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SKILLS FOR THE FUTURE: ASSESSMENT OF THE EFFECTS OF THE "COMPANY PROGRAMME" IN SERBIA

Veštine za budućnost – procena efekata programa „Učenička kompanija" u Srbiji

Abstract

The changes brought about by the Fourth Industrial Revolution across all areas of human activity have had a significant impact on the knowledge and skills requirements of the population. Research shows that in the era of automation, in addition to the need to develop basic digital skills for all, and advanced digital skills for a certain group of workers, the need to develop social and emotional skills is also on the rise. The development of creativity, innovation, analytical and critical thinking, teamwork, self-efficacy, emotional intelligence is gaining in importance. These skills are an integral part of entrepreneurial competence and are developed through entrepreneurship education. Today, entrepreneurship education is approached in a broader context, as education that is crucial for personal development and realization, education that enables individuals to adapt to dynamic changes in the labour market and be active members of society. There are several approaches, methods and models of entrepreneurship education. According to worldwide experience, the best effects in the development of entrepreneurial competencies are achieved through informal types of education, and the "Company Programme" (CP) has globally been recognized as an example of good practice. This programme is based on experiential learning and is implemented in high schools. In order to provide recommendations for the selection of optimal solutions in the approach to entrepreneurship education in Serbia, a study was conducted to assess the effects of the implementation of the Company Programme on the development of entrepreneurial competencies. The research was carried out with the 2018/2019 school year generation of the Company Programme participants, from 74 schools in 45 cities in Serbia. Based on the results obtained, we may come to the conclusion that the Company Programme has resulted in very high development of student self-efficacy (Cohen's d 1.39), great progress in the development of teamwork skills and project management (Cohen's d of 0.89 and 0.79, respectively) and moderate progress in creativity (Cohen's d 0.56).

Keywords: *entrepreneurship education, skills, Company Programme, Student Company, mini-company, self-efficacy, Junior Achievement, education, Serbia.*

Sažetak

Promene koje je donela IV industrijska revolucija na svim poljima ljudskog delovanja značajno su uticale i na potrebe u znanjima i veštinama populacije. Istraživanja pokazuju da 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, timskog rada, samoefikasnosti, emocionalne inteligencije dobijaju na značaju. Navedene veštine predstavljaju sastavni deo preduzetničke kompetencije i razvijaju se kroz preduzetničko obrazovanje. U svetu se danas preduzetničkom obrazovanju pristupa u širem kontekstu, kao obrazovanju koje je od ključne važnosti za lični razvoj i realizaciju, obrazovanju koje osposobljava pojedinca da se prilagođava dinamičnim promenama na tržištu rada i da bude aktivan član društva. Postoji više pristupa, metoda i modela preduzetničkog obrazovanja. Prema svetskim iskustvima najbolji efekti u razvoju preduzetničkih kompetencija se postižu kroz neformalne oblike obrazovanja, a kao primer dobre prakse na globalnom nivou je prepoznat program Učenička kompanija (UK). Ovaj program se bazira na iskustvenom učenju i realizuje se u srednjim školama. U cilju davanja preporuka za izbor optimalnih rešenja u koncipiranju preduzetničkog obrazovanja u Srbiji, sprovedeno je istraživanje procene efekata primene programa UK na razvoj preduzetničkih kompetencija. Istraživanje je sprovedeno sa učenicima, učesnicima u programu UK, školske 2018/19. godine, iz 74 škole iz 45 gradova u Srbiji. Rezultati istraživanja su pokazali da je kod učenika došlo do veoma velikog razvoja samoefikasnosti (Koenov d 1,39), velikog napretka u razvoju veština timskog rada i upravljanju projektima (Koenov d 0,89 i Koenov d 0,79) i umerenog napretka kreativnosti (Koenov d 0,56). To govori u prilog uključivanja ovog programa, kao neformalnog oblika obrazovanja, u sve srednje škole u Srbiji.

Ključne reči: *preduzetničko obrazovanje, veštine, Učenička kompanija, mini kompanija, samoefikasnost, Dostignuća mladih, obrazovanje, Srbija.*

Introduction

The upsurge of new technologies and trends is leading to a turnaround in business models and a change in the division of labour between workers and machines, bringing about the transformation of current job profiles. As a direct result of these changes, the types of skills needed to perform most jobs will undergo a profound shift.

New technologies are opening up new opportunities, increasing productivity, and stimulating growth. However, not everyone is going to be a winner in this process, because adaptation is what 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 developing the knowledge and skills of the population [22]. 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 [26]. The impact of Industry 4.0 on potential growth models and the labour market in Serbia has been comprehensively studied by Djuričin and Lončar [6] and Vujović [31].

Imbalances will emerge in the short term; on the one hand, there will be armies of the unemployed, especially among the youth, who are particularly vulnerable, while, on the other hand, companies will not be able to satisfy their needs for people with specific knowledge and skills.

Existing models of education that offer profiled skill-sets for certain occupations will not be able to respond to the demands of time. Bearing in mind that, according to estimates, current students will have to change several occupations by the end of their career lives to adapt to the labour market demands [22], that there are no longer clear boundaries among professions, that the dynamics of technological development is progressively creating new occupational categories, it is obvious that shifts in the concept of education will be inevitable. "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" [11, p. 2]. In this light, entrepreneurship education plays a particularly significant role.

Skill shift and entrepreneurship education

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 [35, p. 11].

The question of what skills are needed for the future has become the subject of intensive research with the aim of timely preparing the workforce for the jobs of the future [22], [25], [26].

In their *Skill shift: automation and the future of the workforce* report [4], researchers from the McKinsey Global Institute have provided particularly analytical and functional answers to questions on what will be the forthcoming changes in the demand for workforce skills and how work will be organized within companies, as people are increasingly interacting with machines in the workplace.

They have defined a new taxonomy of 25 workforce skills. They group skills 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 of the United States and five European countries, with a special focus on five sectors: banking and insurance, energy and mining, healthcare, manufacturing and retail, they have made an assessment of the evolution of requirements for certain skills by 2030.

In the survey findings 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].

Research has also shown that future workers will spend significantly more time using social and emotional skills than they do today. Overall, between 2016 and 2030, the demand for these social and emotional skills will increase across all industries by 26 percent in the United States and by 22 percent in Europe. Among all the analysis of skill shifts, the rise in demand for entrepreneurship and initiative taking will go up the fastest, with an increase of 33 percent in the United States and 32 percent in Europe. Other social and emotional skills, such as leadership and managing others, have also shown a strong increase [4, p. 11].

It is obvious that economists, other researchers, and experts in organizational practice use different definitions when talking about workforce skills, yet, based on the aforementioned research, certain unambiguous conclusions might be drawn. Automation and new technologies are leading to increasing skills' instability, and adapting to change 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 research papers.

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

Without going into a deeper analysis of the different types of classifications, or further discussion on which of the listed skills are skills and which ones are abilities, we may unequivocally claim that they are all important components of the entrepreneurship competence, and are developed through entrepreneurship education. Therefore, in these times, entrepreneurship education needs to be approached and viewed in a broader context, as education essential for personal development and realisation, education that will enable the individual to adapt to dynamic changes in the labour market and be an active member of society.

Goals, principles and methods of entrepreneurship education

Entrepreneurship education includes "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" [13, p. 3]. The goal of entrepreneurship education is to develop *entrepreneurial competences*. Entrepreneurial competences 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. [14], [11]. In terms of *attitudes*, we speak of creativity, sense of initiative, need for achievement, risk-taking tendency, self-efficacy, locus of control [24], [23], [1], [16]. As far as *knowledge* is concerned, it refers to the understanding of the role of entrepreneurs, as well as knowledge of relevance for carrying out entrepreneurial activities (planning, budgeting, making calculations, and a number of other areas of knowledge important for the successful managing of company functions). The basic and at the same time indispensable level of knowledge to be acquired should ensure the financial literacy of the participants [16], [7].

In the last few decades, there has been an increase in activities aimed at the development and implementation of entrepreneurship education at all levels of education in Europe. In a multitude of existing programmes, it is possible to clearly distinguish three approaches to this type of education [16]. 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, what motivates entrepreneurs, and analyses the factors that affect entrepreneurial processes. The second approach, which may be called *education for entrepreneurship*, focuses on the acquisition of skills and knowledge relevant to starting a new company. Central elements in such teaching include acquiring knowledge and training in budgeting, business plan development,

marketing strategy, business organization plan, and reflecting on the motives for starting 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 range 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 the close connection between entrepreneurship and the economic development theory. The third approach (*through*) is broader and includes the competence to perceive new opportunities and put them to work in different areas of society.

In addition to the differences in content, as far as entrepreneurship education is concerned, there are also differences in the methods used, which may be formal, non-formal and informal.

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

Entrepreneurship education in Europe

Two thirds of European countries have incorporated entrepreneurial learning at the level of primary education. The most dominant is the transversal, horizontal and cross-curricular approach based on learning outcomes. In primary education, half of the countries have had the learning outcomes defined, and they mainly refer to attitudes towards entrepreneurship as well as transversal entrepreneurial attitudes. There are no countries working on practical entrepreneurial skills at the primary school level [13], [5].

At the secondary school level, entrepreneurship education has, in one way or another, been introduced in all countries. Approximately two thirds of the countries have opted for an integrated and cross-curricular approach, with somewhat greater representation of the integrated approach. In some countries, entrepreneurship is taught as a separate subject; in these cases, entrepreneurial learning is covered in different ways: as a separate compulsory subject, as one of the optional elective subjects or as part of an economic group of subjects.

Studies of the impact of entrepreneurship education across methods and educational levels have shown that the greatest effects of entrepreneurship education are achieved through experiential learning and its implementation at lower levels of education [33], [34]. The high school period seems to be especially important. Given the lack of time and money as a resource, and the difference in the effects of individual programmes, it is essential to choose the most efficient method and programme. Research studies around the world 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 Company Programme model [10], [14], [13].

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

The mini-company method encompasses all the 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 sectors.

The mini-company is the most widespread method used in most European countries. Approximately 350,000 students participate in this programme in Europe annually. Some European countries have incorporated the Company Programme[1] as an option into their curricula, while in other countries, the programme is offered through extra-curricular activities or national programmes.

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 a growing awareness of the need for the development

1 The 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 entrepreneurship education in Serbia, the actual work on its development has not gone far yet.

The need to develop the enterprising disposition, skills and knowledge has been expressed in a number of laws and strategic documents (Law on Foundations of Education System, 2009; Law on Primary Education, 2013; Law on Secondary Education, 2013; Law on Adult Education, 2013; National Strategy for Youth, 2005; Strategy for the Development of Education in Serbia by 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 yet been defined.

Entrepreneurship education has so far been incorporated as a separate subject only in secondary vocational schools since 2004/2005. It is on the list of compulsory vocational subjects with an annual course-load of 62 to 64 hours and is taught in the final year of education. 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 mostly taught by teachers of general, general vocational and vocational subjects who have passed a two-day training programme with an emphasis on active teaching methods [5].

In addition, the Ministry of Education, Science and Technological Development implements various programmes and projects related to entrepreneurship which are being or have been carried out with the support of various development partners (such as the German and Norwegian governments, USAID, corporations, NGOs) [5]. However, these are mostly pilot projects of limited scope and duration (only a certain number of schools, defined by type of school or territorially). Systematic attempts to incorporate entrepreneurship into curricula for primary schools, general high schools, secondary art schools are still underway.

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

Junior Achievement Serbia is part of the global Junior Achievement Worldwide (JAW) network, founded in 1919, which covers 121 countries across all continents and is 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 entrepreneurship and financial literacy education programmes. By combining theoretical and practical, hands-on teaching, the mentoring programme, organizing competitions and fairs, these students are given the opportunity to learn the principles of business operations and are at the same time encouraged to develop their entrepreneurial competencies.

The programme is implemented within 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 Government of the Republic of Serbia. It is important to point out that the implementation of this programme, both across the world and in Serbia, is financially supported by the business sector.

In 2013 and 2014, the European Commission declared the Junior Achievement organization in Serbia the national winner in the field of entrepreneurship promotion and a 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 the Ministry of Youth and Sports. The programmes have been accredited by the Ministry of Education, Science and Technological Development of the Republic of Serbia and are listed in the catalogue of programmes approved by the Institute for Advancement of Education.

The focus of the programme is on encouraging students' innovation and creativity, entrepreneurship,

experiential learning while developing skills that contribute to employability, economic and financial literacy. Unquestionably, the flagship, the most recognizable and most important programme implemented within Junior Achievement is the Company Programme.

The Company Programme

The Company Programme is globally recognized as an example of good practice in entrepreneurship education. This programme is based on the learning-by-doing principle. Following a standardized curriculum, students, under the supervision of trained mentors, create a company, develop it and close it during a school year period. 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 entire 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, assigning roles/position among team members, choosing the product or service that the company will provide based on their own ideas, market research, preparation of the business plan, product/service creation, marketing strategy, product design and business promotion, communication with business associates and consumers, exhibiting and selling at competitions school and local events, closing the company and settling its financial balance.

Participation in competitions is an integral part of the programme concept. For instance, Junior Achievement Serbia organizes four regional competitions for the student companies across the country, where companies 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 against other peers - the best student companies from 35 European countries.

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 the opportunities for self-employment and youth employment, this programme also contributes significantly to the students' personal growth [16], [19], [17].

Review of research measuring the effects of the implementation of the Company Programme

In order to scientifically test the effects of the implementation of the Company Programme, as well as to determine the cost-effectiveness of investing in this type of education, after a number of years of implementation of the programme, many countries have conducted independent research. Owing to that, there is a large number of research studies that explore the results of this method of entrepreneurship education. Coverage, applied methodology as well as tasks set in the research varied from country to country.

Research has shown that the programme leads to the successful achievement of short-term outcomes in forming positive attitudes towards entrepreneurship and developing entrepreneurial skills [16], [17], [7], whereas the long-term effects may be observed in higher start-up rates, higher employability, a better career development [9], [8], [1], [33].

The United Kingdom is one of the European countries with the longest history of implementing the Company Programme (the Young Enterprise programme). Upon 50 years of running this programme, a survey has been 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), that their companies were more resilient in surviving the recession crisis period (49.6% increased sales during the crisis, and 30% developed new products), their companies are highly diversified, innovative, and so on [1].

Following 10 years of the implementation of the Company Programme in Sweden, research has been 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 of the programme from 1980 to 2007 and a control group of 221,530 respondents who were not involved in the programme. The findings have shown 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. Companies set up by the Company Programme participants had a 20% higher income on average compared to the control group companies, with the survival span of their companies being longer, contributing more to the budget revenues. When employed in other companies, they advanced faster and the companies employing them grew faster too [33].

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 [16].

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 in Belgium, Estonia, Finland, Italy and Latvia participated in a 27-month field trial using mini-companies as 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. A quantitative study included surveys to students, teachers, parents and business people. The net samples were 7000 students, 3500 parents, 1000 teachers and 400 business people. The data were collected over 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 order to assess the relevance of the Company Programme as accurately as possible, three groups of respondents were observed: students in the tested schools who attended the programme and their teachers and parents; students from the same schools who did not attend the programme and their teachers and parents; students in control schools not included in the programme and their teachers and parents. The attitudes of the respondents were based on pre- and post-tests, and the size of the sample and the high degree of cooperation of the respondents provides reliability in terms of the validity of the results. The study also examined the effects of independent variables such as student age, gender, parental education and occupation, previous entrepreneurial experience, and immigrant status. Research results are given by countries and aggregately. Interestingly, variations in results across countries are relatively small.

What do the obtained overall results tell us?

The number of hours spent in activities, i.e., the quantity of activities, is crucial for achieving effects in experiential learning in programmes such as the Company Programme. During the research, 70% of students spent more than 100 hours engaged in the Company Programme, 30% worked for 99 or less hours. It turned out that for students who spent more than 100 hours in the Company Programme, the programme has resulted in positive effects in several fields. Those who spent fewer hours in the programme had a similar result to students who were not included in the programme. It is an established fact that the main aim of the programme is to enable students to form their own real enterprise and to discover first-hand how a company functions. However, in addition, it was shown that students with high engagement in the Company Programme had significantly higher scores compared to students with less engagement, or no engagement, when measuring their perceived feasibility

for self-employment, self-efficacy, project management, sense of initiative, entrepreneurship, school performance. These results were found both in the group of students who had Company Programme as a mandatory part of the curriculum, and in the group of students for whom it was an elective activity. Researchers have drawn two important implications from this: firstly, schools must allow for enough time for activities in student companies, and students, on the other hand, must make an effort to work on their student companies after school [16, p. 7].

Priorities defined by the government, curricula, teacher training and cooperation between the education and business sectors play a key role in the development of entrepreneurship education [16].

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

An empirical analysis of the effects of the Company Programme implementation in high schools in Serbia

To assess the effects of the implementation of the Company Programme (CP) in high schools in Serbia, an empirical study was conducted. The research has encompassed all high school students in Serbia who participated in the CP in the 2018/2019 school year. The participant test group is made up of members of those teams that have completed all the CP cycles and have participated in regional competitions. According to the Junior Achievement Serbia records for the 2018/2019 school year, a total of 131 companies from 74 schools in 45 cities in Serbia participated in regional competitions. A total of 608 students took part in these competitions, out of which 403 female and 205 male students.

Questionnaire design and structure

The research related to the student group was carried out using two online surveys (pre-test, post-test). The first survey (pre-test) was administered in the student company establishment stage and its goal was to obtain students' perceptions of their entrepreneurial competencies at the CP outset. The second survey (post-test) was undertaken immediately after the end of the CP and its purpose was to acquire answers to the same pre-test questions so as to establish whether, and if so, to what extent there was a shift in attitudes, i.e., whether the CP has had an impact on the development of entrepreneurial competencies.

The pre-test questionnaire consisted of 49 questions. Nine questions referred to students' personal data (gender, age, type of school the student attends, academic achievement – grade point average in the previous school year, parental education, family financial status, parental entrepreneurial experience, previous experience with the CP), whereas 40 questions were aimed at gaining insight into the effects of the programme. The post-test questionnaire contained 51 questions. Of the two additional questions, one dealt with the assessment of the number of hours the student spent in the CP activities, whereas the other one addressed students' evaluation of the usefulness of the programme.

Respondents' personal data (gender, age, type of school, etc.) were viewed as independent variables. Students' perceptions of their entrepreneurial competencies were observed as dependent variables. Questions aimed at determining students' entrepreneurial competencies were stated as attitudes (e.g., when testing teamwork skills, one of the questions was: "I am able to listen to what the others are saying when working in a group", or when assessing self-efficacy: "I can deal efficiently with unexpected events") with close-ended responses. The five-point Likert scale was used for the answers (1 - I totally disagree, 2 - I mostly disagree, 3 - I neither agree nor disagree, 4 - I mostly agree, 5 - I totally agree). Consequently, the overall analysis is based on students' subjective assessment of their entrepreneurial competencies before and upon participating in the CP.

All statements related to the development of entrepreneurial competencies have been adopted from the ICEE study [16]. This was done for two reasons: firstly, these statements were subjected to careful scrutiny by expert teams in five countries and are based on questions used in similar studies according to Johansen, [16, p. 40], and, secondly, the use of the same questions allows for a methodologically more reliable comparison of results.

The pre-test survey was conducted with the logistical support of the Junior Achievement Serbia organization. Information on the purpose of the research, as well as practical instructions on how to access and complete the survey, with a link for survey access, were sent by e-mail to teachers, mentors and directors of student companies, who, in turn, passed them on to other team members.

The process of establishing student companies in various schools took place from the beginning of November 2018 to mid-January 2019. With that in mind, the pre-test survey was activated in mid-December 2018 (18 December). A total of 297 students responded to this first survey.

The post-test survey began on 26 May 2019, after the end of the National Competition of Student Companies, the last annual activity envisaged by the programme. An e-mail with instructions and a link to the survey was sent directly to the e-mail addresses of students who responded to the pre-test survey. The survey was completed on 15 June and the final number of responses to the post-test survey was 155. Poorer response to the post-test survey might be attributed to the end of the school year, preparations for the matriculation and the university entrance exams.

If we compare the number of responses to the pre-test and the post-test survey in terms of the number of students who have started and completed the programme (608 students) in the given school year, we may conclude that we had a satisfactory response, consistent with experience in similar research studies which may serve as a valid basis for further quantitative analysis.

As the CP allows for the participation of students ranging from the first to the fourth year of high school, it is common for some students who had the opportunity to join earlier programmes, to wish to take up activities in a new student company in the next school year. With this in mind, the survey had a question asking about the number of times the student has been a CP participant. The answers received have shown that 17% of the pre-test survey respondents (51 students) have participated for the second time, and 7% (21 students) have participated for the third time. In the post-test survey, 23.2% (36 students) participated in the CP for the second time and 12.3% (19 students) for the third time. Since the research methodology is based on measuring the shift in attitudes, skills and knowledge before and upon completing the programme, the responses of students who have already participated in the CP have been excluded from further processing. In that way, the number of responses that were subjected to quantitative analysis in the pre-test survey was reduced to 225, and in the post-test survey to 100 answers.

Methods of quantitative analysis

The quantitative analysis of data obtained through surveys was performed using the statistical software package SPSS (Statistical Package for Social Sciences). For the purpose of hypotheses testing, several statistical methods were applied in the processing of data. The respondents' structure in terms of gender, age, academic achievement, type of school and other independent variables is presented using the descriptive statistics indicators. Average values for the responses and standard deviation were calculated.

Cohen's coefficient (Cohen's d) and t-tests were used to assess the effect of the training on CP participants, in terms of whether and if so, to what degree and in which direction their responses have changed. Cohen's coefficient shows the standardized difference between the mean values of the two observed groups. Cohen's coefficient with a value of 1 means that the two observed groups differ by one standard deviation, with a value of 2 by two standard deviations and so on. Depending on the research area (be it medical, psychological, sociological, etc.), there are several scales for interpreting the Cohen's d coefficient. With this in mind, the scale recommended for this type of research was used, and according to this scale, the coefficient value of 0.1 indicates a very small effect size, 0.2 a small effect size, 0.5 a medium effect size, 0.8 a large effect size, 1.2 a very large effect size and 2 a huge effect size [21].

In order to determine whether there is a significant difference in achievement between the groups of students defined by an independent variable (e.g., by gender, school type, etc.), one-factor ANCOVA was used with statistical control of the effects of some other continuous variables (covariates).

The reliability of the indicators was tested using Cronbach's alpha coefficient. This coefficient measures

how closely the items, in our case the set of questions in a group, are interrelated according to the observed property. The ideal case is when Cronbach's alpha is greater than 0.7. In interpreting this indicator, it is important to keep in mind that the coefficient is very sensitive to the number of items or questions in the group. Groups with a small number of items often have a lower Cronbach's coefficient, for example, 0.5. In that case, it is methodologically more sound to calculate the mean value of the correlation between items. Briggs and Cheek recommend values of 0.2 to 0.4 as the optimal range of inter-item correlation [28]. As the indicators in this research are based on sets of four to five questions, which is a relatively small number of items, in addition to the Cronbach's alpha coefficient for each indicator, the mean value of the inter-item correlation was calculated. All tests were carried out with a significance level of 5%.

Analysis of the survey participants' structure

As the effects of the CP may potentially be dependent on the age of the students, their gender, type of school, academic achievement, parental education, family social status, previous contacts with entrepreneurship either through family experience or some other type of direct contact, all these characteristics are treated as independent variables. In addition, as an independent variable, the post-test survey tracked the number of hours students spent during the school year in the CP activities. ICEE research has shown that there are large differences in the effects of the programme depending on how much time the student has spent working in the CP.

In terms of *gender*, it may be observed that female students were more represented in both the pre- (67.6%) and the post-test survey (70%). The higher relative participation of female students may be primarily attributed to the structure of schools that have adopted and implemented the CP (high participation of economic and medical schools where female students are more represented) and, to a certain extent, to the commonly observable phenomenon that female students show greater responsibility in fulfilling school obligations, which is how they probably perceived this survey as well.

Observed according to the *age structure*, the survey encompassed students who were 15 to 19 years of age at the time of the survey. The largest number of students (40.9%) who responded to the pre-test survey were born in 2001, 24.4% were born in 2000, followed by 21.8% in 2002 and 11.1% were born in 2003. This age structure has been expected since teacher mentors usually work with students in the third and fourth years of high school.

In the post-test survey, there was a change in the structure of students according to age. The share of students born in 2001, although still the most represented (33%), has decreased relatively, the share of students born in 2002 has increased (31%), while other birth years have remained at approximately the same level.

An analysis of the structure of students by *type of school* shows that the most represented were students from economic schools (28.4%), followed by technical (23.6%), medical (12.4%) and general high schools (16 %). Students of other secondary vocational schools accounted for 16%, and agricultural schools for 3.1% of the total number. Art schools were the least represented (0.4%). The structure of students by type of school did not change significantly in the post-test survey. The structure of schools included in the programme follows the structure of secondary schools in Serbia relatively well. In the 2017/18 school year, there were a total of 510 high schools in Serbia, of which 60.8% were vocational schools, 21.8% general high schools, 9.6% mixed schools and 7.8% art schools.

The analysis of the surveyed students according to their *academic achievement* in the previous grade shows that the majority of the participants in the pre-test survey, as well as in the programme in general, were excellent students[2] (64.4%), followed by very good students (28.4%), while the participation of good students (6.2%) and students with satisfactory academic achievement (0.9%) was relatively small. The post-test survey was mostly taken by excellent students (75%) and very good students (24%), with only one student who had good grades. The structure of students in the programme based on their academic achievement certainly does not follow the average structure of high school students according

2 The structure of all responses to the first survey (297 responses) shows that as many as 66% were completed by excellent students.

to that criterion. Such a high participation percentage of excellent and very good students can be explained on the one hand, by the interest of those who show good results in school in additional school activities, and on the other hand, by the approach mentor teachers use in informing and selecting students for the CP [16].

Data on the *educational level of the programme participants' parents* were obtained using the information on the highest level of education attained by the students' parents. Based on the responses received in the pre-test survey, it can be concluded that the mothers of the largest number of students completed high school education (61.8%), followed by university (16%) and college education (15.1%). Only 7.1% of students were born to mothers who have completed only primary school. A similar structure according to maternal education was maintained in the post-test survey.

The set structure referring to paternal education in the pre-test and post-test survey shows an insignificant difference in comparison to the structure referring to maternal education. Most fathers have completed secondary school (59.1%), followed by university (18.7%) and college education (15.6%), whereas 6.7% of fathers have attained only the primary school level.

Relevant literature states that the development of youth entrepreneurial competencies is strongly influenced by close experiences gained either directly through parents who are or have been involved in entrepreneurship or through closer contacts with entrepreneurs [29]. To explore whether these factors also have an impact on the effects of the CP, the survey included questions, such as "Do your parents have or have they had prior entrepreneurial experience", explaining what this would mean, and the question "Do you know someone who is an entrepreneur?"

The answers to these questions show that 60.9% of students come from families that do not have prior entrepreneurial experience.

It is also believed that the *family financial status* can affect student achievement in the educational process [29], and therefore the survey included the question "What is the average monthly income of your family?" offering answers on a scale with the following intervals: up to 40,000 dinars, from 41,000 to 70,000 dinars, from 71,000 to 100,000 dinars and over 100,000 dinars. There were 31% of students in the category with the lowest income, in the next category there were 32.4% of students. 22.7% of students had a family income of 70,000 to 100,000, and only 13.8% of students came from families with a monthly income of over 100,000 dinars. The structure of students according to their families' income did not change significantly from pre-test to post-test

Research conducted in Belgium, Finland, Italy, Estonia and Lithuania [16] has shown that the effects of the CP implementation are highly dependent on the time students devote to the CP activities. The results showed a significant difference in the achievements of those who were engaged over 100 hours and those engaged less than 99 hours. The achievements of the low-activity students were similar to the results of the control group that was not involved in the CP [17, p.6]. Therefore, the post-test survey included a question in which students were asked to state whether they were engaged for less or more than 100 hours. Those who were involved for more than 100 hours, were able to determine more precisely the number of hours in the intervals of 20 hours, from 100 to 160 hours, or over 160 hours.

The ICEE study has shown that the *average time spent in a student company*, when looking at time spent both in and out of school, in all five countries, was around 160 hours in the 25 CP weeks [16, p.6]. Our survey reports that 67% of students spent more than 100 hours in the CP activities. The largest number, 21% of them, spent 121 to 140 hours working in the company, followed by 15% from 141 hours to 160 hours and 18% over 161 hours[3]. In the ICEE survey, 70% of students spent more than 100 hours in the programme, which is very similar to the structure of our students according to the time spent in activities in the CP [16, p.38].

3 The accuracy of the answers according to the scale should be taken tentatively, regardless of the fact that the question was accompanied with an example of how the time spent should be calculated. When testing the survey questions, it was shown that students do not have a clear picture of how much time they spent in programme activities.

The CP effects on the development of entrepreneurial competencies: results and discussion

Entrepreneurial competencies comprise a wide range of skills, attitudes and knowledge. The scope of the study renders it unfeasible to explore the CP effects in all possible fields so the focus is on verifying the CP effects on self-efficacy, creativity, teamwork and project management competencies. These fields were chosen because of their importance for further students' personal and professional development.

Self-efficacy

Self-efficacy refers to an individual's belief in his or her capacity to execute behaviours necessary to produce specific performance attainments[4]. Self-efficacy is based on the idea of the importance of subjective experience of personal competence in the attainment of various goals, not on actual knowledge and skills. It is not perceived as a personality trait, but as a belief in one's own capacity to align knowledge and abilities, in order to achieve the desired goals in certain areas and circumstances.

Based on many years of research, the creator of the concept, psychologist Albert Bandura, states that self-efficacy beliefs determine how people feel, think, motivate themselves and behave, and that they include cognitive, motivational, affective and selection processes. "A strong sense of efficacy enhances human accomplishment and personal well-being in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities. They set themselves challenging goals and maintain strong commitment to them. They heighten and sustain their efforts in the face of failure. They quickly recover their sense of efficacy after failures or setbacks. They attribute failure to insufficient effort or deficient knowledge and skills which are acquirable. They approach threatening situations with assurance that they can exercise control over them. Such an efficacious outlook produces personal accomplishments, reduces stress and lowers vulnerability to depression" [3, p. 2].

By way of comparison, he claims that "people who doubt their capabilities shy away from difficult tasks which they view as personal threats. They have low aspirations and weak commitment to the goals they choose to pursue" [3, p. 2].

Albert Bandura developed the concept of self-efficacy in the 1970s within the framework of socio-cognitive theory. Ever since then, the term has been widely accepted and researched across various fields of theoretical and applied psychology. However, the term "self-efficacy" is sometimes identified or confused with the term "self-esteem". As Bandura argues, "the construct of self-efficacy differs from the colloquial term confidence". Confidence is a nonspecific term, a catchphrase that refers to strength of belief but does not necessarily specify what the certainty is about and therefore cannot be accepted as a construct in theoretical analysis. In order to clarify the difference in terms, Bandura states that, for example, a person's confidence statement may be that they are good at math; but when it comes to the same person's self-efficacy, then it is about his/her belief that s/he will know how to solve specific tasks in the forthcoming exam.

Having in mind the importance of the effects of self-efficacy for future students' development, special attention in this research has been devoted to monitoring the effects of the CP on the development of this attitude.

The level of self-efficacy in students was tested based on the questions: Qs1 "I can deal efficiently with unexpected events"; Qs2 "Thanks to my resourcefulness, I know how to handle unforeseen situations"; Qs3 "I can solve most problems if I invest the necessary effort"; Qs4 "I remain calm when facing difficulties because I can rely on my coping abilities"; and Qs5 "I can usually handle whatever comes my way". These questions were taken from the ICEE survey [16, p. 51-52].

It is interesting to note that the students evaluated their abilities relatively high at the very CP start. The average score on most of the questions ranged above 4 on both tests. For example, they rated their ability to solve most problems if they invest the necessary effort on average with over 4.5 on both tests (Table 1). In comparison, their European peers' responses ranged around 3.6, averaging 3.7 on the post-test in a group of students who had more than 100 hours of the CP engagement [16, p. 51].

4 https://www.apa.org/pi/aids/resources/education/self-efficacy

As the results of the ICEE study have shown that there is a significant difference in student achievement depending on the number of hours involved in the CP activities, in the post-test we singled out the responses of students who spent more than 100 hours in the CP activities. When their responses were compared with the responses to the pre-test, the group was shown to have made significant progress. Among them, Cohen's d for individual questions ranged from the lowest value of 0.222 to 0.488, which indicates a shift from low to medium level effect size. Thus, our research confirmed the claim that the extent of students' dedication to the programme is crucial, confirming the statement that "deep dive is better than light touch: working 100 hours or more in the mini-company gives better results" [16, p. 7]. This is important for mentors and schools to keep in mind when planning time in the CP organization.

Since individual answers provide only fragments for assessing self-efficacy, the indicator of self-efficacy levels was determined based on a set of answers to the questions asked in the survey. The reliability of the indicator was tested via Cronbach's alpha coefficient, and its value in both pre- and post-tests is higher than 0.8, indicating that the questions are closely interrelated to the observed property. By comparing the mean values of pre- and post-test responses of the CP participants with a more than 100 hours of engagement, it can be concluded that there has been a significant shift in the development of self-efficacy. Cohen's d is 1.3389, which, interpreted on this coefficient's scale of values represents a very large effect size (Table 2).

Table 1: Self-efficacy: comparative results for pre-test and post-test responses

Question	Mean pre-test	Std. deviation pre-test	Mean post-test*	Std. deviation post-test	Cohen's d
Qs_1	4.138	0.7926	4.418	0.6775	0.380
Qs_2	4.058	0.882	4.433	0.633	0.488
Qs_3	4.533	0.7258	4.672	0.5042	0.222
Qs_4	4.009	0.9306	4.313	0.7826	0.354
Qs_5	4.018	0.796	4.224	0.7349	0.269

*results of students who spent more than 100 hours in the CP activities.

Such effects of the CP on the development of self-efficacy in students can be well understood when we keep in mind that according to Bandura, "the most effective way of creating a strong sense of efficacy is through mastery experiences. Successes build a robust belief in one's personal efficacy. Failures undermine it, especially if failures occur before a sense of efficacy is firmly established. If people experience only easy successes they come to expect quick results and are easily discouraged by failure. A resilient sense of efficacy requires experience in overcoming obstacles through perseverant effort. Some setbacks and difficulties in human pursuits serve a useful purpose in teaching that success usually requires sustained effort" [3, pp. 2-3].

As the next important factor in the development of self-efficacy, Bandura cites "vicarious experiences", i.e., experiences that are gained by observing people similar to oneself. The attitude "If they can do it, I can do it as well" is being developed in this way. The greater the perceived similarity with the observed model, the greater the effects of this modelling. Although this factor is not as strong as personal experience, it has significant effects. It has a particularly strong influence in the development of self-efficacy in people who are insecure [3].

Bearing in mind that the CP method of work is based on experiential learning, that it involves peer teamwork, it is not surprising that it leads to the given effects in the development of students' self-efficacy.

The analysis of the potential impact of factors, such as gender, type of school or some other independent variable, has shown that only maternal education had a statistically significant effect on the development of self-efficacy. Cohen's coefficient for students whose mothers

Table 2: Observed indicators of entrepreneurial competences on the pre-test and post-test and Cohen's d coefficient

Indicator	Mean pre-test	Std. deviation pre-test	Mean post-test*	Std. deviation post-test	Cohen's d	Cronbach's Alfa pre-test	Cronbach's Alfa post-test
Self-efficacy	4.15	0.642	4.41	0.509	1.3389	0.834	0.813
Creativity	4.27	0.537	4.47	0.47	0.564	0.695	0.721
Teamwork	4.65	0.481	4.7	0.431	0.8937	0.77	0.744
Project management	3.64	0.990	4.11	0.843	0.7917	0.902	0.913

*results of students who spent more than 100 hours in CP activities.

had completed primary school education was 0.1 (small effect size), for high school level 0.41 (medium effect size), and for students whose mothers had acquired university education it was 0.94 (large effect size). In the ICEE research, parental education has also proven to be important for the development of self-efficacy; however, their study has not looked into maternal and paternal education separately [16, p. 52].

In research studies related to the effects of entrepreneurship education, several authors studied the connection between self-efficacy and entrepreneurial intentions. Their results show a high correlation between self-efficacy and expressed entrepreneurial intentions [27]. This was an additional reason to pay special attention to the development of this attitude.

Creativity

There are many definitions of creativity in literature, depending on whether it is viewed from the angle of art, science, education, psychology, innovation or some other area of human creativity. Creativity is related to the richness of ideas, originality of thought, as well as their use in practical work. Therefore, a broad enough definition may be accepted, which views creativity as "the ability to create something new with the skill of imagination, be it a new solution to a problem, a new method or device, or a new art object or form".[5]

Students' creativity was assessed using the following questions: Qc1 "I am good at combining ideas in new ways"; Qc2 "My thoughts, ideas, and actions are often original"; Qc3 "I am good at making routine tasks exciting"; Qc4 "I like trying out new things and activities"; Qc5 "I am often able to come up with answers to difficult problems" (Johansen, 2018, p. 51). The extent to which the questions are closely related to the observed property was tested via Cronbach's alpha coefficient. It was 0.695 in the pre-test and 0.715 in the post-test, which indicates an acceptable degree of reliability of the selected questions.

A comparison of the responses received by first-time CP participants before and after the CP completion, has shown that there has been slight progress in this field. Cohen's d ranged from 0.033 to 0.189. When the answers of high-activity students engaged in the CP for more than 100 hours were filtered out, the effect size shifted from small to medium. Cohen's d ratio ranged from 0.040 to 0.415 (Table 3).

Table 3: Creativity: comparative results for pre-test and post-test responses

Question	Mean pre-test	Std. deviation pre-test	Mean post-test*	Std. deviation post-test	Cohen's d
Qc_1	4.462	0.7674	4.642	0.5422	0.271
Qc_2	4.133	0.8292	4.358	0.7528	0.284
Qc_3	3.911	0.9454	4.284	0.8493	0.415
Qc_4	4.662	0.628	4.687	0.6327	0.040
Qc_5	4.178	0.7987	4.373	0.5989	0.276

*results of students who spent more than 100 hours in the CP activities.

Students rated their creativity relatively high at the beginning. The average score on most of the above questions was higher than 4 on both tests. Interestingly, the lowest score (3.9) was given on the question "I am good at making routine tasks exciting", and the highest self-confidence was shown on the question "I like trying out new things and activities", with the average score of 4.66 on the pre-test, increasing to 4.69 in the post-test. Compared to their peers' answer in the ICEE survey, it can be seen that they ranged around 3.5, and averaged 3.6 on the post-test, in a group of students with high CP activity exceeding 100 hours [16].

Stepping aside from fragmentary observations to the indicator of creativity, it can be concluded that a group of students who had high CP activity, more than 100 hours, made moderate progress. The value of Cohen's d is 0.587 (Table 2).

The analysis of the impact of other factors, apart from the number of hours spent in the CP, has shown that only maternal education had a statically significant influence on the development of creativity in students. The biggest step in the development of their creativity was made by students whose mothers had a university education (Cohen's d of 0.587). The ICEE research has also shown that children of parents with a university degree achieve the greatest progress in this field [16].

5 https://sr.wikipedia.org/sr-ec/%D0%A1%D1%82%D0%B2%D0%B0%D1%80%D0%B0%D0%BB%D0%B0%D1%88%D1%82%D0%B2%D0%BE
https://dictionary.cambridge.org/dictionary/english/creativity

Teamwork

A team is a group of two or more individuals who must interact to achieve one or more common goals, and the competence to work in a team is central to the CP. Teamwork was assessed by five items: Qt1 "I am able to work together with other people"; Qt2 "I am able to actively participate in teamwork"; Qt3 "I am good at promoting my own ideas and opinions when working in a group"; Qt4 "I am good at giving positive feedback when working in a group"; Qt5 "I am able to listen to what the others are saying when working in a group" [16].

The value of Cronbach's alpha for this indicator was 0.770 on the pre-test, and 0.744, on the post-test for the group that was engaged for over 100 hours, which shows that the questions are closely related and well formulated for the needs of indicators being investigated. The value of Cronbach's alpha in the ICEE study was 0.81 (Table 2).

Table 4: Teamwork: comparative results for pre-test and post-test responses

Question	Mean pre-test	Std. deviation pre-test	Mean post-test*	Std. deviation post-test	Cohen's d
Qt_1	4.738	0.6322	4.657	0.7082	0.121
Qt_2	4.778	0.5626	4.776	0.5985	0.03
Qt_3	4.462	0.7904	4.627	0.6475	0.228
Qt_4	4.507	0.7799	4.672	0.5874	0.239
Qt_5	4.773	0.5237	4.791	0.5086	0.035

*results of students who spent more than 100 hours in the CP activities.

It may be noticed that the students were self-confident in this field as well. The average scores on the test were above 4.5 for most questions. The lowest average score (4.4) was measured for the question "I am good at promoting my own ideas and opinions when working in a group", and the highest (4.78) for the question "I am able to actively participate in teamwork" (Table 4). In addition to a quite high starting position, the analysis of the answers received shows that there has been a further development of teamwork skills during the CP.

The average value of the teamwork indicators on the pre-test was 4.65, and on the post-test 4.7. Cohen's d is 0.89, which indicates a large impact of training on the observed set (Table 2). In the ICEE study, the average values on the pre-test for this indicator were 3.9, on the post-test 4.0, with Cohen's d at 0.18.

In addition to the number of hours spent in the CP, the ANCOVA test has shown that the age of the participants was also important for the effects of the programme in this field (< 0.05). Students, born in 2000 and 2001, had significant progress in this field (Cohen's d of 0.34 and 0.26, respectively), compared to students born in 2002 and 2003, where Cohen's d ranged from 0.036 up to 0.015.

Project management

In order to determine the indicators for project management skills, the survey included the following questions: Qp1 "I am able to create a project plan"; Qp2 "I am able to set project goals"; Qp3 "I am able to structure tasks in a project"; Qp4 "I am able to delegate various tasks/activities in a project" [16, p. 51].

The value of Cronbach's alpha for this indicator was 0.9 in the pre-test, and in the post-test, in the group that was engaged for more than 100 hours, it was 0.934. This suggests that the questions are closely related and aligned well with the needs of the survey. The value of Cronbach's alpha in the ICEE study was 0.81.

In assessing their abilities in this area, students were more modest compared to previous skills. The average value of answers to the questions asked in the pre-test was around 3.6. After the end of the programme, it was 4.1 (Table 5). This is the only area in which our students' scores were close to the scores derived from the ICEE survey students' responses. Their answers on the pre-test were 3.5, and after the programme 3.7. The value of Cohen's d was 0.24, which was the highest value of this coefficient, i.e., the largest shift in the results in the observed fields.

Table 5: Project management: comparative results for pre-test and post-test responses

Question	Mean pre-test	Std. deviation pre-test	Mean post-test	Std. deviation post-test	Cohen's d
Qp_1	3.467	1.1042	3.985	0.9769	0.475
Qp_2	3.822	1.0956	4.179	0.9523	0.348
Qp_3	3.684	1.0577	4.149	0.9415	0.464
Qp_4	3.604	1.1607	4.149	0.9132	0.493

*results of students who spent more than 100 hours in the CP activities.

Cohen's d for this indicator in our study was 0.79 indicating a large impact of training on the observed set (Table 2). The differences in the values of Cohen's d in our study and the ICEE study, in addition to possible and expected differences in the effects of the programme, can also be explained by the sensitivity of this indicator to the size of the set.

The ANCOVA test has shown that the effects of the CP in this field were influenced by the age of the students and maternal education. Cohen's d was 0.64 in the generation born in 2000, then 0.57 in the generation born in 2001, which was also the most numerous in the survey, and 0.72 in the generation born in 2002. This coefficient for the youngest students, the 2003 generation, was 0.3. When observing the influence of maternal education on project management, it can be stated that measured by Cohen's coefficient, the greatest progress has been made by students whose mothers have a university degree. In that group, Cohen's d was 1.1, which speaks of a very big shift. The group of students whose mothers had completed high school had Cohen's d of 0.64, and the students of mothers with primary school education was 0.09. The influence of parents' education on this area has also been demonstrated in the ICEE research study [16, p. 52].

Concluding remarks

The changes brought about by the Fourth Industrial Revolution in all areas of human activity have significantly affected the requirements in terms of knowledge and skills of the population. Research shows that in the era of automation, in addition to the need to develop basic digital skills for all, and advanced digital skills for a certain group of workers, the need to develop social and emotional skills is also growing. The development of creativity, innovation, analytical and critical thinking, teamwork, self-efficacy, emotional intelligence is gaining in importance. These skills are an integral part of entrepreneurial competence and are developed through entrepreneurship education. In the world today, that type of education is being approached in a wider context, as education essential for personal development and realization, education that will enable the individual to adapt to dynamic changes in the labour market and be an active member of society.

There are several approaches, methods and models of entrepreneurship education. According to world experiences, the best effects in the development of entrepreneurial competencies are achieved through informal types of education, and the Company Programme has globally been recognized as an example of good practice. This programme is based on experiential learning and is implemented in high schools. In order to give recommendations for the selection of optimal solutions in the approach to entrepreneurship education in Serbia, a study was conducted to assess the effects of the implementation of the Company Programme on the development of entrepreneurial competencies. The research was carried out with the 2018/2019 school year generation of the CP participants, from 74 schools in 45 cities in Serbia, who have completed the entire programme (608 students).

Based on the results obtained, we may come to the conclusion that the CP has had significant effects on the development of self-efficacy, creativity, teamwork skills, project management knowledge and skills in students. Measured by Cohen's d, it has been shown that there has been a very high development of student self-efficacy (Cohen's d 1.39), great progress in teamwork development and project management (Cohen's d of 0.89 and 0.79, respectively) and moderate progress in creativity (Cohen's d 0.56).

When interpreting these results, it is important to bear in mind that the post-test was administered immediately after the end of the programme. Research on the effects of the CP, conducted with programme participants in several countries several years after their CP involvement, has shown that the CP alumni while going through various life situations and experientially testing their abilities, became aware of how much impact this programme has had on their skills and attitudes. With this in mind, we believe that the effects of the programme are greater than the quantitative analysis shows.

So far, there have been no comprehensive studies of the application of the CP in Serbia. The attention of the scholarly audience, both in this country and in the region, has been mainly directed at examining entrepreneurial intentions and attitudes towards entrepreneurship among

students, and in this sense, we have very limited insights into the effects of entrepreneurship programmes offered to high school students.

Serbia is introducing entrepreneurship education into its education system, but there is still no clearly defined strategy for the development of this type of education for different levels and educational profiles. Currently, entrepreneurship, as a subject, has been introduced in the final grade of secondary vocational schools, and in other secondary schools and at lower educational levels, this competence is envisaged to be developed through cross-curricular collaboration. The conclusion of numerous worldwide studies on the CP effects that are also confirmed by our research results speaks in favour of the inclusion of the CP as an educational programme in all high schools in Serbia.

The beneficial effects of the programme are based on a standardized training method that combines practical and theoretical teaching, which spontaneously develops students' engagement and alleviates the problem of insufficiently, or inadequately, trained entrepreneurship teachers. An additional quality is that the CP programme is implemented in cooperation between the business and education sectors, naturally connecting the two sectors, which may further contribute to reducing the lagging of the education system behind the needs of the economy.

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