneurship as a course or as an extracurricular activity in all other schools of any educational profile, within the framework of extended school activities defined by law.

Unquestionably, the flagship, the most recognizable and most important programme implemented within Junior Achievement is the "Student Company" programme.

This programme is based on the learning by doing principle. Following a standardized curriculum, under the supervision of trained mentors, students create a company, develop it and close it in one school year. Students are given the opportunity to run their own companies, with real products and services, as well as to manage the money earned during the whole period of their high school education.

Student companies are formed at the beginning of the school year and, throughout the duration of the programme, students go through all the stages of an actual company's business operations: raising finance for starting up a company, defining the organizational structure of the company; allocating roles/positions among team members; choosing the product or service that the company will provide based on their own ideas; market research; business plan preparation; product/ service creation; marketing strategy; product design and business promotion; communication with business associates and consumers; exhibiting and selling at school competitions and local events; closing the company and settling its finances.

In order to ensure successful business operations of their companies, students are encouraged to interact with the business sector, potential buyers, institutions and the civil sector, thus promoting both their work and the community in a context wider than the school. In addition to acquiring first-hand knowledge on how business processes operate, the "Student Company" programme also enables students to familiarize themselves with the principles of market economy. Participation in competitions comprises an integral part of the programme concept. Junior Achievement Serbia organizes four regional competitions for student companies across the country, in which they compete for the national finals, where they

eventually vie for the best student company in Serbia. Every year, the best Serbian student company attends the European competition where it measures its strength with other peers - the best student companies from 35 European countries. Student companies from Serbia also have the opportunity to take part in international fairs organized by Junior Achievement Europe, held in various European cities.

Although the guiding idea behind this programme is to foster entrepreneurial spirit and financial literacy, and the most important outcome sought after in the programme is to open opportunities for self-employment and youth employment, this programme, in addition, contributes significantly to students' personal growth [27], [29].

Having in mind that students work according to a standardized methodology and receive guidelines and procedures for different stages in the development of a student company, research has shown that there are no significant variations in the organization, length and quality of student companies in different schools and countries [27, p. 12]. Based on these facts, it may be assumed that the programme should result in the same or similar effects in different countries. However, "numerous studies in the world show that factors that shape the entrepreneurial intentions of young people are significantly conditioned by the cultural and socio-economic context, which means that we cannot rely solely on experiences from other countries in the design of entrepreneurship education programmes" [44, p. 160].

So far, there has been no extensive research into the effects of applying this method of entrepreneurship education in Serbia; therefore, it might be interesting to explore the effects of application of this programme in our educational system. To that end, a research project has been launched involving mentor teachers participating in the realization of the programme.

Assessment of effects of the "Student Company" method in Serbia based on empirical research

In order to assess the effects of the application of the "minicompany" method on the development of entrepreneurial competences of students in the secondary school system in Serbia, a survey was conducted polling the teachers involved in the implementation of the programme.

Having in mind that, within the scope of entrepreneurship education, a distinction may be made between the "narrower" and "broader" approach, with the former encompassing "education and training for running entrepreneurial business" and the latter dealing with "training for entrepreneurial behaviour, thinking, and performance" [6, p. 6], for the purpose of our research we have focused on the assessment of effects in terms of the broader approach.

Our initial standpoint was that no matter "whether or not they go on to found businesses or social enterprises, young people who benefit from entrepreneurial learning, develop business knowledge and essential skills and attitudes, including creativity, initiative, tenacity, teamwork, understanding of risk and a sense of responsibility" [18, p. 6].

Our aim was to find out how teachers who work or have worked with students in the implementation of the "Student Company" programme evaluate the usefulness of the programme in terms of the development of attitudes, skills, business knowledge.

Since there is a multitude of existing programmes and methods of entrepreneurship education that may be encountered in the European and global practices, we believe that research studies of this type are essential if we are to come up with scientifically-based recommendations for a wider application of this educational method in our environment. So far, there have been no comprehensive studies of the application of the "Student Company" programme in Serbia. Attention of the scientific audience, both in this country and in the region, has been more directed at examining entrepreneurial intentions and attitudes towards entrepreneurship among students, and in this sense, we have only very limited insights into the effects of entrepreneurship programmes offered to high school students.

Strong inspiration to launch this research came from the findings of the Innovation Cluster for Entrepreneurship Education, a large multinational research project. The Innovation Cluster for Entrepreneurship Education (ICEE) started in January 2015 and ran until January 2018. The project was co-funded by the European Commission

through the Erasmus+ programme. The leading partner in the consortium, with responsibility for its implementation, was Junior Achievement Europe (JA Europe).

The ICEE project was a policy experiment. To move towards the European goal that every young person should have a practical entrepreneurial experience before they leave school, the consortium tested what the scenario would look like if 50% of students between 15 and 20 years of age had such an experience. At the centre of the study was a mini-company scheme called the JA Company Programme (CP).

In this project, twenty upper secondary schools from Belgium, Estonia, Finland, Italy and Latvia participated in a 27-month field trial using mini-companies for the practical entrepreneurial experience. These schools were compared with the situation at five control schools. The research in ICEE was based on a combination of qualitative and quantitative methods. The quantitative study included surveys to students, teachers, parents and business people. The net samples were 7,000 students, 3,500 parents, 1,000 teachers and 400 business people. The data were collected over the period of two school years. In the qualitative study, 150 people from ten of the participating schools were interviewed in addition to head teachers and representatives from JA and the ministries. In addition to the research, all the ICEE partners worked together in four "cluster areas" to identify good practices on: national strategies, content and tools, teacher training, and assessment [27].

The research in Serbia was primarily initiated with the idea of exploring some of the issues that were the subject of the ICEE analysis — first of all, the evaluation of the effects of the programme on students in the sphere of developing entrepreneurial competences, as well as obtaining information on how entrepreneurship educators themselves were prepared for it. The research was based on responses expressing personal opinions and teacher assessments. Some of the questions were designed in the form of statements (e.g. Our education system pays enough attention to entrepreneurship education). A 5-point Likert scale was used for responses (1 – I strongly disagree, 2 – I generally disagree, 3 – I neither agree nor disagree, 4 – I generally agree, 5 – I strongly agree). Certain questions

required teachers to rate the effects of the programme in certain areas, on a scale from 1 to 5 (e.g. Assess the usefulness of the "Student Company" programme in developing students' entrepreneurship skills (1 – not useful, 5 – very useful). In designing the questions, so as to be able to compare the results, we were guided by the questions that had already been tested and used in research undertaken with the same or similar objectives [27].

The research was conducted from mid-September to late November 2018. During this period, a questionnaire was defined and tested, an online teacher survey was carried out, and interviews with 25 teachers were held.

The questionnaire was sent to all active teachers collaborating with JA Serbia. According to the organization's data, as of 2008 until now, 963 teachers have received training for working with students in the "Student Company" programme. In the meantime, there have been natural fluctuations, and a certain number of teachers have retired, some have changed their jobs, and a number of them have never in effect been active. There are currently 461 teachers in the JA Serbia teacher base. Some teachers mentor student teams each year, whereas others do it periodically. It is also important to keep in mind that teachers' work is voluntary. In the past several years, the average number of active teachers in a school year has ranged from 100 to 120 teachers. In the survey sent, we received a response from 175 teachers from 118 schools. Bearing in mind that the "Student Company" programme is being run in 120 schools, this may be considered a very high response rate. This response rate may also be regarded as an indicator of their evaluation of the programme.

As we were interested in how teachers assess the extent to which entrepreneurship education is being implemented in our secondary schools, whether they need additional training in order to engage in entrepreneurship education and how they evaluate the effects achieved by using the "mini-company" method with their students, it was important for us to determine whether there are differences in attitudes about these issues that are dependant on the type of secondary school in which they work, their vocation (prior education) and the length of work experience in running the "Student Company" programme with students.

Among surveyed teachers, most of them (84%) work in secondary vocational schools, 11% in grammar schools, 4% in mixed schools and 1% in art schools. The structure of respondents closely follows the structure of our secondary schools. In the school year 2017/2018, there were 510 secondary schools in Serbia, of which 310 were vocational (60.8%), 111 grammar schools (21.8%), 49 mixed (9.6%) and 40 art schools (7.8%). A somewhat higher representation of JA teachers in secondary vocational schools may be interpreted as a result of the introduction of entrepreneurship course into the curricula of these schools, thus igniting a greater interest of teachers to master a specific model of entrepreneurship education.

Out of all the surveyed teachers, 50% of them have been participating in the implementation of the programme for more than 5 years, 21% from 3 to 5 years and 29% for less than 3 years. Out of the total number of respondents, 75% are women, and 25% are men. In secondary schools in Serbia women comprise 66% of employees.

According to the educational structure, the teachers who graduated from faculties in the field of social sciences and humanities comprise the majority (47%), with the faculty of economics being most represented, 31% received education in the field of technical and technological sciences, 15% studied natural and mathematical sciences and 7% medical sciences.

When asked whether they had the opportunity to acquire knowledge in the field of entrepreneurship during their formal education, 65% stated they did not.

As their main motivation for signing up for the training aimed at preparing them for the implementation of the "Student Company" programme, out of several answers offered, two of which were to be selected, 75% of teachers reported "the usefulness of the programme for students' development and personal growth". It was followed by the answer "for professional development" chosen by 46% of respondents, whereas 20% reported curiosity as the reason. Interestingly enough, only 5% stated it was "for credit points", although earning points through different types of continuous professional training is a requirement. These data point to a high level of personal motivation of teachers for being involved in the programme. This is also shown in answers to the question "Why are you running

the 'Student Company' programme at your school?" Out of the answers offered, three of which could be selected, the answer "I believed that it would be useful for the students I teach" was given by 80% of respondents, the response "because of the opportunity for acquiring new knowledge" was submitted by 53%, whereas the statements "I believe in learning by doing" and "I am attracted to informal forms of teaching" were chosen by 41% and 28% of respondents respectively. The answers "for socializing and getting to know new people" and "for the sake of expressing my creativity and innovation" were found at the bottom of the list, receiving 25% and 22% respectively.

The responses point to high levels of intrinsic teacher motivation, which is a significant factor for the success of the programme implementation. Notwithstanding how much a programme may be standardized, the role of the teachers is still of the utmost importance in the educational process.

The ICEE study states that "enthusiastic and competent teachers play a crucial role in the implementation and upscaling of EE3" [27, p. 8].

The survey item aimed at assessing the competence of teachers for the implementation of the programme was the following: "I have the necessary knowledge and skills for mentoring in the 'Student Company' programme and I do not need additional training and improvement", where respondents were supposed to indicate the extent to which they agreed with the statement on a scale of 1 to 5 (1 expressing "I strongly disagree", and 5 "I strongly agree"). Out of the total number of teachers, only 9.7% believe that further training is not necessary, and these are the teachers who have been involved in the programme for more than 3 years (21.6% of respondents with 3 to 5 years of experience and 10% of respondents with experience of over 5 years) (Figure 2). Obviously, teachers with 3 to 5 years of experience in the programme are more confident. In this group the mean score was 3.48, for teachers with over 5 years of experience it was 3.24, whereas the mean score for the whole group was 3.21. As expected, teachers with less than 3 years of experience were the ones who believed that they needed further training the most (mean score

³ Entrepreneurship education.

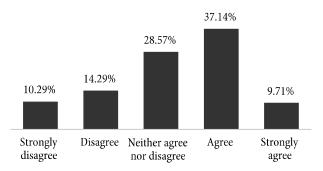
of 2.98). That additional training is needed was explicitly stated by 24.5% of teachers. This is not surprising, as 65% of teachers have not encountered entrepreneurship education during their previous schooling.

When observing the variations in responses in relation to the type of teachers' primary education field, the mean score ranges from 3, in the group of teachers coming from the background of natural and mathematical, as well as technical and technological sciences, up to 3.4 for teachers graduating from social sciences and humanities. On the basis of the interviews conducted with teachers, it may be concluded that this difference in favour of the teachers who received education in social sciences and humanities is attributable to the teachers who studied faculties with an economic group of courses (Faculty of Economics, Faculty of Management, Faculty of Organizational Sciences).

The item "Our education system pays enough attention to entrepreneurship education" received a mean score of 2.3. Out of the total number of respondents, 63% said that entrepreneurship education was not being given sufficient attention (Figure 3). Out of the 175 surveyed teachers, only two opted for the statement "I strongly agree" and they come from the group of teachers with the shortest experience in the programme. There were no significant differences in teachers' answers dependant on their education or seniority in the programme.

The statement used to assess whether there are differences in the attainability of the ultimate goal of entrepreneurship education – the development of students' entrepreneurial competencies, which may be attributable

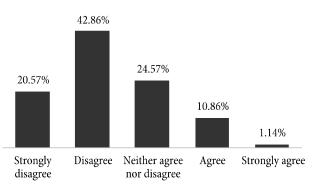
Figure 2: Teacher's attitudes on "I have the necessary knowledge and skills for mentoring in the 'Student Company' programme and I do not need additional training and improvement"



to the types of secondary schools, was the following: "The courses in the curriculum offer students the opportunity to develop entrepreneurial competencies". Responses in all subgroups (divided by the type of school, length of teachers' programme participation) were very similar. When all schools are observed collectively, the mean score is 2.72, with secondary vocational school teachers' responses receiving a mean of 2.73, and grammar school teachers 2.63. Teachers in art schools gave the lowest rating (the average being 1.5), but due to their low participation in the total set, they did not significantly affect the overall mean results. Such an inconsiderable difference in the assessment of the curricula between secondary vocational schools, in which entrepreneurship is a curriculum course, in contrast to grammar schools which do not include it, suggests that there is probably a problem in how the curriculum is defined and how the entrepreneurship course is being taught in terms of learning outcomes.

As the main objective of the survey was to assess the effects of applying the "Student Company" method to the development of students' entrepreneurial competencies, the questionnaire required teachers to evaluate the usefulness of the programme for the development of entrepreneurial skills (Figure 4) and the development of entrepreneurial attitudes (Figure 5) on a 5-point scale. The statements were related to specific types of skills and attitudes, 1 meaning that the programme had no effect, and 5 indicating that the programme was very useful. The responses have demonstrated that teachers believe the "Student Company" programme to be very effective in both areas.

Figure 3: Teacher's attitudes on "Our education knowledge and skills for mentoring in the 'Student system pays enough attention to entrepreneurship"

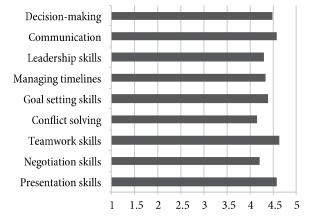


Skillswise, what can be inferred from the means cores is that the programme provides excellent results in developing teamwork skills (4.62), presentation skills (4.58), communication (4.58), decision-making (4.48). Slightly weaker effects, but still above 4, are achieved in goal setting skills (4.39), managing timelines (4.33), leadership skills (4.30), negotiation skills (4.21) and conflict solving (4.14).

Excellent results are also attained in developing attitudes. Teachers have evaluated that the programme most significantly affects the development of creativity in students (4.71), then self-confidence (4.65), proactivity and taking initiative (4.53), need for achievement (4.47), perseverance (4.42) and risk management (4.21).

The teachers were asked to specify the areas in which they believed the "Student Company" programme gave the best results (Figure 6) and the development of students' overall potential ranked first. It is worth noting that for each of the offered areas the mean score was above 4.2.

Figure 4: Assessment of the effects of the "Student Company" programme on developing entrepreneurial skills



Based on the findings of the research, it may be ascertained that the "Student Company" programme accomplishes excellent results in the development of entrepreneurial skills, entrepreneurial attitudes, and financial literacy. All these lead to the growth of the students' overall potential, and this is exactly what is important in the era of the Fourth Industrial Revolution, when the most valued individual traits are creativity, proactivity, adaptability, need for achievement, risk-taking and a sense of initiative.

These results are fully consistent with the results obtained through ICEE research. In their words, "teachers, students and parents in all the countries mentioned a wide range of learning outcomes, such as knowledge (how to start and run a company); generic skills (creativity, conflict solving and presentations), and attitudes (school motivation, responsibility, self-efficacy and self-confidence). Both students and teachers mentioned that a by-product

Figure 5: Assessment of the effects of the "Student Company" programme on the development of entrepreneurial attitudes

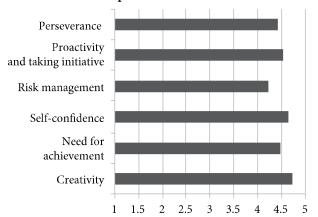
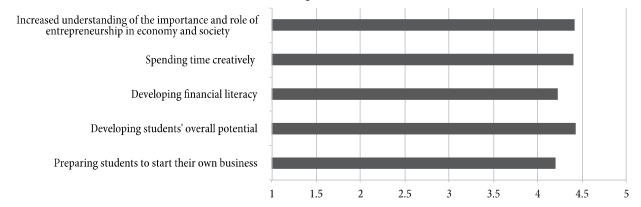


Figure 6: Assessment of the effects of the "Student Company" programme on student development in different areas



of this process, was more students coming to understand the usefulness of the other subjects that they were being taught" [27, p. 7]. Furthermore, "they pointed out that the most important success factor for CP is the opportunity it provides for the individual student. Teachers (and students) describe how mini-companies provide opportunities for personal growth through practical knowledge; opportunities that the school otherwise does not provide" [27, p. 47].

We obtained very strong evidence of these attitudes through interviews with teachers. They found that, when involved in the programme, students developed a competitive spirit and self-confidence. They heard students say that they had not experienced anything better in their lives. They said that students improved their school performance and they could see great progress in students participating in the programme over the period of two school years. Probably the most vivid assessment of the effects of the programme was given by a teacher who said "these kids are starting to differ from other children in the classroom".

Conclusion

The Fourth Industrial Revolution is leading to accelerated transformations of economies and societies globally. Labour market demands are changing dramatically. New occupations are emerging and the existing ones disappearing. Given the dynamics of the change, there is a high degree of uncertainty about the types of knowledge and skills that will be needed in the future. Numerous studies suggest that an increase in the need for workers with finely tuned social and emotional skills - skills that machines are a long way from mastering, will be accompanying the adoption of advanced technologies in the workplace. The development of creativity, innovation, entrepreneurship and sense of initiative, analytical and critical thinking, communication and negotiation skills, decision-making, leadership, and empathy is gaining in importance.

These skills are an integral part of the entrepreneurship competence and are successfully developed through entrepreneurship education. In today's world, this form of education is approached not only in its narrow sense, as

a process of preparing for business creation, but also in a wider context, as a process of developing entrepreneurial mindsets and skills, as well as personal qualities that have universal application. There are several approaches, methods and models of entrepreneurship education. Serbia has started implementing entrepreneurship education within its education system, but does not yet have a clearly defined strategy for the development of this type of education across different levels and educational profiles. Currently, entrepreneurship has been introduced as a course in the final year of secondary vocational schools, while in other schools and at lower educational levels it is envisaged that this competence will be developed through cross-curricular collaboration. The research we have conducted shows that the existing curricula do not allow for the efficient development of entrepreneurship competence among students and is not given enough attention. Insufficient teacher training for this type of education appears as an additional problem.

Worldwide experience shows that the best effects in the development of entrepreneurial competences are achieved through informal types of education, and the "Student Company" method has been recognized as an example of good practice. This method is based on experiential learning and is implemented in secondary schools. In order to provide recommendations aimed at selecting optimal solutions for the design of entrepreneurship education in Serbia, a study has been carried out to evaluate the effects of the implementation of the "Student Company" programme within our educational system. The survey has shown that, according to the assessments provided by 175 teachers from 118 secondary schools participating in the programme, the "Student Company" method also gives excellent results in the development of entrepreneurship skills and attitudes among our students. A standardized training method combining practical and theoretical instructions alleviates the problem of insufficiently or inadequately trained entrepreneurship teachers. In addition, the "Student Company" method is implemented in cooperation between the business and education sectors, spontaneously connecting them, which can further contribute to reducing the "delay" of the educational system in terms of the needs of the economy.

All these arguments speak in favour of the inclusion of this model in all secondary schools in Serbia as an informal type of education.

References

- 1. Athayde, R. (2012). *Impact: 50 years of young enterprise*. London: Kingston University.
- 2. Bacigalupo, M., Kampylis, P., Punie, Y., & Van den Brande, G. (2016). *EntreComp: The entrepreneurship competence framework*. Luxembourg: Publication Office of the European Union. Retrieved from http://publications.jrc.ec.europa.eu/repository/bitstream/JRC101581/lfna27939enn.pdf.
- Bartlett, W., Uvalić, M., Durazzi, N., Monastiriotis. V., & Sene, T. (2016). From university to employment: Higher education provision and labour market needs in the Western Balkans (Synthesis Report). Luxembourg: Publications Office of the European Union. Retrieved from http://www.lse.ac.uk/ business-and-consultancy/consulting/assets/documents/ From-University-to-Employment.pdf.
- Bughin, J., Hazan, E., Lund, S., Dahlstrom, P., Wiesinger, A., & Subramaniam, A. (2018). Skill shift: Automation and the future of the workforce, Discussion paper. McKinsey Global Institute. Retrieved from https://www.mckinsey.com/featured-insights/ future-of-work/skill-shift-automation-and-the-future-ofthe-workforce.
- Business Innovation Programs. (2014). *Učenička kompanija u Srbiji izazovi i* šanse. Kragujevac. Retrieved from http://bips.rs/wp-content/uploads/2015/12/UK-u-Srbiji-Izazovi-i-Sanse.pdf.
- Čekić-Marković, J. (2015). Preduzetničko obrazovanje Komparativni pregled obrazovnih politika, modela i prakse. Beograd: Tim za socijalno uključivanje i smanjenje siromaštva, Vlada republike Srbije. Retrieved from http://socijalnoukljucivanje. gov.rs/wp-content/uploads/2016/03/Preduzetnicko_obrazov anje%E2%80%93Komparativni_pregled.pdf.
- Curth, A., Chatzichristou, S., Devaux, A., & Allinson, R. (2015). Entrepreneurship Education: A road to success. Luxembourg: European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs. Retrieved from https:// ec.europa.eu/growth/content/entrepreneurship-education-road-success-0_de.
- 8. Dostignuća mladih. (2016). *Omladinska kompanija*, Beograd: Dostignuća mladih, GIZ.
- 9. Đurđević, S., & Stevanović, A. (2017). Učenička kompanija izazov za sve. XXI naučna konferencija nacionalnog značaja, "Pedagoška istraživanja i školska praksa", Obrazovne promene u Srbiji: Izazovi i perspektive, pp.103-105.
- 10. Eide, T. H., & Olsvik, M.V. (2017). Qualitative case study of minicompany experiences in five European countries "If everything is told to you, it is not learning. You have to figure out something on your own". Eastern Norway Research Institute. Retrieved from http://icee-eu.eu/the-research/final-report.html.
- 11. Elert, N., Andersson, F. W., & Wennberg, K. (2015). The impact of entrepreneurship education in high school on long-term entrepreneurial performance. *Journal of Economic Behavior and Organization*, 111, 209-223. Retrieved from http://dx.doi.org/10.1016/j.jebo.2014.12.020.

- 12. Ernst & Young. (2013). Avoiding a lost generation. *G20 Young Entrepreneurs' Alliance Summit, Russia*. Retrieved from https://www.ey.com/Publication/vwLUAssets/Avoiding_a_lost_generation_June_2013/\$FILE/Avoiding_a_lost_generation_LoRes_FINAL.pdf.
- 13. European Commission. (2017). Investing in a smart, innovative and sustainable Industry, A renewed EU Industrial Policy Strategy, Communication from the Commission to the European Parliament, the European Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank. Brussels. Retrieved from https://ec.europa.eu/growth/industry/policy/skills_en.
- 14. European Commission. (2016a). *New skills agenda for Europe*. Retrieved from https://ec.europa.eu/growth/industry/policy/skills_en.
- 15. European Commission. (2016b). Entrepreneurship education at school in Europe. Eurydice Report. Luxembourg: Publications Office of the European Union. Retrieved from https://publications.europa.eu/en/publication-detail/-/publication/74a7d356-dc53-11e5-8fea-01aa75ed71a1.
- European Commission. (2015). Entrepreneurship education: A road to success. Retrieved from https://ec.europa.eu/growth/ content/entrepreneurship-education-road-success-0 en.
- 17. European Commission. (2012). *Rethinking education: Investing in skills for better socioeconomic outcomes*. Retrieved from http://www.cedefop.europa.eu/files/com669_en.pdf.
- 18. European Commission. (2013). Entrepreneurship 2020 Action Plan Reigniting the entrepreneurial spirit in Europe. Retrieved from /https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0795&from=EN.
- 19. European Commission. (2012). Effects and impact of entrepreneurship programmes in higher education. Brussels: Directorate-General for Enterprise and Industry. Retrieved from https://ec.europa.eu/growth/content/effects-and-impact-entrepreneurship-programmes-higher-education-0_en.
- 20. European Commission. (2010). EUROPE 2020: A strategy for smart sustainable and inclusive growth. Brussels. Retrieved from http://eurlex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A52010DC2020.
- 21. European Commission. (2008). "Think small first": A small business act for Europe. Retrieved from http://ec.europa.eu/enterprise/policies/sme/small-business-act/index_en.htm.
- 22. European Parliament. (2006). Recommendations of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning. Official Journal of the European Union, 2006/962/EC. Retrieved from https://www.google.rs/search?q=recommendation+for+lifelong+learning &oq=Recommandation+for+life+long+&aqs=chrome.1.69i5 7j0.19918j0j8&sourceid=chrome&ie=UTF-8#.
- European Commission. (2003). Green Paper Entrepreneurship in Europe. Retrieved from http://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:52003DC0027.
- 24. European Commission. (2002). Best Procedure project on "Education and training for entrepreneurship". Final report of the expert group. Retrieved from https://ec.europa.eu/ growth/content/best-procedure-project-education-andtraining-entrepreneurship-final-report-expert-group-0_en.
- 25. Frey, B. C., & Osborne, M. A. (2013). *The future of employment:* How susceptible are jobs to computerisation? Retrieved from

- https://www.oxfordmartin.ox.ac.uk/downloads/academic/ The_Future_of_Employment.pdf.
- 26. Jenner, C. (2012). Business and education: Powerful social innovation partners. *Stanford Social Innovation Review, 17.*
- 27. Johansen, V. (2018). *Innovation cluster for entrepreneurship education*. Eastern Norway Research Institute. Retrieved from http://icee-eu.eu/the-research/final-report.html.
- 28. Kisić, S. (2018). Key challenges for the Serbian education. *Ekonomika preduzeća*, 66(1-2), 189-202.
- 29. Kisić, S. (2017). "Učenička kompanija" kao model preduzetničkog obrazovanja, XXI naučna konferencija nacionalnog značaja, "Pedagoška istraživanja i školska praksa", Obrazovne promene u Srbiji: Izazovi i perspektive, pp.101-103.
- Laboissiere, M., & Mourshed, M. (2017). Closing the skills gap: Creating workforce-development programs that work for everyone. McKinsey Global Institute. Retrieved from https:// www.mckinsey.com/industries/social-sector/our-insights/ closing-the-skills-gap-creating-workforce-developmentprograms-that-work-for-everyone?cid=other-emil-alt-mipmck-oth-1702.
- 31. Lund, S., Mourshed, M., Rutherford, S., & Tyreman, M. (2018). Retraining and reskilling workers in the age of automation. McKinsey Global Institute. Retrieved from https://www.mckinsey.com/global-themes/future-of-organizations-and-work/retraining-and-reskilling-workers-in-the-age-of-automation?cid=othereml-alt-mgi-mgi-oth-1801&hlkid=3fd28775fc8645cda3c027 a1e54fe158&hctky=10018290&hdpid=15560729-b393-4c60-8833-c5a11363b2d9.
- 32. Lund, S., & Manyika, J. (2017). Five lessons from history on Al, automation and employment. McKinsey Global Institute. Retrieved from https://www.mckinsey.com/global-themes/future-of-organizations-and-work/five-lessons-from-history-on-ai-automation-and-employment.
- 33. Manyika, J., Lund, S., Chui, M., Bughin, J., Woetzel, J., Batra, P., Ko, R., & Sanghvi, S. (2017). *Job lost, jobs gained: Workforce transitions in a time of automation*. McKinsey Global Institute. Retrieved from https://www.mckinsey.com/~/media/McKinsey/Global%20Themes/Future%20of%20Organizations/What%20 the%20future%20of%20work%20will%20mean%20for%20 jobs%20skills%20and%20wages/MGI-Jobs-Lost-Jobs-Gained-Report-December-6-2017.ashx.
- 34. Markov, S., & Izgarjan, A. (2010). Percepcija preduzetništva kod studentkinja i studenata Univerziteta u Novom Sadu. *Sociološki pregled*, *44*(2), 325-336.
- 35. Markov, S., & Stanković, F. (2008). Univerzitetsko okruženje i preduzetničke težnje studenata. In S. Markov & F. Stanković (Eds.), *Univerziteti i preduzetništvo* (73-113), Novi Sad: Univerzitet u Novom Sadu.
- McKinsey Global Institute. (2017). Report: What the future of work will mean for jobs skills and wages. Retrieved from https:// www.mckinsey.com/global-themes/future-of-organizationsand-work/what-the-future-of-work-will-mean-for-jobs-skillsand-wages.
- 37. Miljković Krečar, I. (2010). Razvoj poduzetničkih kompetencija u sustavu cjeloživotnog obrazovanja. *Napredak*, *151*(3-4), 417-432. Retrieved from https://hrcak.srce.hr/82718.
- 38. Miljković Krečar, I. (2008). Konstrukcija i empirijska provjera upitnika poduzetničkih sklonosti. *Psihologijske teme, 17*(1), 57-73. Retrieved from https://hrcak.srce.hr/32452.

- Mourshed, M., Patel, J., & Suder, K. (2014). Education to employment: Getting Europe's youth into work. McKinsey Center for Government, McKinsey & Company. Retrieved from https://www.mckinsey.com/featured-insights/future-of-work.
- 40. Mourshed, M., Farrell, D., & Barton, D. (2013). *Education to employment: Designing a system that works*. McKinsey Center for Government, McKinsey & Company. Retrieved from https://www.mckinsey.com/featured-insights/future-of-work.
- Pejanović, R., Košić, K., Čikić, J., Nikić, V., & Demirović, D., (2015). Istraživanje razvojnog modela treće misije Univerziteta u Novom Sadu. XXI Skup Trendovi razvoja: "Univerzitet u promenama". Retrieved from http://www.trend.uns.ac.rs/ stskup/trend_2015/radovi/T2.1/T2.1-6.pdf.
- 42. Petković, S. (2017). University students' entrepreneurial intentions: Insights from BiH (Republic of Srpska). *Acta Economica*, 15(27), 59-92.
- 43. Schwab, K. (2018). *The Global Competitiveness Report 2017-2018*. Geneva: World Economic Forum. Retrieved from http://www3.weforum.org/docs/gcr/2016-2017/Global_Competitiveness_Report_2016-2017.pdf.
- 44. Ševkušić, S., Stojanović, Lj., & Simijonović, R. (2018). Koji faktori oblikuju nameru srednjoškolaca u Srbiji da se bave preduzetništvom? *Zbornik Instituta za pedagoška istraživanja, 50*(1), 158-181. Retrieved from DOI:https.//doi.org./10.2298/ZIPII801158S.
- Subotić, M., Mitrović, S., Grubić-Nešić, L., & Stefanović, D., (2017). Uloga univerziteta u razvoju preduzetništva. XXIII Skup TRENDOVI RAZVOJA: "Položaj visokog obrazovanja i nauke u Srbiji". Fakultet tehničkih nauka, Univerzitet u Novom Sadu, Novi Sad. Retrieved from http://www.trend.uns.ac.rs/stskup/ trend_2017/radovi/T3.3/T3.3-9.pdf.
- 46. Uvalić, M., & Bartlett, W. (2016). From university to employment: Higher education provision and labor market needs in Serbia. Luxembourg: Publications Office of the European Union. Retrieved from http://www.lse.ac.uk/business-and-consultancy/consulting/assets/documents/From-University-to-Employment.pdf.
- 47. Vlada Republike Srbije. (2012). *Strategija razvoja obrazovanja u Srbiji do 2020. godine*. ("Službeni glasnik RS", broj 107/2012). Retrieved from http://www.vtsnis.edu.rs/StrategijaObrazovanja.pdf.
- 48. Wennberg, K. (2015). Addressing youth employment: The role of entrepreneurship & education initiatives in changing labour markets. ASEF Experts' Meeting on Entrepreneurship & Youth Employment "Re-engineering Tactics for Asia & Europe". Stockholm, Sweden.
- 49. Wennberg, K., & Elert, N. (2012). The Effects of Education and Training in Entrepreneurship A long-term study of Junior Achievement Sweden Alumni labour potential and business enterprise. RATIO, Sweden.
- Williamson, N., Beadle, S., & Charalambous, S. (2013). Enterprise education impact in higher education and further education. Department for Business, Innovation and Skills, ICF GHK.
- 51. World Economic Forum. (2018). *The Future of Jobs Report*. Insight Report, Geneva. Retrieved from https://www.weforum.org/reports/the-future-of-jobs-report-2018.



Svetlana Kisić Zajčenko

Svetlana Kisić is Special Advisor at the Economics Institute in Belgrade and lecturer at the Belgrade Business School. She began her consulting career in 1987 at the Economics Institute, and from 1994 to 2007 continued it as Director of the Financial Consulting Department at Deloitte. She worked on projects in different economic fields, such as privatization, restructuring, development of strategic plans, organizational issues, etc. Svetlana Kisić earned her B.Sc. and M.Sc. degrees at the Faculty of Economics, University of Belgrade. She has been a member of the Supervisory Board of the UniCredit Bank Serbia since 2011, as well as a member of the Supervisory Board of the UniCredit Leasing Serbia from 2012 to 2017. She is a member of the Executive Board and Presidency of Serbian Association of Economists, and member of Serbian Association of Corporate Directors. She is co-founder and Chairperson of the Women's Government, as well as President of the Supervisory Board of Junior Achievement Serbia. She has published, both independently and as a co-author, a great number of books, studies and articles.



Saša Petković

is Associate Professor at the Faculty of Economics, University of Banja Luka (UNIBL). He teaches courses in the field of entrepreneurial and theoretical economics at all study cycles. He authored and co-authored 28 research papers published in scientific journals and proceedings of the correspondent conferences and 8 monographs. Since 2007 he has been serving as Vice Dean for Teaching Issues. He also founded the Center for Project Management and Entrepreneurship at the Faculty of Economics, UNIBL. Since 1999 he has been engaged in the international development organization CARE International Balkans as a project manager.