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JEL classification: A21.
Original scientific paper
https://doi.org/10.32910/ep.71.5.2

THE ROLE OF VOCATIONAL EDUCATION IN DEVELOPING ENTREPRENEURIAL COMPETENCES OF STUDENTS

Entrepreneurship is defined as one of key lifelong competences and it represents ability to turn ideas into real projects. As such, it includes creativity, initiative, taking responsibility, taking risks, planning and managing projects. The development of entrepreneurial competences via formal education has become a priority for governments of a large number of European countries. Many EU documents emphasize the importance of investing into education that focuses on the development of entrepreneurial competences, as it directly affects students' employment. However, this guideline represents a new challenge for the educational system – the need to change educational programs and organize them so that they influence the development of entrepreneurial competences, which enables students to become more employable and to cope with uncertainty, complexity and dynamics of the labor market.

High unemployment rate of young people and challenges and demands of the labor market have led to a debate about the effectiveness and efficiency of educational programs at all levels. In this context, effectiveness and quality of vocational education and training (VET) are particularly important, since most vocational school students, after finishing secondary level,

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will not continue towards tertiary education, but will rather find themselves on the labor market. Therefore, vocational education should focus on the development of such skills (generic competences and vocational qualifications) that will correspond to the needs of the labor market, thus enabling easier and faster employment.

The main purpose of this paper is to determine the extent to which vocational education contributes to development of students' entrepreneurial competences. The data used in this paper comes from a survey that covered 1272 students from 15 secondary vocational schools in Osijek-Baranja County, one of the most underdeveloped regions in Croatia. The analysis of the results has shown that there is a positive correlation between extracurricular activities and entrepreneurial environment with the level of students' entrepreneurial competences. No correlation between the formal educational program and the level of entrepreneurial competences has been found. The findings of this research may serve as the basis for the development of vocational education programs that would include and meet the labor market demands, thus increasing students' employability.

Key words: *VET, entrepreneurial education, lifelong education, entrepreneurial competences of students*

1 Introduction

A large percentage of students of secondary vocational schools will enter the labor market after completing secondary education. These are young people who have acquired certain knowledge of their profession through secondary education. But, did they acquire the knowledge and skills they need to start their own business from which they can secure a living? Do they even know what entrepreneurship is? What is their perception of entrepreneurs? Have they learned to think entrepreneurially, and are they creative? These and many similar questions arise due to increasing unemployment of young people and the fact that having theoretical knowledge in a certain filed is simply not enough anymore.

The importance of entrepreneurship education is mentioned in many European and Croatian documents. The Entrepreneurship Development Strategy of the Republic of Croatia 2013-2020 states: a) that entrepreneurship education is formal learning guided by teachers and instructors, which is acquired in educational institutions according to curricula and programs approved by the relevant educational authorities; b) that entrepreneurship education plays an important role in the growth of the number of people preparing to start a business and success-

ful business operations after opening; and c) that it is important for institutions to continue to develop entrepreneurship within the educational curriculum. The importance of entrepreneurship is also evident from the fact that it is one of the six interdisciplinary themes of the National Curriculum Framework. It is equally important as civil education and health education, which are much more discussed in the public. Looking at the broader picture, the sense of initiative and entrepreneurship is one of the eight areas of lifelong learning defined by the European Commission in 2016.

The thesis of this paper is based on the fact that secondary vocational schools focus on training students to perform jobs of a particular profession in order to enable them to quickly enter the labor market. Based on this fact, it is legitimate to ask to what extent does secondary vocational education prepare them for entrepreneurial behavior. We will try to answer this question in the research part of the paper, which encompasses secondary vocational schools in Osijek-Baranja County. An analysis of their school curricula, as well as annual work plans and programs was made. A questionnaire was conducted among the final year students in order to assess the impact of entrepreneurship education, and the results were statistically processed and analyzed.

2 Methodology

The aim of this paper is to investigate to what extent students of vocational schools in Osijek-Baranja County, after completion of secondary education, are prepared for entrepreneurial behavior. This paper tries to determine how much secondary vocational education contributes to the development of students' entrepreneurial competences. A questionnaire developed within the ASTEE[1] project, co-financed by the European Union from the Competitiveness and Innovation Framework Programme (CIP) and implemented from December 2012 to June 2014, was used in the implementation of the research part of the paper as a tool for assessing the effects of entrepreneurship education.

[1] The ASTEE (Assessment Tools and Indicators for Entrepreneurship Education) project was initiated as a result of the perceived need to develop instruments for measuring the effects of entrepreneurial education at different levels of education. It is an international project involving partners from seven countries: Denmark, France, Portugal, Germany, Ireland, Belgium and Croatia (Josip Juraj Strossmayer University of Osijek, Faculty of Economics in Osijek). Questionnaires were designed by the partners and then tested on a total of 4,900 respondents in 13 European countries (Denmark, Sweden, Ireland, United Kingdom, France, Italy, Germany, Austria, Croatia, Belgium, Romania, Portugal and Spain).

The outcome of the project is a reliable and valid measuring instrument for assessing the effects of entrepreneurship education at all levels of education: elementary (primary level), high school (secondary level) and higher (tertiary level) education. This instrument is primarily intended to help educators measure their students' progress, as well as for measuring the effectiveness of their educational methods. The ASTEE questionnaire for high school education (ASTEE measurement tool – secondary level) was used in the research. The questionnaire measures five basic indicators, with the majority of indicators being composed of a number of sub-indicators. The five basic indicators, with the corresponding sub-indicators, are presented in brief:

1. A Mindset
   a. *Entrepreneurial Mindset* – respondents assess their personality traits, such as persistence and independence.
   b. *Core Self-Evaluation* – measures students' perception of their own capability to successfully perform various activities and tasks.
   c. *Entrepreneurial Attitudes* – students' attitudes towards entrepreneurship are examined.
2. B1 Connectedness to Education
   a. *Teaching Methods* – students evaluate to what extent they are encouraged to act proactively and engage in innovative and entrepreneurial activities at school.
   b. *Entrepreneurial Teachers* – the focus is on the student-teacher relationship and it measures how students evaluate the support of teachers.
3. B2 Entrepreneurial Knowledge – students' self-assessment of their knowledge of entrepreneurship.
4. C Entrepreneurial Skills
   a. *Creativity* – the ability to think in a different and creative way.
   b. *Financial Literacy* – determines to what extent respondents understand financial statements.
   c. *Managing Ambiguity* – the ability to manage and cope in uncertain and ambiguous situations.
   d. *Marshalling of Resources* – the ability to choose and use the resources needed to realize a business idea.
   e. *Planning* – the ability to structure tasks and plan their execution.
   f. *Teamwork* – measures the ability to achieve goals through collaboration, as well as the ability to connect with other people.
5. D Connectedness to Future Career

a. *Innovative Employee* – respondents' orientation to jobs that will enable them to be enterprising.

b. *Entrepreneurial Intentions* – respondents' intention da to start up their own company.

The research was conducted in the period from April 03 to May 15, 2017, with the prior consent of school principals, who were familiar with the research objectives. The survey was conducted using the pen and paper method, usually during the homeroom class. The objectives of research were explained to respondents at the start of class. It was explained to them that the research is anonymous and confidential and that they can decide not to complete the questionnaire at any time. On average, completing a questionnaire lasted 10 minutes. During the implementation and distribution of the questionnaire, schools' professional services staff (pedagogues, psychologists) were of great assistance, without whose help it would be impossible to conduct the research in such a short time. This cooperation was particularly important in schools outside of Osijek. In statistical analysis, data processing was performed using SPSS (IBM SPSS Statistics for Windows, Version 20.0.).

3 Education for entrepreneurship

Just as entrepreneurship and enterprise can be observed in a narrow economic sense or as a broad social concept, there are also various definitions and different goals of entrepreneurship education.

Gibb (2002) believes that education for entrepreneurship should focus on various aspects of uncertainty and complexity and their manifestation for different individuals beyond the conventional business context. Grecu and Denes (2017) argue that the gap between real-life situations and the classroom theories and concepts can be bridged with the help of entrepreneurship education for students with different specialization fields. According to Charney and Libercap (2007), entrepreneurship education produces self-sufficient enterprising individuals and champions of innovation, and it leads to greater opportunities with advancing technologies.

Oberman Peterka (2008) finds that, although there are authors who associate entrepreneurship education exclusively with starting a business venture and define it as "*a collection of formalized teachings that informs, trains, and educates anyone interested in business creation, or small business development*", perception of entrepreneurship and entrepreneurship education is increasingly changing. According to the author, entrepreneurship education is beginning to be considered and defined also as encouraging the development of creativity and skills for recognizing opportunities that others have overlooked, and that successful entrepreneurs

possess acumen, self-respect and knowledge to act where others hesitate. Gibb (1999, cited by Oberman Peterka, 2008) reconciles these two views, meaning that it includes both understanding of entrepreneurship in terms of starting and running a business, and entrepreneurship as a way of life and thinking, and thus goals of entrepreneurship education are classified into three groups:

- *Learn to understand entrepreneurship*. This goal, among other things, aims to develop understanding of entrepreneurship and the role of entrepreneurs, leading to creation of a positive attitude towards entrepreneurship. In the context of the Republic of Croatia, achieving this goal is extremely important because the transition period left a very negative image of entrepreneurs in the general public.
- *Learn to be enterprising* aims to create individuals with an entrepreneurial approach to everyday life on the one hand, that is, act enterprising in the workplace in the sense of an active role in creating value in communities in which they operate on the other.
- *Learn to be an entrepreneur* is a goal that is related to preparing individuals to become entrepreneurs, and to manage companies.

Oberman Peterka, Delić and Perić (2016) emphasize that the goals of entrepreneurship education can be diverse and multiple: from (a) understanding the meaning of entrepreneurship and the role of entrepreneurship and entrepreneurs in society, to (b) development of project management competences, innovation or ultimately (c) starting and running a business venture.

Knowledge about entrepreneurship (first goal) includes an understanding of how the economy works, understanding the importance and position of entrepreneurship, learning about the process of creating innovation and creativity. To achieve the second goal, to be enterprising, it is necessary to instill an enterprising way of thinking in all life situations with an emphasis on the development of skills and personality traits, such as taking initiative, independence, motivation, goal orientation, perseverance and dedication, efficiency, creativity, curiosity, willingness to fail, faith in one's own abilities and values. The third goal of entrepreneurship education is to prepare an individual to become an entrepreneur, which includes teaching and empowering individuals in the fields of planning, organizing, managing, leading and delegating, analyzing, communicating, negotiating, both individual and team work, analyzing and taking risks, etc. These three goals of entrepreneurial learning were tested through the questionnaire conducted within the research part of this paper. Achievement of the first goal, "*learn to understand entrepreneurship*", is examined by the B2 indicator, related to students' self-assessment of their knowledge of entrepreneurship. The second goal, "*learn to be entrepreneurial*", is measured by the A indicator, which examines entrepreneurial mindset expressed through self-assessment of enterprising activity and students'

attitudes about entrepreneurship. The third goal, "*learn to be an entrepreneur*", is measured by the C indicator, which evaluates the level of entrepreneurial skills.

From the above, it is clear that for both enterprising persons and entrepreneurs, entrepreneurial mindset requires development of specific knowledge, skills and attitudes.

Necessary *knowledge* includes the ability to recognize opportunities for personal growth, as well as for professional or business activities, a fundamental understanding of how the economy works (opportunities and challenges that employees or companies face), as well as awareness of ethical position of each business entity and how to act for the common good (social entrepreneurship, fair trade).

Entrepreneurial *skills* include proactive project management, successful presentation and negotiation, and the ability to both work individually or in a team. Furthermore, it is extremely important to objectively look at one's strengths and weaknesses in order to take risks responsibly when necessary.

Entrepreneurial *attitude* of a person is characterized by taking initiative, proactivity, independence and innovation in personal, social and business life. It includes motivation and focus on goals.

Knowledge, skills and attitudes, with two additional indicators, are measured by the questionnaire used in the research part of the paper.

4 Entrepreneurship education in the EU

In December 2016, the European Parliament published Recommendation 2006/962/EC on key competences for lifelong learning[2]. This document defines 8 areas of lifelong learning:

- Communication in the mother tongue;
- Communication in foreign languages;
- Mathematical competence and basic competences in science and technology;
- Digital competence;
- Learning to learn;
- Social and civic competences;
- **Sense of initiative and entrepreneurship**;
- Cultural awareness and expression,

[2] Recommendation 2006/962/EC on key competences for lifelong learning, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32006H0962

With these recommendations, EU strategists have clearly defined what they expect from their citizens, regardless what career path they choose. The same year (2006), conference titled Entrepreneurship Education in Europe: Fostering Entrepreneurial Mindsets through Education and Learning was held in Oslo. The conference was attended by all relevant stakeholders (representatives of national, regional and local authorities, business associations and entrepreneurs, representatives of various programs, teachers, representatives of universities and students), and the result was the Oslo Agenda for Entrepreneurship Education in Europe, a detailed catalog of initiatives based on examples of good practice that have been made available to all EU members and other European countries. The Oslo Agenda included a framework for the following areas[3]:

A. Strategy Development
B. Support to the educational system
C. Support to teachers and educators
D. Entrepreneurship activities in schools and faculties
E. Building links and opening education towards the outside world
F. Communication with the environment

The Oslo Agenda places special emphasis on support for teachers and educators because without their involvement, which requires resources, knowledge, skills and motivation of teachers, it would not be possible to create an environment that fosters the development of entrepreneurship education, and thus entrepreneurial skills within formal education. A response to the framework of the Oslo Agenda has been reached in Budapest at the symposium *Entrepreneurship Education: Enabling Teachers as a Critical Success Factor.* Stakeholders from different fields (education, business world and the wider community) again became involved in order to take forward the development of teacher education in entrepreneurship, and adopted the so-called Budapest Agenda, which gives recommendations for the following areas:

A. Initial teacher education
B. National support
C. Continuing professional development
D. Local school support

All the strategies and recommendations set a big task before the educational system, completion of which requires systematic work on developing entrepreneurial skills from the lowest levels of education. The importance of vocational education has been discussed for last twenty years, and failure of such programs to adapt

[3] http://www.gvpartners.com/web/pdf/EC_Oslo_Agenda.pdf

to changing economic conditions and needs of the labor market is considered one of the reasons for rising youth unemployment. A study conducted by Hietanen and Järvi (2015) has shown that entrepreneurial learning can be enabled and may manifest itself as a useful process both in non-business and business school contexts. According to the authors, entrepreneurship education, especially in lower educational levels and non-business programs, should be seen as a synthesis of experimentation with discovered and created opportunities and managing knowledge and competences through reflective practices and decision-making processes.

The Netherlands is one of the better examples of good vocational education. Onstenk (2003) argues that in Dutch vocational education, specific courses or modules are available, explicitly aiming at entrepreneurship, diverging from trade and commerce training to entrepreneurial qualifications and specializations in training systems for bakers, farmers, ceramicists or hairdressers. In 43 certificate courses in secondary vocational education, mostly on higher levels, modules for general entrepreneur skills (GES) are included. Dutch vocational education places a special emphasis on actually and actively introducing students to the personal, entrepreneurial and managerial aspects of enterprising. This is done, according to Onstenk (2003), by allowing students to participate in simulations, competitions or mini-enterprises, as well as by contacts with real entrepreneurs, ranging from visits to enterprises and guest lectures (exemplary models) to actively undertaking assignments for or collaboration with (starting) entrepreneurs.

Austria is another good example of implementing entrepreneurship education in formal educational programs[4]. There are many initiatives focused on skills development of young people. Those initiatives include the Entrepreneurship Skills Certificate® and the Innovative Youth. Entrepreneurship Skills Certificate® is a voluntary additional qualification to support the development of students' knowledge of business and entrepreneurship in schools in Austria. This initiative runs as an add-on to the regular compulsory secondary education and it is a modularized training program, implemented at individual school level alongside the regular curriculum. The Innovative Youth program offers alternative educational provision for scientific and engineering disciplines to develop creativity, curiosity and the innovative appetite of the students. Austrian government is very well aware that teachers are the backbone of implementation the entrepreneurship education. There are many programs oriented towards improving entrepreneurship knowledge of teachers. One of them is *the Lehrer/Innen in der Wirtschaft programme*[5], which provides teachers with access to industry, giving them the opportunity to learn about the problems that companies face and bringing the experiences back into their educational programs.

[4] https://www.schooleducationgateway.eu/downloads/entrepreneurship/Austria_151022.pdf

[5] Teachers in economics programs

5 Entrepreneurship education in the Republic of Croatia

The National Curriculum Framework is the basic document that defines the essential components of the educational system (curriculum currently in force was adopted in 2011). The basic characteristic of the National Curriculum Framework is the move to a system based on competence and student achievement (learning outcomes), unlike the previous curriculum, which was focused on content. The National Curriculum Framework is also important because it serves as a template for planning and organizing schoolwork, including development of school curriculum. School curricula will be the subject of research and analysis in the empirical part of the paper.

The next step is to analyze the representation of entrepreneurship education in the educational system. In the structure of the National Curriculum Framework for pre-school education, general compulsory and secondary education, entrepreneurship appears as one of six interdisciplinary themes. It is interesting to note that part of the themes coincides with the key competences of lifelong education (learning to learn, application of information and communication technology, civil education). It is a common practice in other European countries to treat entrepreneurship as an interdisciplinary theme.

In the proposal of the new National Curriculum Framework from February 2016, entrepreneurship remains an interdisciplinary theme, but the term enterprise is introduced as one of the 8 core values[6]:

> *Building on the National Curriculum Framework (2011), the values that the National Curriculum Framework gives particular attention are:* ***knowledge***, ***solidarity***, ***identity***, ***responsibility****. In addition to these four values, the following are further highlighted:* ***integrity***, ***respect***, ***health*** *and* ***enterprise****.*

In doing so, enterprise is additionally defined:

> ***Enterprise****. Presupposes activation of personal potentials in a creative, constructive and innovative manner for the purpose of using and adapting to changing circumstances in different areas of life and in different social roles. Enterprise involves recognizing opportunities, willingness to act and tendency to take reasonable risks.*

Furthermore, in the proposal of the national curriculum, interdisciplinary theme entrepreneurship has been elaborated in detail on 30 pages and includes all

[6] National Curriculum Framework PROPOSAL, February 2016 (http://www.kurikulum.hr/wp-content/uploads/2016/02/ONK-18.2-POPODNE-2.pdf)

the essential elements: theme description, educational goals, domains in curriculum organization, educational expectations by cycles and domains, learning and teaching, and evaluation. It is evident from the document that it relies on current strategies of the European Union, because interdisciplinary theme entrepreneurship is addressed in three domains: think entrepreneurially, act entrepreneurially, economic and financial literacy.

Strategic development documents are always followed in the formation of curriculum. One of such documents is the Strategy for Education, Science and Technology (adopted on October 14, 2014). Analysis of this document showed that entrepreneurship is mentioned only in relation to higher education, adult education and lifelong learning (of employees in the educational system).

The next analyzed document was the Entrepreneurship Development Strategy of the Republic of Croatia 2013-2020 (adopted on October 25, 2013). Entrepreneurship education is not mentioned anywhere among strategic entrepreneurship development objectives until 2020.

The next document that provides a picture of the state of entrepreneurship education in the Republic of Croatia is the 2017 GEM Croatia report titled *What makes Croatia a (non)entrepreneurial country?* GEM (Global Entrepreneurship Monitor) is the largest international survey of entrepreneurship in which Croatia has been participating since 2002. The GEM study very comprehensively monitors changes in entrepreneurial activity at the individual level and changes in the quality of entrepreneurial environment. Education is one of the dimensions through which the study monitors entrepreneurial ecosystem. GEM allows monitoring of situation in each of the components of entrepreneurial environment since 2002. Table 1 shows contribution of primary and secondary education to the development of entrepreneurial capacity of young people[7]. As can be seen in the table, such contribution is graded significantly lower in Croatia than the EU average and much lower than in countries with the highest grades. Throughout the three observed years, Croatia was close to the worst rated countries, and it was rated the worst in 2015. Moreover, the statement: *"Primary and secondary education devotes adequate attention to entrepreneurship and to starting new companies,"* ended up on the infamous list of the lowest graded statements about the entrepreneurial ecosystem in Croatia, 2012-2016.

[7] In 2017, experts evaluated the entrepreneurial environment using a standardized questionnaire. By expressing their agreement / disagreement with individual statements using ratings from 1 to 9 (where 1 = completely inaccurate, and 9 = completely accurate), an estimate of availability and quality of each individual component of entrepreneurial environment is obtained.

Table 1

PRIMARY AND SECONDARY EDUCATION, CROATIA AND EU COUNTRIES

Year	Croatia	EU	Best		Worst	
2015	1.89	3.42	5.6	Portugal	1.89	Croatia
2016	2.47	3.19	5.41	Netherlands	2.16	Hungary
2017	2.39	3.34	5.59	Netherlands	2.26	Poland

Source: GEM Croatia (2017)

Precisely because of the poorly rated state of the Croatian educational system, the first recommendation from the GEM study relates to education:

> *Since **entrepreneurial competence** is one of eight lifelong competences, which each one of us should have, it is necessary that everyone, but especially the young people, insist that the formal education system ensures appropriate education for acquiring such competence **during formal schooling,** from primary school to university. Youth, teachers and parents should have an active role in that, and insist on such a reform of the education system that will allow it.*

Furthermore, the recommendations emphasize that, together with the media, educational institutions are responsible for (non)quality of the entrepreneurial ecosystem:

> ***The media and education** must recognize their role and responsibility for the low level of social and cultural norms (non-supportive value system) in relation to the valuation of entrepreneurial activity and shape their programs and activities based on that.*

An additional problem pointed out by the recommendations is unevenness of quality and non-uniformity of the entrepreneurial ecosystem, which is made up of numerous ministries, agencies and other institutions. The Ministry of Education and schools are mentioned only as one of the wheels.

The project "Representation of entrepreneurial contents in high schools", conducted in 2012 by the National Centre for External Evaluation of Education and the University College of Economics, Entrepreneurship and Management "Nikola Šubić Zrinski" also contributed to assessment of the state of the Croatian educational system. The methodology and the target group partly coincide with this paper, making the results of the project relevant and worthwhile for consideration and comparison. Since the research included gymnasiums, vocational schools and

art schools (as opposed to research within this paper, which studies only secondary vocational schools), it is interesting to see how students assess their knowledge of entrepreneurship.

Table 2

AVERAGE STUDENTS' SELF-ASSESSMENT OF THEORETICAL AND PRACTICAL KNOWLEDGE OF ENTREPRENEURSHIP IN CROATIA

	Gymnasium	**Four-year vocational school**	**Three-year vocational school**	**Art school**	**Total**
Theoretical knowledge	2.27 (N = 899, SD = 0.97)	2.54 (N = 1,533, SD = 1.00)	2.55 (N = 696, SD = 1.34)	2.04 (N = 139, SD = 0.98)	2.44 (N = 3,267, SD = 1.12)
Practical knowledge	2.20 (N = 897, SD = 1.00)	2.46 (N = 1,534, SD = 1.12)	2.63 (N = 693, SD = 1.35)	2.03 (N = 140, SD = 1.02)	2.41 (N = 3,264, SD = 1.15)

Source: Representation of entrepreneurial contents in high schools (2012)

Table 2 shows that students of vocational schools grade their knowledge of entrepreneurship higher than students of gymnasiums and art schools. Students of three-year vocational schools gave the highest grade to their practical knowledge of entrepreneurship, which is to be expected, given the greater number of hours of practical teaching both in school and in companies. Interestingly, 94.6 percent of respondents answered the question: "Do you think you could learn practical skills required to start your own business?" with "Yes". It can be observed that students gave a very similar average grade to both their theoretical and practical knowledge: 2.44 and 2.41, respectively, but at the same time believe that practical skills can be learned, indicating students' expectations that may be partly fulfilled by formal education.

6 Empirical part: The role of secondary vocational education in the development of students' entrepreneurial competences

The empirical part of the paper explores entrepreneurial competences of students of vocational schools in Osijek-Baranja County and provides answers to questions whether students are prepared for entrepreneurial behavior upon completion of secondary education, are they taught creative and innovative thinking, do they have basic business literacy, and whether they are motivated to proactively seek employment or self-employment, that is, start their own venture.

6.1 Respondents

The total sample of respondents consisted of 1,272 third and fourth grade students of secondary vocational schools in Osijek-Baranja County. More precisely, 1,272 questionnaires were entered into SPSS statistical data processing software, but, since not all data for some categories was entered in a certain number of questionnaires, the total number of respondents in some subscales will deviate from this number. For example, some students did not mark gender or place they are from, or have overlooked a question. Only students of final grades of vocational courses were involved in the study, i.e., fourth grade students (graduates) in four-year educational programs and third grade students in three-year occupations of secondary vocational schools. Students attending school according to the five-year model of the nurse/technician course were not involved in the study, since it is the only educational program that lasts five years and does not fit in with the rest either formally or statistically.

Out of the total number of respondents, 538 respondents (42.5%) were girls, while 729 respondents (57.5%) were boys. 90% of respondents were born in 1998 and 1999. As many as 55% of respondents come from rural areas, and more than 70% of respondents do not engage in any additional activity apart from schooling (neither volunteering nor working).

6.2 Research results

In the implementation of the research part of the paper, a questionnaire created within the ASTEE project was used, which assesses the level of development

of education for entrepreneurship at different levels of education. Students filled in the questionnaire by circling the numbers on a scale from 1 to 7, where 1 meant 'I strongly disagree', 2 'I mostly disagree', 3 'I slightly disagree', 4 'I neither agree nor disagree', 5 'I slightly agree', 6 'I mostly agree', and 7 'I strongly agree'.

Table 3 shows differences between girls and boys on all subscales. As can be seen from the table, girls scored statistically significant higher results than boys on subscales *Teaching Methods*, *Teamwork* and *Innovative Employee*, while boys achieved statistically significant higher results than girls on subscales *Creativity* and *Financial Literacy*. The most pronounced difference between boys and girls, both statistically and practically, relates to significantly lower *Financial Literacy* of girls, which is visible from medium-strong effect size of 0.31.

Table 3

DIFFERENCES BETWEEN BOYS AND GIRLS ON SUBSCALES OF THE ASTEE QUESTIONNAIRE

Areas		**Girls (mean)**	**Boys (mean)**	**t**	**r**
A	Entrepreneurial Mindset	14.16	14.39	-1.08	0.06
	Core Self-Evaluation	32.40	32.96	-1.52	0.09
	Entrepreneurial Attitudes	15.43	15.44	-0.02	0.00
B1	Teaching Methods	23.43	22.26	2.14*	0.12
	Entrepreneurial Teachers	11.29	11.15	0.49	0.03
B2	Entrepreneurial Knowledge	15.62	15.20	1.73	0.10
C	Creativity	15.01	15.55	-2.46*	0.14
	Financial Literacy	11.78	13.21	-5.39***	**0.31**
	Marshalling of Resources	16.63	16.45	0.67	0.04
	Planning	9.71	9.66	0.33	0.02
	Teamwork	12.04	11.45	3.78***	0.22
D	Innovative Employee	11.61	11.01	4.08***	0.23
	Entrepreneurial Intentions	10.92	12.47	-4.51***	0.26

Notes: * = < 0.05; **< 0.01; *** = < 0.001; r = effect size

Table 4 compares the results of respondents living in urban areas (N=570) and those living in municipal settlements or villages (N=702). According to data of the Croatian Bureau of Statistics, according to the 2011 Population Census, there are 7 cities in Osijek-Baranja County (Beli Manastir, Belišće, Donji Miholjac, Đakovo,

Našice, Osijek and Valpovo) and the respondents have been classified accordingly[8]. The results show that respondents from smaller communities obtain higher results on all subscales except for *Entrepreneurial Knowledge*, and statistically significant higher results in the B1 area, which examines *Connectedness to Education*.

Table 4

DIFFERENCES BETWEEN RESPONDENTS LIVING IN THE CITY AND THOSE LIVING IN SMALLER COMMUNITIES ON SUBSCALES OF THE ASTEE QUESTIONNAIRE

Areas		**City (mean)**	**Village (mean)**	**t**	**r**
A	Entrepreneurial Mindset	14.14	14.42	-1.358	0.08
	Core Self-Evaluation	32.52	32.80	-0.776	0.04
	Entrepreneurial Attitudes	15.26	15.54	-0.990	0.06
B1	Teaching Methods	21.52	23.76	-4.151***	0.24
	Entrepreneurial Teachers	10.46	11.79	-4.811***	0.27
B2	Entrepreneurial Knowledge	15.38	15.36	0.081	0.01
C	Creativity	15.12	15.49	-1.695	0.10
	Financial Literacy	12.36	12.82	-1.698	0.10
	Marshalling of Resources	16.40	16.66	-1.014	0.06
	Planning	9.65	9.74	-0.524	0.03
	Teamwork	11.66	11.73	-0.459	0.03
D	Innovative Employee	11.14	11.35	-1.428	0.08
	Entrepreneurial Intentions	11.51	12.03	-1.514	0.09

Notes: * = < 0.05; **< 0.01; *** = < 0.001; r = effect size

City: respondents living in urban areas

Village: respondents living in non-urban areas (municipalities and villages)

Table 5 shows differences between respondents who answered the question "Have you started an activity or a project outside of school (e.g. sports, music, theater, politics)?" with YES (N=232) and those who answered with NO (N=1036). As can be seen from the table, students who started an activity outside of school obtain statistically significant higher results in almost all areas (except *Entrepre-*

[8] Source: https://www.dzs.hr/hrv/censuses/census2011/results/censustabshtm.htm

neurial Attitudes, *Entrepreneurial Teachers* and *Innovative Employee*). The most pronounced difference is visible across the entire C area, which measures *Entrepreneurial Skills* (*Creativity, Financial Literacy*, *Marshalling of Resources*, *Planning and Teamwork*). In addition, respondents who started an entrepreneurial activity outside of school are statistically significantly more *Enterprising* and their *Entrepreneurial Intentions* are more pronounced. Statistically and practically most pronounced differences between students who have undertaken some entrepreneurial activities and those that have not are in the following 6 areas, which is visible from their medium-strong effect sizes: *Entrepreneurial Mindset, Creativity, Financial Literacy, Marshalling of Resources, Planning and Entrepreneurial intentions*.

Table 5

DIFFERENCES BETWEEN RESPONDENTS WHO HAVE STARTED AN ACTIVITY AND THOSE WHO HAVE NOT ON SUBSCALES OF THE ASTEE QUESTIONNAIRE

Areas		**YES (mean)**	**NO (mean)**	**t**	**r**
A	**Entrepreneurial Mindset**	15.61	13.98	6.064***	**0.44**
	Core Self-Evaluation	33.81	32.43	2.902**	0.21
	Entrepreneurial Attitudes	15.70	15.32	1.056	0.08
B1	Teaching Methods	24.75	22.31	3.505**	0.26
	Entrepreneurial Teachers	11.65	11.11	1.521	0.11
B2	Entrepreneurial Knowledge	15.96	15.24	2.310**	0.17
C	**Creativity**	16.80	14.97	6.593***	**0.48**
	Financial Literacy	14.43	12.19	6.608***	**0.49**
	Marshalling of Resources	17.99	16.21	5.365***	**0.40**
	Planning	10.76	9.45	6.313***	**0.46**
	Teamwork	12.24	11.58	3.360**	0.25
D	Innovative Employee	11.55	11.18	1.917	0.14
	Entrepreneurial Intentions	13.38	11.42	4.483***	**0.33**

Notes: * = < 0.05; **< 0.01; *** = < 0.001; r = effect size

YES – respondent has started an activity or project outside of school

NO – respondent has not started an activity or project outside of school

Table 6 shows the differences between respondents who have one or more people that have started a company among persons close to them (YES) and those who don't (NO) on all subscales. It is evident that in all areas, except for B1 *Connectedness to Education*, respondents in whose environment there are entrepreneurs (N=691) achieve statistically significant higher results than those that do not have entrepreneurs in their immediate surroundings (N=581). Statistically and practically most pronounced difference between the YES and NO categories of respondents relates to significantly more pronounced *Creativity*, *Planning and Entrepreneurial Intentions* of the YES group, which can be read from the medium-strong effect size, which is the highest for *Entrepreneurial Intentions* (r=0.42).

Table 6

DIFFERENCES BETWEEN STUDENTS WHO HAVE ENTREPRENEURS AMONG PERSONS CLOSE TO THEM AND THOSE WHO DO NOT ON SUBSCALES OF THE ASTEE QUESTIONNAIRE

Areas		**YES (mean)**	**NO (mean)**	**t**	**r**
A	Entrepreneurial Mindset	14.73	13.74	4.726***	0.27
	Core Self-Evaluation	33.36	31.86	4.106***	0.23
	Entrepreneurial Attitudes	15.82	14.89	3.295**	0.19
B1	Teaching Methods	23.01	22.41	1.120	0.06
	Entrepreneurial Teachers	10.97	11.46	-1.746	0.01
B2	Entrepreneurial Knowledge	15.88	14.73	4.758***	0.27
C	Creativity	15.87	14.66	5.574***	**0.32**
	Financial Literacy	13.21	11.87	5.099***	0.29
	Marshalling of Resources	16.97	16.00	3.811***	0.22
	Planning	10.09	9.21	5.452***	**0.31**
	Teamwork	11.92	11.43	3.244**	0.18
D	Innovative Employee	11.52	10.93	3.988***	0.23
	Entrepreneurial Intentions	12.92	10.42	7.450***	**0.42**

Notes: * = < 0.05; **< 0.01; *** = < 0.001; r = effect size

YES – one or more persons close to the respondent (father/stepfather, mother/stepmother, other relative, friend) have started their own company

NE – no one close to the respondent has started their own company

The next t-test compares the results of respondents who have a job in addition to going to school with those of respondents who do not work. Table 7 shows that respondents who work in addition to going to school obtain statistically significant higher results in almost all areas than those who do not work. Medium-strong effect size is present in the areas of *Entrepreneurial Mindset*, *Creativity*, *Financial Literacy* and *Planning*, while great effect size occurs in the area of *Entrepreneurial Intentions*.

Table 7

DIFFERENCES BETWEEN RESPONDENTS WHO HAVE A JOB AND THOSE THAT WHO DO NOT WORK ON SUBSCALES OF THE ASTEE QUESTIONNAIRE

Areas		**YES (mean)**	**NO (mean)**	**t**	**r**
A	**Entrepreneurial Mindset**	15.17	13.96	5.026***	**0.33**
	Core Self-Evaluation	33.83	32.28	3.663***	0.24
	Entrepreneurial Attitudes	16.20	15.12	3.347***	0.22
B1	Teaching Methods	24.25	22.23	3.262***	0.21
	Entrepreneurial Teachers	11.29	11.16	0.417	0.03
B2	Entrepreneurial Knowledge	15.87	15.19	2.410*	0.16
C	**Creativity**	16.39	14.97	5.720***	**0.37**
	Financial Literacy	14.19	12.08	7.032***	**0.46**
	Marshalling of Resources	17.47	16.21	4.269***	0.28
	Planning	10.49	9.43	5.634***	**0.38**
	Teamwork	11.95	11.61	1.907	0.12
D	Innovative Employee	11.61	11.13	2.876**	0.19
	Entrepreneurial Intentions	14.53	10.86	9.652***	**0.63**

Notes: * = < 0.05; **< 0.01; *** = < 0.001; r = effect size

YES – respondent has a job in addition to going to school

NO – respondent does not have a job in addition to going to school

Table 8 shows the differences between respondents who have experience with volunteering (N=212) and those who do not volunteer (N=1064). As can be seen from the table, volunteers achieve statistically significant higher results on subsca-

les *Entrepreneurial Mindset*, *Teaching Methods, Creativity, Financial Literacy* and *Planning*. Statistically and practically most pronounced difference between volunteers and those that do not volunteer relates to *Entrepreneurial Mindset, Creativity* and *Planning*, which is evident from medium-strong effect size.

Table 8

DIFFERENCES BETWEEN STUDENTS WHO VOLUNTEER AND THOSE WHO DO NOT VOLUNTEER ON SUBSCALES OF THE ASTEE QUESTIONNAIRE

Areas		**YES (mean)**	**NO (mean)**	**t**	**r**
A	**Entrepreneurial Mindset**	15.20	14.10	3.897***	**0.30**
	Core Self-Evaluation	33.65	32.49	2.367*	0.18
	Entrepreneurial Attitudes	15.63	15.34	0.769	0.06
B1	Teaching Methods	25.10	22.30	3.869***	0.29
	Entrepreneurial Teachers	11.83	11.07	2.063	0.16
B2	Entrepreneurial Knowledge	15.68	15.28	1.229	0.09
C	**Creativity**	16.27	15.13	3.889***	**0.30**
	Financial Literacy	13.73	12.38	3.794***	0.29
	Marshalling of Resources	17.34	16.37	2.845**	0.22
	Planning	10.62	9.51	5.141***	**0.39**
	Teamwork	12.02	11.63	1.878	0.14
D	Innovative Employee	11.71	11.16	2.834**	0.21
	Entrepreneurial Intentions	12.79	11.59	2.632**	0.20

Notes: * = < 0.05; **< 0.01; *** = < 0.001; r = effect size

YES – respondent volunteers

NO – respondent does not volunteer

The following is an analysis of the results of the ASTEE questionnaire in relation to the representation of entrepreneurial contents in the annual school plan and program, that is, school curriculum. The results of respondents who attend schools in which the subject of entrepreneurship is taught (Trade, Economics, Technical School and Gymnasium of Natural Sciences, High School Valpovo, Second High School Beli Manastir, High School Našice) are compared with those that do not have entrepreneurship as a separate subject. The results in Table 9 show that stu-

dents in schools in which entrepreneurship is not taught achieve statistically significant higher results on subscales *Entrepreneurial Teachers*, *Financial Literacy* and *Entrepreneurial Intentions*. But, all the indicators have small effect size.

Table 9

DIFFERENCES BETWEEN STUDENTS OF SCHOOLS IN WHICH THE SUBJECT OF ENTREPRENEURSHIP IS TAUGHT AND SCHOOLS IN WHICH IT IS NOT TAUGHT ON SUBSCALES OF THE ASTEE QUESTIONNAIRE

Areas		**Have entrepreneurship**	**Do not have entrepreneurship**	**t**	**r**
A	Entrepreneurial Mindset	14.23	14.32	-0.380	0.02
	Core Self-Evaluation	32.35	32.87	-1.356	0.08
	Entrepreneurial Attitudes	15.21	15.51	-1.016	0.06
B1	Teaching Methods	22.46	22.90	-0.785	0.05
	Entrepreneurial Teachers	10.63	11.52	-3.119**	0.18
B2	Entrepreneurial Knowledge	15.53	15.25	1.100	0.06
C	Creativity	15.01	15.50	-2.182	0.13
	Financial Literacy	12.12	12.89	-2.782**	0.16
	Marshalling of Resources	16.42	16.60	-0.678	0.04
	Planning	9.67	9.70	-0.135	0.01
	Teamwork	11.66	11.72	-0.381	0.02
D	Innovative Employee	11.22	11.27	-0.312	0.02
	Entrepreneurial Intentions	11.24	12.10	-2.437*	0.14

Notes: * = < 0.05; **< 0.01; *** = < 0.001; r = effect size

Have entrepreneurship – results of respondents in schools in which the subject of entrepreneurship is taught

Do not have entrepreneurship – results of respondents in schools in which the subject of entrepreneurship is not taught

Given the small differences in Table 9, additional comparison of results was conducted, between students who attend schools which have the keyword "poduzetn*"[9] represented significantly more times in school curriculum than

[9] The keyword "poduzetn" is the root word of "poduzetništvo" (entrepreneurship), "poduzetnik" (entrepreneur) and "poduzetno" (enterprising).

others, and students who attend schools where the keyword appears once or not at all. Extreme examples are Trade and Commercial School Davor Milas on the one hand, where the keyword appears 104 times in the curriculum, and Agriculture and Veterinary School Osijek on the other, where it does not appear even once. The results (Table 10) show that students of the Agriculture and Veterinary School Osijek achieve higher results on all subscales, and statistically significant higher results on subscales *Entrepreneurial Teachers* and *Innovative Employee*. In addition to the mentioned subscales, medium size effect is also visible in the area of *Entrepreneurial Intentions*.

Table 10

DIFFERENCES BETWEEN STUDENTS OF TRADE SCHOOL AND AGRICULTURE SCHOOL ON SUBSCALES OF THE ASTEE QUESTIONNAIRE

Areas		**Trade**	**Agriculture**	**t**	**r**
A	Entrepreneurial Mindset	13.52	14.28	-1.131	0.18
	Core Self-Evaluation	31.84	33.59	-1.549	0.25
	Entrepreneurial Attitudes	14.64	15.85	-1.312	0.22
B1	Teaching Methods	21.41	23.70	-1.414	0.23
	Entrepreneurial Teachers	10.05	12.04	-2.231*	**0.36**
B2	Entrepreneurial Knowledge	15.24	15.83	-0.767	0.13
C	Creativity	14.29	15.46	-1.571	0.26
	Financial Literacy	11.72	12.94	-1.613	0.26
	Marshalling of Resources	15.90	16.39	-0.705	0.12
	Planning	9.41	10.07	-1.295	0.21
	Teamwork	11.32	11.38	-0.115	0.02
D	Innovative Employee	10.27	11.61	-2.477*	**0.41**
	Entrepreneurial Intentions	11.00	12.79	-1.878	**0.31**

Notes: * = < 0.05; **< 0.01; *** = < 0.001; r = effect size

Trade – results of respondents who attend Trade and Commercial School Davor Milas

Agriculture – results of respondents who attend Agriculture and Veterinary School Osijek

In addition, also compared were School of Economics and Administration Osijek, which teaches the subject of entrepreneurship in several educational courses through several grades and Agriculture and Veterinary School Osijek once more (Table 11). Students of the School of Economics give slightly higher grades to their *Entrepreneurial Knowledge*, *Marshalling of Resources* and *Teamwork*, while students of the Agriculture School achieve higher results on all other subscales, with the most significant difference on subscale *Entrepreneurial Teachers*, both statistically and according to effect size.

Table 11

DIFFERENCES BETWEEN STUDENTS OF SCHOOL OF ECONOMICS AND AGRICULTURE SCHOOL ON SUBSCALES OF THE ASTEE QUESTIONNAIRE

Areas		**Economics**	**Agriculture**	**t**	**r**
A	Entrepreneurial Mindset	14.14	14.28	-0.238	0.04
	Core Self-Evaluation	32.38	33.59	-1.306	0.20
	Entrepreneurial Attitudes	15.72	15.85	-0.161	0.03
B1	Teaching Methods	23.23	23.70	-0.322	0.05
	Entrepreneurial Teachers	10.18	12.04	-2.400*	**0.36**
B2	Entrepreneurial Knowledge	16.21	15.83	0.540	0.08
C	Creativity	14.71	15.46	-1.197	0.18
	Financial Literacy	12.33	12.94	-0.898	0.14
	Marshalling of Resources	16.79	16.39	0.666	0.10
	Planning	10.03	10.07	-0.099	0.02
	Teamwork	11.82	11.38	1.059	0.16
D	Innovative Employee	10.97	11.61	-1.549	0.24
	Entrepreneurial Intentions	11.55	12.79	-1.448	0.22

Notes: * = < 0.05; **< 0.01; *** = < 0.001; r = effect size

Economics – results of respondents who attend School of Economics and Administration Osijek

Agriculture – results of respondents who attend Agriculture and Veterinary School Osijek

7 Analysis of results: What makes students more enterprising?

It can be argued that those who have been involved in different kinds of activities beside their formal education, those who work in addition to attending school and those who volunteer obtain better results on more subscales. All these activities can be grouped under the common name *learning-by-doing* and are expected to create individuals who are more enterprising, creative, financially literate and skilled in planning, with more pronounced entrepreneurial intentions. However, all these activities are primarily the result of students' intrinsic motivation, not of the efforts of the school and educational program to develop students' entrepreneurial competences and ensure easier employment and start of their professional career.

In order to get a clear picture, schools that have the subject of entrepreneurship were put in one group and the results of their questionnaires were compared with the results of questionnaires conducted in schools that do not offer entrepreneurship as a subject. Consequently, in the first group of schools, the keyword "poduzetn*" was significantly more prevalent in school documents, and therefore it was expected that their students would achieve better results. But just the opposite turned out to be true. Respondents from schools that do not teach the subject of entrepreneurship have achieved higher results on all subscales except for *Entrepreneurial Knowledge*. Although these are not statistically significant differences, the trend cannot be ignored. A further comparison of Trade and Commercial School Davor Milas, which teaches the subject of entrepreneurship and significantly stands out according to the occurrence of the keyword, with Agriculture and Veterinary School Osijek, in whose school documents the keyword does not appear even once, yields results that can be linked to the previous ones. Namely, not only have students of Agriculture and Veterinary School obtained higher results on all subscales, but they are in the area of medium effect size on three subscales, meaning that they are more enterprising employees, that they have more pronounced entrepreneurial intentions, and that their grades of entrepreneurial teachers are significantly higher. A very similar relationship was observed when School of Economics and Administration Osijek was compared to Agriculture and Veterinary School Osijek. Students of Agriculture and Veterinary School achieve higher results on ten out of thirteen subscales. While analyzing these results, shortcomings of the research became apparent, because no tests were conducted to evaluate entrepreneurial capacity of principals and entrepreneurial competences of teachers, which would, together with school documents, paint a complete picture of the school and better correlate it with the students' results. The results also question the extent to which the activities and contents listed in school documents are actually implemented in practice, or should they rather be perceived only as a collection of good intentions and wishes, included so as to satisfy the formal requirements.

When comparing the results of research conducted within this paper with the results of research within the ASTEE project, it is very important to take certain limitations into account, regarding the fact that the survey within the ASTEE project was conducted in different European countries that have different educational systems and that, instead of the grade that they attend, age (16-17 years) was the decisive factor when selecting respondents. Nevertheless, when comparing results, indicators have emerged, which cannot be ignored or placed in the context of limitations, differences or errors.

From this analysis, it can be said that, for the purposes of this paper, respondents achieved results within or above ASTEE 95% confidence interval in 6 areas: *Entrepreneurial Mindset*, *Core Self-Evaluation*, *Creativity*, *Teamwork*, *Innovative Employee* and *Entrepreneurial Intentions*. Subscale *Marshalling of Resources* was graded unambiguously higher. *Entrepreneurial Attitudes* and *Financial Literacy* received mixed grades. *Planning* and *Entrepreneurial Knowledge* were graded within or below ASTEE 95% confidence interval. And finally, *Teaching Methods* and *Entrepreneurial Teachers* were graded worse in all comparisons in our study in relation to ASTEE results. It can therefore be claimed that area B1 (Connectedness to Education), in all comparisons, and area B2 (Entrepreneurial Knowledge), in majority of comparisons, are below the results of international research. More specifically, respondents have given lower grades than the international sample of respondents from the ASTEE project to the group of statements about school (In school I have been taught: 1) How to think creatively, 2) To come up with ideas, 3) To translate ideas into action, 4) To create a business, 5) About the role of the entrepreneur in society 6) How to evaluate a business idea). Likewise, they have given lower grades to statements that evaluate teachers (I feel that: 7) Teachers encourage me to participate in additional activities, 8) Teachers listen to my ideas, 9) Teachers say it is alright to make mistakes).

8 Conclusion and recommendations

Sense of initiative and entrepreneurship is mentioned in strategic documents of the European Union as one of the eight key competences for lifelong learning. Entrepreneurship is recognized and accepted as an important skill necessary for every individual, regardless of whether entrepreneurship and entrepreneurs are seen as an important wheel in the country's economy or if the term is seen more broadly in the sense of being enterprising in all life situations. The concept of lifelong education, which includes development of entrepreneurial competence, is society's answer to constant and rapid changes that occur in all areas of life. The

first steps in the process of lifelong learning are made within the framework of the educational system. Educational system of secondary vocational schools in Osijek-Baranja County was the subject of analysis and research in this paper, with the goal of investigating the extent to which *secondary vocational education contributes to the development of students' entrepreneurial competences*.

Given the respondents' perception that their teachers, and thus the educational system as a whole, do not contribute to education for entrepreneurship, recommendations for the development of entrepreneurial potential of vocational education students were made. The educational system needs to achieve three goals of entrepreneurship education: teach students about entrepreneurship, teach them how to be enterprising, and how to be an entrepreneur. The disparity between vocational education programs and employers' demands can be reduced by modernizing the existing educational programs, which will include much more practical teaching (through practice firms, internships, etc.) and extracurricular (volunteer and project) activities. But, modernization of educational programs requires, above all, better and more structured cooperation between educational institutions, the private sector and the state.

Students who have experience with starting various activities, those who have a job in addition to attending school, and respondents who volunteer obtain significantly better results in all indicators, which provides a solid basis for concluding that all kinds of practical activities, regardless of whether they are related to school or extracurricular activities, have a significant impact on the development of students' entrepreneurial skills (even those students who have never studied anything related to entrepreneurship and entrepreneurial behavior). However, teachers are largely responsible for developing students' proactivity, and they have been rated as one of the stumbling blocks to the development of entrepreneurial and proactive behavior of students. Given that these results represent students' perception, it would be good to conduct an appropriate questionnaire among teachers in order to measure their entrepreneurial competences. In any case, teachers are not sufficiently educated nor encouraged for entrepreneurial and proactive behavior, and one of the recommendations certainly relates to the importance of continuing education and training of teachers.

The conducted research builds upon the increasingly topical debate about (non)employability of young people. On the one hand, the rate of unemployment of young people in the Republic of Croatia in February 2018 was 26.9%[10]. On the

[10] http://www.hzz.hr/UserDocsImages/stat_bilten_02_2018.pdf

other hand, young people's interest in vocational education is decreasing, which is why this sector is experiencing a shortage of labor. The responsibility for both problems (among other things) lies with formal education of young people and their insufficient preparation for the labor market. Based on conducted analysis, several recommendations are given, aimed at enabling secondary vocational education become an important vehicle in increasing entrepreneurship capacity and employability of young people:

- The VET sector needs to develop a strategy for cooperation with the business sector – such a partnership enables utilization of students' full potential and development of programs that meet the needs and requirements of the labor market and society.
- VET must offer an educational program that will include experiential learning (through social projects, simulations, guest lecturers, learning through community work and various extracurricular activities) to enable students to better prepare for the labor market and improve prospects for a successful start of their professional career.
- Implement education for entrepreneurship by incorporating entrepreneurial content into a significant number of vocational subjects through which students will acquire entrepreneurial skills and competences that they will be able to use in building and maintaining a professional career.
- Provide lifelong learning and training to teachers in secondary vocational schools – teachers have a significant influence on the development of students' entrepreneurial competences, but as the research has shown, most teachers themselves do not have developed entrepreneurial knowledge. Therefore, it is extremely important to involve teachers in the process of development of entrepreneurship education in vocational schools, improve their pedagogical competences and encourage them to adopt teaching methods that encourage the development and implementation of entrepreneurship education.

The conducted research has limitations, hence the implications for further research: need for a study that includes other Croatian regions; need for increased research focused on the ratio of self-employment of students that have finished secondary vocational education; need for a benchmark analysis with other European secondary vocational education programs; need for a study that involves the business sector and its perception of the quality, future challenges and elements of change of VET.

As seen from the results, Croatian secondary vocational education still fails to encourage extracurricular activities and various social and community projects and it does not fulfill its potential in developing students' entrepreneurial compe-

tences. Vocational education must be in line with the needs of the labor market, because only then it can equally participate in sustainable development of the Croatian economy based on knowledge, competences and proactive behavior.

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ULOGA SREDNJEG STRUKOVNOG OBRAZOVANJA U RAZVOJU PODUZETNIČKIH KOMPETENCIJA UČENIKA

Sažetak

Poduzetništvo je definirano kao jedna od osam kompetencija cjeloživotnog obrazovanja, a održava sposobnost pojedinca da svoje ideje pretvori u stvarne projekte. Kao takvo, poduzetništvo predstavlja kreativnost, inovativnost, preuzimanje odgovornosti, preuzimanje rizika, planiranje i upravljanje projektima. Razvoj poduzetničkih kompetencija kroz formalno obrazovanje postaje jedno od strateških prioriteta za sve veći broj europskih zemalja. Mnogi europski dokumenti naglašavaju važnost ulaganja u obrazovni program koji će se fokusirati na razvoj poduzetničkih kompetencija, obzirom da upravo one direktno utječu na zapošljivost učenika i studenata. Međutim, to stavlja značajan izazov pred edukacijski sustav – potrebno je promijeniti edukacijske programe i usmjeriti ih prema razvoju poduzetničkih kompetencija koje će učenicima i studentima omogućiti da budu zapošljiviji i osnažiti ih za djelovanje u nesigurnim, kompleksnim i dinamičnim uvjetima na tržištu rada.

Visoka nezaposlenost mladih ljudi kao i izazovi i potrebe tržišta rada sve češće dovode do rasprave o efikasnosti i kvaliteti obrazovnih programa na svim nivoima. U tom su kontekstu, efikasnost i kvaliteta strukovnog obrazovanja od posebnog značaja obzirom da se većina učenika, nakon završetka strukovnog srednjoškolskog obrazovanja, neće odlučiti za fakultet nego će se naći na tržištu rada. Zbog toga bi se, strukovno obrazovanje, trebalo fokusirati na razvoj onih vještina (opće i strukovne kvalifikacije) koje će odgovarati potrebama tržišta rada i omogućiti jednostavnije i brže zapošljavanje.

Cilj ovoga rada je istražiti u kojoj su mjeri učenici strukovnih škola Osječko-baranjske županije po završetku srednjoškolskog obrazovanja pripremljeni za poduzetničko ponašanje. Ukupan uzorak ispitanika sastojao se je od 1272 učenika iz petnaest strukovnih srednjih škola Osječko-baranjske županije, jedne od najnerazvijenijih hrvatskih regija. Analiza rezultata pokazala je da postoji pozitivna korelacija između praktičnih izvannastavnih aktivnosti i okruženosti poduzetnicima s razinom razvijenosti poduzetničkih vještina kod studenata. Takva veza s obrazovnim sustavom nije utvrđena. Rezultati istraživanja mogu poslužiti kao temelj za razvoj strukovnog obrazovanja koji će u svoje programe implementirati potrebe tržišta rada i tako povećati zapošljivost mladih ljudi.

Ključne riječi: strukovno obrazovanje, poduzetničko obrazovanje, cjeloživotno obrazovanje, poduzetničke kompetencije učenika