Goran Đoković[1]
Saša Jovanović[2]
Petar Čelik[3]

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Bridging Knowledge and Business: Education and Entrepreneurial Development

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***Abstract**: Considering the growing importance of entrepreneurship and its far-reaching contributions across various sectors, this paper aims to emphasize the role of education in fostering the acquisition of knowledge and skills essential for developing entrepreneurial mindsets and practices. It also highlights the positive impact that developing entrepreneurial competencies can have on students. The research combines an in-depth literature review of relevant studies on entrepreneurial education with an empirical survey investigating graduate students' attitudes from the Republic of Serbia. Data analysis and interpretation included descriptive statistics, correlation method and regression model. The findings demonstrated that entrepreneurial teaching and support significantly affect entrepreneurial impact such as skills to manage risk, entrepreneurial mindst and ability to create value for others.*

***Keywords**: entrepreneurship, entrepreneurial education, entrepreneurial competencies, entrepreneurial mindset*

Povezivanje znanja i biznisa: Obrazovanje i razvoj preduzetništva

***Sažetak**: Imajući u vidu rastući značaj preduzetništva i njegov sveobuhvatan doprinos različitim sektorima, cilj ovog rada je da naglasi ulogu obrazovanja u*

[1] Modern Business School, Belgrade, Serbia, goran.djokovic@mbs.edu.rs
[2] Modern Business School. Belgrade, Serbia, sasa.jovanovic@mbs.edu.rs
[3] Economics Institute, Belgrade, Serbia, petar.celik@ecinst.org.rs

sticanju znanja i veština koje su ključne za razvoj preduzetničkog načina razmišljanja i prakse. Takođe se ističe pozitivan uticaj razvoja preduzetničkih kompetencija na studente. Istraživanje kombinuje detaljan pregled relevantne literature o preduzetničkom obrazovanju sa empirijskim istraživanjem koje ispituje stavove diplomiranih studenata iz Republike Srbije. Analiza i interpretacija podataka obuhvatila je deskriptivnu statistiku, korelacionu metodu i regresioni model. Rezultati su pokazali da preduzetnička nastava i podrška značajno utiču na preduzetničke ishode, kao što su veštine upravljanja rizikom, preduzetnički način razmišljanja i sposobnost kreiranja vrednosti za druge.

***Ključne reči**: preduzetništvo, preduzetničko obrazovanje, preduzetničke kompetencije, preduzetnički način razmišljanja*

1. Introduction

The aim of this paper is to highlight the importance of education in terms of acquiring new knowledge and skills necessary for the development of entrepreneurial mindsets and practices, as well as to point out the positive effects of the development of entrepreneurial competencies for students.

The development and functioning of an economy in which entrepreneurship occupies a significant part is not possible without placing it in the context of educational policies and measures. The reason for that lies in the fact that these ground policies are essentially presented through the state and society actions in order to encourage businesses to substantially contribute to achieving both locally and globally set economic goals. Regarding the importance that entrepreneurship has for the economy and society, many countries around the world have recognized the multiple contributions of entrepreneurial competencies in their educational programs. Their international education frameworks acknowledge entrepreneurship as a key competency to enhance employability, innovation, and economic growth. The entrepreneurial competencies in education policies refer to the skills, attitudes, and knowledge that education systems aim to develop among students to foster entrepreneurial thinking and behaviour.

The paper presents the results of an in-depth literature review of relevant studies that analyze the impact of entrepreneurial education on the development of competencies among students, which are necessary for their effective involvement in business ventures, but also on encouraging an entrepreneurial mindset. The study was further supplemented by empirical research on the attitudes of graduate students, which examined the contribution of entrepreneurial education and learning to the development of certain entrepreneurial competencies. The survey was based on the application of The

EntreComp Framework, as a research instrument developed by the European Commission, which provided testing of three important dimensions in the development of entrepreneurial competences among young people, such as entrepreneurial teaching and learning, preparing and supporting entrepreneurs and measuring impact. The research was conducted in 2024 on a sample of 126 university graduates from the Republic of Serbia. The data obtained through the survey were analyzed using descriptive statistics, correlation method and regression model.

2. The role of entrepreneurship in shaping the labour market

At the very beginning, it is important to distinguish that entrepreneurship is not just an occupation reflecting in establishing a company or making a business plan. Entrepreneurship is much more than that, and it represents a way of thinking and a specific view of life, an understanding of the world, a reflector of thought that illuminates the direction in which people should move. It encompasses the energy of the individual, but also the energy of society as a whole. According to Vukotić (2018) entrepreneurship is not a bureaucratic creation, much less a means of political manipulation with voters.

The role of entrepreneurs is to use technological possibilities to produce new goods or the production of old ones in a new way, opening new possibilities for replacing materials with new ways of production. The concept of innovation is very present in defining entrepreneurs. However, entrepreneurship must not be equated with innovation. An innovator does not have to be an entrepreneur. Entrepreneurship is a way of organizing and managing the commercialization of innovation. According to Drucker & Maciariello (2014) “entrepreneurship is based on recognizing opportunities for innovation and their fastest possible market and economic valorisation. Innovation creates resources." In addition, Lajović & Vulić (2011) indicate that innovations lead to the creation of a new resource that did not exist before (or existed but did not have a use value) or gives a new opportunity to use an existing resource. Innovative organizations are characterized by a lack of fear of change and a general atmosphere of continuous learning and improvement. A company's success in both national and international markets increasingly depends on its ability to innovate. Some national economies create more favorable environments than others to stimulate innovative activity among enterprises. A company's focus should be on improving productivity according to global, industry, and group standards. Innovation plays a crucial role in enhancing national competitive advantage by driving productivity, efficiency, and differentiation in global markets. Companies that achieve a competitive advantage in their industry are typically those that not only identify emerging market demands or the potential of new technologies

but also swiftly implement strategic business actions to capitalize on these opportunities (Lajović & Vulić, 2011).

Entrepreneurship significantly affects the global labour market in several keyways, such as shaping employment patterns, job creation, skill demands, and workforce adaptability. The global labour market has been severely hit by digital development trends that are gradually, but rapidly changing the previously ingrained postulates, which were globally valid, thus causing systemic uncertainty in many occupations. This leads to significant changes in many jobs, meaning that many currently employed individuals will need to change their occupations in the future to adapt to the challenges of the modern labour market. In this context, it is worth recalling Goethe's timeless reflection—that technology alone cannot save us. This serves as a reminder that, while investing in advanced technical knowledge is crucial, we must not overlook the importance of the humanities, broadly understood, as a foundation for critical thinking, creativity, and a deeper understanding of the human experience.

As we progress further into the era of the Fourth Industrial Revolution, characterized by the rapid advancement of science and technology, significant qualitative transformations are occurring in both work and daily life. However, alongside these developments, substantial challenges arise in regulating the integration of modern technologies into business operations, as they often introduce rapid and disruptive shifts in the labour market (Đoković, Čelik, 2016). We are now witnessing a high degree of job automation in trade and administration, which represent sectors that have historically employed a predominantly female workforce. However, digitalization has not led to changes only in these areas, as it is rapidly developing and being implemented in many sectors, including service consulting, in which artificial intelligence is slowly but surely taking its place. These trends are already demonstrating their disruptive impact, as the labour crisis is no longer confined to developed Western economies or highly specialized sectors. Their effects are also evident in the transportation industry, where many markets are experiencing a significant shortage of drivers.

The current era, which is part of an ongoing transformation, underscores the necessity of labour force sustainability in the job market. This sustainability depends primarily on individuals' commitment to lifelong learning and their ability to adapt to emerging trends, rather than solely relying on existing knowledge and skills. In many cases, previously acquired competencies may become insufficient or obsolete in the face of evolving employer demands and innovative business solutions.

It can now be stated with a high degree of certainty that the traditional employment paradigm, which ensured job stability throughout an individual's working life, has become part of the past. It has been replaced by a modern

business culture characterized by a balanced approach to hiring and dismissal, where job security is less guaranteed, and workforce flexibility is prioritized. The innovation sector is one of the most dynamic and fast-growing, yet it is not sustainable without quality and targeted education, appropriate legal frameworks, effective management, and strategic human resources.

However, both the education sector and legislative frameworks often fail to adapt with sufficient agility to technological advancements and innovations and their broader implications. Instead, they continue to implement traditional educational programs, which in turn produce graduates who do not align with the evolving demands of the labour market. As a result, conventional forms of education are increasingly losing their relevance, as non-formal education frequently serves as a more effective alternative.

3. Fostering Entrepreneurial Competences Through Education: Literature review

The European Commission (Cedefop, 2023) identifies entrepreneurship as a "key competence, encompassing creativity, innovation, risk-taking, and the ability to plan and manage projects to achieve objectives". The Commission finds this competence "vital for personal development, active citizenship, social inclusion, and employability in a knowledge-based society". Furthermore, the *OECD Learning Compass 2030* has classified future-ready skills, including entrepreneurship, adaptability, and digital literacy.

The significance of entrepreneurial education is recognized in many national education policies around the world. In 2016, Estonia introduced the *Entrepreneurship and Career Education Programme,* aiming to provide all students with opportunities to experience entrepreneurship and develop competencies applicable throughout their lives. Estonia is an example of a country known for its advanced education system, with entrepreneurial education incorporated at all educational levels, starting from basic education. As a result of such development of entrepreneurial competencies, Estonia has become a significant hub for technology start-ups, boasting high number of unicorns. German National Skills Strategy (2019) pointes out the necessity of digital and entrepreneurial skills in vocational training and recommended start-up incubators in higher education institutions. Similarly, Austria defined the *National Action Plan for Entrepreneurship Education* (2020) aiming to develop entrepreneurial competencies across all educational levels, with a particular focus on vocational education and training (VET).

Based on the literature review, it can be concluded that the results of relevant studies highlight the importance of including entrepreneurship education in

national educational policies, as well as the positive effects of developing entrepreneurial competencies—not only in launching business initiatives among students, but also in applying knowledge through creative approaches and problem-solving in various life situations.

In earlier scientific publications, Peterman & Kennedy (2003) showed that participation in entrepreneurial education significantly contributes to the development of competencies for starting a business. This study was based on a sample of students from the Young Achievement Australia enterprise program. Similarly, Dehghanpour (2013) explored the impact of entrepreneurship education and training on entrepreneurship intention in the context of Iran. In recent studies, Kaya-Capocci et al. (2025) demonstrated the potential for integrating entrepreneurial skills into STEM (Science, Technology, Engineering, and Mathematics) education. Their findings indicate that entrepreneurial skills such as problem-solving, creativity, and resilience are crucial for students to apply their knowledge in real-world contexts.

A significant contribution in exploring the relationship between entrepreneurship and education was made in a study conducted by Li et al. (2023). The study included students from Chinese universities and demonstrated how participation in entrepreneurship competitions enhances their entrepreneurial competencies more effectively. This indicates that experiential learning opportunities, such as competitions, play a crucial role in developing practical entrepreneurial skills. Similar findings were presented in a study (Deng & Wang, 2023) conducted on a sample of different Chinese college students, which demonstrated a positive and significant correlation between entrepreneurial education (EE) and entrepreneurial intentions (EI) of students. However, a quasi-experimental study carried out in Switzerland by Volery et al. (2013) revealed that entrepreneurship education at the upper-secondary level significantly enhances students' beliefs, their capacity to exploit opportunities, and their entrepreneurial knowledge, although its effect on entrepreneurial intention was found to be limited.

A systematic review by Crișan et al. (2024) has explored the embedding of entrepreneurship education in non-business courses. The study indicated that such integration aims to develop individual entrepreneurial skills across the population, rather than solely encouraging new venture creation. This broader scope of EE is associated with changes in pedagogies to suit a more diverse range of educators and students. In exploring the competences related to online entrepreneurship and digital business, Pham et al. (2023) have indicated that EE positively influences students' perceptions of the usefulness and feasibility of engaging in business on technology platforms. Furthermore, Al-Omar et al. (2024) conducted a study on a sample of university students in Jordan. The authors found that entrepreneurship education positively impacts students' intentions to start their own businesses. However, perceived

governmental support, in terms of financial aid and regulatory policies, did not significantly moderate this relationship. The results presented in this study indicate that while education fosters entrepreneurial aspirations, additional governmental support mechanisms might be necessary to translate intentions into actual ventures.

In order to analyse the effects of entrepreneurship education, it is useful to consider the results of the following studies. Significant results have been demonstrated in research conducted by the European Commission indicating that 78% of students who participated in entrepreneurship education programs were employed shortly after graduation, indicating a positive correlation between entrepreneurial competences and employability. Based on a study conducted in the United Kingdom, on a sample of university students, it was concluded that graduates from Entrepreneurship Education Programmes (EEPs) demonstrate an 89.0% employment rate 15 months post-completion, surpassing the 86.3% rate of other business degree graduates (Rogers-Draycott et al., 2024). In addition, Prasad et al. (2024) found that 90% of youths who underwent entrepreneurship education in developing countries were employed, compared to 60% in the general population

3. Research methodology

3.1. Hypothesis development

To focus the research scope, the following hypothesis was developed:
Hypothesis (H1): Participation in entrepreneurship education programs has a positive impact on the development of entrepreneurial competences among university students.

To support the hypothesis H1 the systematic literature reviews offer valuable insights. According to Maragh, D. (2025), implementing entrepreneurship in educational programs provides significant impact on the students' entrepreneurial mindset, intention and action. Motta & Galina (2023) indicated the positive effects of experiential learning on developing entrepreneurial skills and competences. Similar findings were demonstrated in a study (Vinogradova et al., 2022) conducted on a sample of students in Moldova, revealing the positive effects of entrepreneurship education on the development of entrepreneurial competences, and students' entrepreneurial intentions. Furthermore, Banha et al. (2022) explored the importance of entrepreneurial education for the progress of national economies, pointing to the necessity of developing entrepreneurial competencies in young people through educational programs.

To complement Hypothesis H1, additional assisting hypotheses were developed, to explore the specific components of entrepreneurship education.

H1a: There is a significant positive relationship between students' experience of entrepreneurial teaching and learning (Variables 1–6) and their reported improvement in entrepreneurial mindset (Variable 15).
H1b: There is a significant positive association between students' access to entrepreneurship training and support (Variables 7–12) and their development in managing risk and uncertainty (Variable 14).

3.2. Instruments and data collection

The research was based on the application of a questionnaire that was developed according to the Entrepreneurship Competence (EntreComp) Framework, conceptual model developed by the European Commission. The original EntreComp framework includes 442 learning outcome statements that refer to 15 key entrepreneurial competences across three broad areas: Ideas and Opportunities, Resources, and Into Action (Bacigalupo et al. 2016). These competences are highly relevant for students and educational settings. For the purposes of this empirical research, 18 statements (variables) were selected, relating to three dimensions: Entrepreneurial Teaching and Learning, Preparing and Supporting Entrepreneurs, and Measuring Impact, as presented in Table 1. Respondens rated the statements on a 1–5 Likert scale (1 = strongly disagree, 5 = strongly agree).

Table 1: Variables by research dimensions

Entrepreneural Teaching and Learning	
Var 1	I am encouraged to take initiative and try new ideas during my studies.
Var 2	My coursework includes solving real-world problems creatively.
Var 3	I have opportunities to work on projects with students from different disciplines.
Var 4	I am given the freedom to experiment and learn from failure.
Var 5	My program emphasizes developing skills like leadership, critical thinking, and innovation.
Var 6	I feel supported in turning my ideas into concrete projects or initiatives.
Preparing and Supporting Entrepreneurs	
Var 7	My university offers training or workshops on starting a business.
Var 8	I have access to mentors or experts who support entrepreneurial activities.
Var 9	There are competitions, hackathons, or incubators that I can participate in.
Var 10	I feel encouraged to explore self-employment or entrepreneurship as a career path.
Var 11	I have gained practical experience in building or managing a project, product, or service.
Var 12	There are clear pathways to get support for launching a venture.
Measuring Impact	
Var 13	I have become more confident in recognizing and pursuing opportunities.
Var 14	I've developed skills in managing risk, uncertainty, and ambiguity.
Var 15	My entrepreneurial mindset has improved since starting my studies.
Var 16	I am more willing to take responsibility and act on my ideas.
Var 17	I feel prepared to create value for others in economic, social, or cultural contexts.
Var 18	My institution provides feedback or measures progress on my entrepreneurial development.

Source: Bacigalupo et al. (2016)

3.3. Methodology and sample

The survey was conducted in 2024 on a sample of 126 (N=126) university graduates from the Republic of Serbia who had studied in the following fields: management, economics, information technology, and environmental studies. The structure of the sample of students according to the scientific field (table 2) shows a relatively uniform representation, with a slightly higher participation of environmental studies students (30.2%).

Table 2: The sample structure according to the scientific field

Field of study					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Management	27	21.4	21.4	21.4
	Economics	32	25.4	25.4	46.8
	IT	29	23.0	23.0	69.8
	environmental studies	38	30.2	30.2	100.0
	Total	126	100.0	100.0	

Source: Authors' calculations in SPSS

The methodological framework of the empirical research included descriptive statistics, the correlation method, and a regression model for the analysis and interpretation of the data.

At the beginning of data processing and analysis, a reliability analysis was conducted, which involved testing variables grouped by specific dimensions.

The reliability analysis showed that the tested dimensions demonstrated acceptable internal consistency ($\alpha > 0.70$ is generally acceptable), with Cronbach's Alpha values of $\alpha = 0.881$ for Entrepreneurial Teaching and Learning (table 3), $\alpha = 0.929$ for Preparing and Supporting Entrepreneurs (table 4) and $\alpha = 0.732$ for Measuring Impact (table 5).

Table 3: Scale: Entrepreneurial Teaching and Learning

Reliability Statistics	
Cronbach's Alpha	N of Items
.881	6

Source: Authors' calculations in SPSS

Table 4: Scale: Preparing and Supporting Entrepreneurs

Reliability Statistics	
Cronbach's Alpha	N of Items
.929	6

Source: Authors' calculations in SPSS

Table 5: Scale: Measuring Impact

Reliability Statistics	
Cronbach's Alpha	N of Items
.732	6

Source: Authors' calculations in SPSS

4. Research findings and discussion

For the purpose of testing hypothesis H1a, the correlation method was applied, with the aim of determining the relation between the Entrepreneurial teaching and learning (Vars 1-6) and students' entrepreneurial mindset (Var 15).

To analyze the overall impact of entrepreneurial teaching and learning, a composite variable was created by combining six related variables. The composite score was calculated using the mean of Var 1 to Var 6 for each respondent.

Pearson correlation analysis was conducted to examine the relationship between the composite score representing Vars 1 - 6 and Var 15, which demonstrates students perceived improvement in entrepreneurial mindset. The findings presented in table 6 indicate the existence of a strong, positive correlation (r= 0.759) between the tested variables, which is statistically significant ($p < 0.01$). These results support the hypothesis H1a that higher entrepreneurial teaching and learning is associated with greater improvement in students' entrepreneurial mindset.

Table 6: Pearson correlation between entrepreneurial teaching and learning and students' entrepreneurial mindset

Correlations			
		Vars 1-6	My entrepreneurial mindset has improved since starting my studies.
Vars 1-6	Pearson Correlation	1	**.759****
	Sig. (2-tailed)		.000
	N	126	126
My entrepreneurial mindset has improved since starting my studies.	Pearson Correlation	.759**	1
	Sig. (2-tailed)	.000	
	N	126	126
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Authors' calculations in SPSS

When comparing the students' responses according to their scientific field, the following results were obtained (tables 7 and 8). IT graduated students reported higher mean scores in both entrepreneurial teaching (M = 4.229) and mindset (M = 4.05), compared to economics students (M = 4.06 and M = 3.9), management students (M=3.54 and M=3.37) and students of environmental and social sciences (M=3.66 and M=3.17).

Table 7: Compared Means for entrepreneurial teaching and learning among the students' fields of study

Case Processing Summary						
	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Vars 1-6 * Field of study	126	100.0%	0	0.0%	126	100.0%

Report			
Vars 1-6			
Field of study	Mean	N	Std. Deviation
Management	3.5494	27	.34224
Economics	4.0625	32	.32996
IT	**4.2299**	29	.38938
Environmental studies	3.6623	38	.55681
Total	3.8704	126	.50195

Source: Authors' calculations in SPSS

Table 8: Compared Means for Vars 13 -18 regarding the students' fields of study

Case Processing Summary						
	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Vars 13 -18 * Field of study	126	100.0%	0	0.0%	126	100.0%

Report			
Vars 13 -18			
Field of study	Mean	N	Std. Deviation
Management	3.3765	27	.23837
Economics	3.9323	32	.35886
IT	**4.0517**	29	.26391
Environmental studies	3.1711	38	.35617
Total	3.6111	126	.48899

Source: Authors' calculations in SPSS

Hypothesis H1b was tested based on the method of correlation between the composite score for variables Var 7 - Var 12 from the Preparing and Supporting Entrepreneurs dimension and Var 14, which refers to the ability of graduate students to manage risks, uncertainty, and ambiguity (table 9). The findings demonstrate strong, positive correlation (r= 0.892) between the tested variables, which is statistically significant ($p < 0.01$).

Table 9: Pearson Correlation between entrepreneurship training and support and students' ability to manage risk and uncertainty

Correlations			
		I've developed skills in managing risk, uncertainty, and ambiguity.	Vars 7-12
I've developed skills in managing risk, uncertainty, and ambiguity.	Pearson Correlation	1	**.892****
	Sig. (2-tailed)		.000
	N	126	126
Vars 7-12	Pearson Correlation	.892**	1
	Sig. (2-tailed)	.000	
	N	126	126
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Authors' calculations in SPSS

Furthermore, in the data analysis, a regression model was applied with the intention of determining the impact of entrepreneurship education on the development of entrepreneurial competencies among university students.

The regression model (table 10), which included variables related to entrepreneurial teaching (Vars 1–6) and entrepreneurial support (Vars 7–12), significantly predicted entrepreneurial impact (Vars 13–18). The overall model was statistically significant, $F(2,123)=81.60$, $p<.001$, indicating that the combination of teaching and support variables accounts for a significant portion of the variance in students' entrepreneurial outcomes. The multiple correlation coefficient (R= 0.755) between the observed and predicted values of the dependent variable (Entrepreneurial Impact) indicates a strong positive correlation. Furthermore, the model explained approximately 57% of the variance in entrepreneurial impact ($R^2=.570$), which is a strong effect.

Based on the presented results, it can be concluded that when students are exposed to teaching methods that encourage initiative, creativity, collaboration, and risk-taking, along with institutional structures that offer mentorship, training, and opportunities to apply entrepreneurial skills, they are more likely to report growth in entrepreneurial mindset, confidence, and readiness to create value.

Table 10: Regression model

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	Vars 7-12, Vars 1-6[b]	.	Enter
a. Dependent Variable: Vars 13 -18			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.755[a]	.570	.563	.32316
a. Predictors: (Constant), Vars 7-12, Vars 1-6				

ANOVAa						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17.044	2	8.522	81.603	.000b
	Residual	12.845	123	.104		
	Total	29.889	125			
a. Dependent Variable: Vars 13 -18						
b. Predictors: (Constant), Vars 7-12, Vars 1-6						

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.655	.234		2.805	.006
	Vars 1-6	.380	.093	.390	4.101	.000
	Vars 7-12	.384	.089	.409	4.303	.000
a. Dependent Variable: Vars 13 -18						

Source: Authors' calculations in SPSS

The research results can be interpreted in the context of relevant studies from the literature review.

In a conceptual paper based on a detailed literature review, Grigg (2021) considered that EntreCompEdu provides a relevant structure and materials for educators to develop their teaching programs and courses. In a study

(Sandberg, 2023) conducted in Germany, the framework was also used to assess the impact of entrepreneurship courses on the development of entrepreneurial competencies. Based on the results of this study, it was concluded that the analyzed entrepreneurship courses mainly imparted managerial knowledge to students, rather than fostering an entrepreneurial mindset. Furthermore, in the research conducted by the Bernadó & Bratzke (2024), it was pointed out that this EntreCompEdu offers a comprehensive framework for entrepreneurial competences, presenting them from a neutral perspective and following a traditional process-oriented approach.

Joensuu-Salo et al. (2022) have tested the EntreComp framework on a sample of secondary and higher education level students from seven European countries (Finland, Belgium, Italy, Netherlands, Spain, the United Kingdom, and Germany). Their study indicated that entrepreneurial competence is related to prior experience of entrepreneurship and start –up behaviour. However, the authors concluded that EC is undimensional, even though the framework includes three distinct areas. In adittion, a study conducted in Finland (Teodosiu, 2021) demonstated that participating in entrepreneurship education students gained entrepreneurship knowledge, skills, mindset and attitude.

The results of this research, which relate to the development of entrepreneurial competencies according to the field of study of students, can be compared with a similar study conducted in Poland. The study (Chudy-Laskowska et al. 2021) showed that management students had higher entrepreneurial competencies in compare with the students of other scientific fields, particularly in "identifying business opportunities, analysis of the context related to the conducted activity, designing value for customers and strategic thinking". Furthermore, the findings presented in a study (Pasic et al., 2023) involving engineering students demonstrated that the most developed competences during their studies were working with others, motivation, and perseverance, followed by creativity, vision, and learning through experience. However, it should be emphasized that entrepreneurial education is not limited to business studies or the pursuit of economic goals but is interdisciplinary and applicable across various fields. Thus, the study conducted by Durão et al. (2024) applied the framework for researching entrepreneurial education and entrepreneurial competencies in the arts and humanities and/or in economics and business studies. Similar findings were preseted in research by Vij & Ball (2010), Dreisiebner (2018), Doe (2017) and Rocha et al. (2024), who demonstrated the importance of developing entrepreneurial competences among non-business students. However, the study presented in this paper analyzed data on a sample of students in four scientific fields whose educational programs included entrepreneurial courses, in contrast to artistic and other social field, such as law, that do not incorporated courses aimed at developing entrepreneurial skills. This can be considered one of the research limitations, which may affect the generalizability of the findings,

as the results reflect the experiences and skills of students in fields with a structured focus on entrepreneurship, rather than those from disciplines that may lack similar opportunities.

In addition to European countries, the EntreComp framework has proven to be a suitable instrument for examining entrepreneurial competencies in different social and economic contexts. For example, Hany et al. (2023) provided a study demonstrating its application in Egyptian hospitality schools, Bashir & Farooq (2023) used the framework to explore the competences of teachers in Pakistan, López-Núñez et al. (2022) conducted a study on a sample of university students from Spain and Chile.

5. Conclusion

Entrepreneurial education is an indispensable segment of quality education that prepares business and non-business students for the modern demands of the labor market initiated by the need for creative thinking and problem solving, risk management abilities, participation in teamwork, as well as for the competencies of value creation in economic, but also in wider social contexts.

The findings presented in this paper offer further insight into the impact of entrepreneurial education on the development of key entrepreneurial competencies, including students' ability to manage risk, cultivate an entrepreneurial mindset, and create value for others. The regression analysis confirms that entrepreneurial teaching and institutional support play a critical role in shaping students' entrepreneurial outcomes. With a strong positive correlation ($R = 0.755$) and a substantial portion of variance explained ($R^2 = 0.570$), the model demonstrates that a combined approach—emphasizing both pedagogical methods that foster initiative, creativity, and risk-taking, and support structures such as mentorship and practical training—significantly contributes to the development of students' entrepreneurial mindset, confidence, and their ability to create value. A comparison of the results across students from management, economics, IT, and environmental studies indicated that IT graduates reported higher average scores in both entrepreneurial teaching and entrepreneurial mindset. These findings highlight the value of integrating comprehensive entrepreneurial education strategies within higher education curricula to effectively nurture entrepreneurial competencies.

As a limitation of the research, it was stated that the sample was based on the selection of students from scientific fields, whose syllabi included courses related to entrepreneurship, which should be taken into account when interpreting the results. Future research should involve more comprehensive explorations into the effects of entrepreneurship education on the development of entrepreneurial competencies, including both business and non-business students. This is particularly important in light of findings from relevant studies

that demonstrate entrepreneurship as an interdisciplinary field with broad applications in both practice and everyday life.

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