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TECHNOLOGIES IN
BUSINESS AND EDUCATION**

**Proceedings of the International Conference
dedicated to the
50th anniversary
of the Department of Informatics**

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FOREWORD

These proceedings contain the papers of the International Conference “Information and Communication Technologies in Business and Education” which took place at the University of Economics – Varna, Bulgaria, 18 October 2019.

The international scientific conference is dedicated to the **50th anniversary of the Department of Informatics at the University of Economics – Varna**. The conference is also dedicated to the 100th anniversary of the University. The included papers describe recent scientific and practical developments in the field of information and communication technologies, information systems, and their applications in business and education.

The papers in the Proceedings are peer reviewed and are checked for plagiarism.

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ENTREPRENEURSHIP IN THE EDUCATION OF UNIVERSITY STUDENTS

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Abstract

Currently, academic entrepreneurship significantly contributes to the competitiveness of the national economy by connecting and strengthening cooperation between research centres and enterprises. The article discusses the results of research conducted on a sample of students regarding their entrepreneurial attitudes. This article presents the possible factors that affect entrepreneurship among respondents and starting their own business as well as the basic barriers to entrepreneurship. In a knowledge-based economy that faces many challenges, entrepreneurship can be an important determinant of economic, technological and social development.

***Keywords:** entrepreneurship, academic entrepreneurship, entrepreneurship education, economic education, student entrepreneurship.*

INTRODUCTION

In the face of globalisation changes, the functioning of enterprises and organisations is becoming increasingly difficult. If we add geopolitics to this, the conditions in which organisations must now function are difficult. The pursuit of competitive advantage by individual states or groups of states is enormous, because only then one can affect the functioning of the global economy. Countries that gain an advantage become players who set trends and directions. Innovation, knowledge as well as entrepreneurship can guarantee the domestic economy an advantage over other economies. One of the first people to use the subject of entrepreneurship was J.B. Say, according to whom, the entrepreneur was a person transferring capital from an area with lower profitability to an area with a higher level of efficiency and profit, investing their resources and bearing the risk associated with the decisions made (Say, 1960, p. 550). Entrepreneurship is recognised as one of the key competences. Its definition is ambiguous and educating it may involve forming a variety of skills.

The concept of entrepreneurship may refer to human personality traits, the process of setting up a business and the ability to take advantage of opportunities in the environment and to take innovative actions (Borowiec-Gabryś, Kilar 2018). According to Piecuch, entrepreneurship is simply the art of dealing with various life situations, which can be learned and trained (Piecuch, 2010). Thus, education plays an important role in the development of entrepreneurship. According to J. Timmons and H. Stevenson, entrepreneurship is a process of creating or recognising opportunities and using them regardless of their resources. They emphasize in their works that an entrepreneur is the one who initiates and builds an organization not limiting himself to its description and analysis (Timmons, 1990, p. 5). According to the classic approach of P. Drucker, entrepreneurship should be understood as a specific approach to management consisting in "introducing innovations forming the foundations of future business", with "the best use of available resources" (Drucker, 1992, p. 36). In addition, "the entrepreneur is always looking for change, reacts to it and uses it as an opportunity" (Drucker, 1992, pp. 36-37). There is therefore a strong link between innovation and entrepreneurship. J. Schumpeter has already pointed to this relationship. In turn, according to J. Timmons, entrepreneurship is "a way of thinking, reasoning and acting, focused on searching for opportunities", as well as "a pursuit of opportunities without taking into account the limitations created by currently controlled resources" (Timmons, 1999, p. 27).

Entrepreneurship education in Poland already takes place at the high school level and is continued at the higher level. The introduction of entrepreneurship in secondary schools was intended to get young people familiar with business. Propagators of this direction wanted to familiarise young people with establishing and running a business. The very idea of this was right, but the problem arose with the implementation of such a noble goal. To begin with, the program of the subject, which is overloaded with content and has no reflection in practice, raises concerns. Another issue is that teachers place more emphasis on knowledge and less on skills. Teachers educating the subject mostly do not run or have never run a business. In addition, teachers of the subject - entrepreneurship - also teach other subjects,

which means that entrepreneurship is complimentary to the full-time job. Considering the above, young people who undertake university studies have acquired knowledge in the field of entrepreneurship, but in many cases they can not practically apply it.

In relation to the above, there is a need to shape entrepreneurial attitudes, in particular the skills to set up and develop a business. Entrepreneurship in Poland (but not only) is usually defined at the level of the small and medium enterprise sector. The emerging and existing small and medium-sized enterprises influence the development of many macroeconomic factors: GDP, international exchange or employment: the small and medium-sized enterprise sector employs about 70% of employees of all enterprises in Poland and many countries. Academic entrepreneurship is an important aspect that is highlighted by various organisations and institutions implementing programs that are designed to improve the competitiveness of the Polish economy. The growing emphasis on the development of the knowledge-based economy has led to the search for solutions that are to increase the level of cooperation between science and business units. Academic entrepreneurship is to be one of the development directions enabling this rapprochement. In the development of academic entrepreneurship, regardless of the meaning of the concept itself, students and their entrepreneurial attitudes play a large role. The main purpose of the article is to present the results of research on entrepreneurial attitudes of students, which covered individuals studying in non-economic and economic faculties. It was important to verify that the completed course could affect these attitudes.

1. ENTREPRENEURSHIP EDUCATION IN STUDENT'S OPINION

Teaching entrepreneurship as one of the most important skills students should be equipped with should be constantly monitored by universities and evaluated. Skills that help students open their own business should be one of the main goals of the university, because it depends on how entrepreneurial and creative the management staff of future enterprises will be. And what follows, what companies will build the economy of the country.

In 2016, the study programs are analysed in four Visegrad countries: the Czech Republic, Poland, Slovakia and Hungary. A total of

188 study programs were reviewed (Egerova, 2016). Study programs in economic and other faculties (technical, artistic, humanities) were examined. The results of the analysis show the university's approach to shaping entrepreneurial attitudes, in particular the preparation to set up and run own business.

From the data in Table 1, it results that about 40% of fields of study have a subject related to entrepreneurship in their study programs. They prepare students to open their own business and, in addition, they have the word entrepreneurship in their names. In Poland, the share of programs with at least one subject directly related to entrepreneurship is the lowest and amounts to 31%. Besides, the studied fields of study also provide subjects that can be associated with entrepreneurship because they relate to issues related to the functioning of the enterprise. These are, for example, subjects such as management, marketing, accounting, finance, business plan, negotiations. Subjects from this group are several times more common. In total, subjects directly and indirectly related to entrepreneurship were included in the study programs of 93% of the studied fields of study. (Nowaczyk, Sobczak, 2019)

Table 1

Fields of study with at least 1 subject directly related to entrepreneurship and without subjects directly and indirectly related to entrepreneurship

Country	Number of analysed fields of study	% of fields of study with subject/s directly related to entrepreneurship	% of fields of study without subjects related to entrepreneurship
Czech	59	39	9
Hungary	36	44	6
Poland	42	31	7
Slovakia	51	43	6
Total	188	39	7

Source: based on Entrepreneurship education. Opportunities and Challenges for Universities in Visegrad Countries, ed. by D.Egerova, NAVA, Pilzno 2016, tab. 4.3 i 4.5, s. 58-59.

In Poland, the studied fields of study had a total of 13 subjects related to entrepreneurship education and other 162, which are useful in teaching how businesses operate. Subjects directly related to entrepreneurship, having the word entrepreneurship in their name, included, among others, knowledge of legal regulations related to conducting business activities, sources of supporting entrepreneurship, registering business activities, creating a business plan and economic analysis (Nowiński, Nowaczyk, Sobczak, Tomczyk, Fabiś 2016).

In addition to subjects educating entrepreneurial competence, entrepreneurship faculties and specialties are run at Polish universities. At some universities there is the field of Entrepreneurship, e.g. at the University of Silesia in Katowice. An example of a specialty in this area is the Entrepreneurship specialty in a small and medium company in Master's degree management studies at the Faculty of Management of the Poznań University of Economics (Nowiński, Nowaczyk, Sobczak, Tomczyk, Fabiś 2016).

As a result of focus studies conducted periodically (from 2016) among students of economic and non-economic faculties (the same number of students take part in each faculty each year) the impact of teaching entrepreneurship to students on developing entrepreneurial attitudes and supporting entrepreneurial initiatives taken at the regional, national or global level by students was diagnosed. The collected research results have allowed to indicate the changes that universities should take in order to better prepare young people for entrepreneurship.

Students of economic faculties emphasised that entrepreneurship education is necessary, especially in economic studies, because it is a group of students who will in the future deal with broadly understood business. The formula of teaching the subject has not changed over the years and students of "practical entrepreneurship" are still not being taught. In contrast, students of non-economic faculties mostly would like to have entrepreneurship classes, although there was some who found it unnecessary. In all editions of the study, students who already have companies indicated that entrepreneurship classes should be compulsory, because only in this way one is able to encourage new people to take their own individual initiatives and motivate to greater

economic activity. In the opinion of this group of students, entrepreneurship education should be conducted at every level of education, and in terms of economic studies, it should be compulsory and subject to the special care of the university and the state, because its level reflects the students' decision to open their own business. Students stressed that entrepreneurship should be a course implemented in every field of study, because the market economy requires representatives of each field to be able to think of their field as a business. This new look at entrepreneurship shows that young people with business experience recognise the essence of entrepreneurship and its creation among representatives of all fields of study.

People who are currently running their own businesses claimed that by attending entrepreneurship classes and basing only on them they would not make the decision to start their own business. In their opinion, the classes only provide information and do not allow one to practice the whole process. The information obtained during the classes was, in their opinion, too theoretical and did not indicate how, step by step, having an idea to start a business. Some respondents also indicated that the number of hours on the subject was insufficient for such exercises to be carried out. In addition, young people stated that the knowledge needed to run their own business is dispersed on several or even a dozen or so subjects, but no one combines all the information (Nowiński, Nowaczyk, Sobczak, Tomczyk, Fabiś 2016).

Despite the growing economic development, fewer students plan to set up a company, and the number of undecided people and those who do not want to run their own business has increased. Easier access to a large labour market can hinder the risk of running a business. Having said that, in smaller cities, own business is often the only solution not to be unemployed.

During the research, students emphasised that a lot of attention was paid to showing the topic of starting their own company in all education. The knowledge they receive during classes, although it is often supported by examples, turns out for students to be insufficient to know what steps should be taken to open a business. Students indicated that after completing the course in entrepreneurship they were rather afraid to

start their own business, as the classes also pointed to the difficulties and problems they might encounter on their way. Often, these factors and fear of the unknown prevented them from opening a business. Another factor that discouraged the establishment was the lack of any support from the institution or the state in this respect. The respondents often indicated that they did not know which offices to go to, how to fill in the documents, where and whom to ask for advice and what legal form to choose. Another problem is planning activities, analysing the competition's offer, product or service marketing activities, or all matters related to the personnel and financial part. Students were afraid that in case of questions or problems they would not know where to look for help. Their fears were, moreover, justified, because the examples from life that their fellows gave, who were already running their business, confirmed this. Everyone - students of economics and non-economics faced problems and lack of support from institutions and organisations.

The research has shown that students feel entrepreneurial. Positive responses were given by 65% of female students and 70% of last year' students. A 2016 survey found that 55% of female students and 64% of male students are or rather feel entrepreneurial. Therefore, although the participants in the current study felt more entrepreneurial, this did not translate into the intentions of starting their own business. Most students, 89%, consider themselves entrepreneurial, who are mainly characterised by risk-taking skills, ingenuity as well as creativity and initiative. Approximately 47% of the surveyed population did not work during the studies related to the chosen field of study. This proves that the main problem is the unwillingness to build your career path after starting studies in a given field and the lack of ideas for starting and type of business.

Students running their companies indicated that when setting up a company they used the help of others - external companies or people who had already followed this path and could be a signpost and help for them. Most pointed to family help in this area. Students stated that entrepreneurship education should be run by universities and lecturers were indicated as those who should guide, motivate students and strengthen them in the pursuit of establishing their own businesses.

According to the respondents, it is very important to know how to run own business and the skills to run it. Students emphasised that during classes they received knowledge about starting a business and a lot of details related to it, but most indicated that there were no practical classes related to running a company. The surveyed students of economic studies pointed to a number of program content related to finance, cooperation with people or the law, which in their opinion were relevant from the point of view of doing business. Non-economic students complained about the lack of knowledge in this area. Students realise that to run a business and develop it, knowledge and management skills are needed. Non-economic students indicated that they had ideas for their own business, but the finance-related part must be left to specialists in this area. All students of non-economic faculties claimed that by completing the economic faculty it was easier to set up their own business. In turn, students of economic faculties claimed that only students in the field of management were prepared to conduct business, because in their studies they had had the widest range of subjects.

At the same time, all students emphasised that success on the market depends not only on knowledge and the idea for a business, but on creativity, planning skills, time management, teamwork skills, coping with stress and risk taking. Students of all faculties indicated that they rarely practised these skills during their classes. Students of all faculties highly assess the arranged meetings with interesting people during their studies, which show the business path of these people. The problems, challenges or even resistance and difficulties they had to face. As they emphasised, it is more valuable to meet a man who talks about running a business, showing its dark sides and ways to overcome these crises than telling only about the positives of doing business. For students, student internships, company visits, meetings with successful people or people who run their companies and want to share their practices and experience play a very important role. Such a practical aspect of education is perceived by students as an opportunity to listen, watch and learn from others who have practical knowledge and teach how to deal with specific situations.

A group of 74% of students after graduation are not ready or planning to open their company. Among the arguments against setting up own enterprise the lack of adequate financial resources was most often indicated - students who want to take out a loan to open a business accounted for 4% of all respondents. Another factor is fear of the unknown and "easiness" - it is better to work for someone and not have worries, do the work and have time off. The respondents also pointed out that family and friends (who usually work full-time) advise against opening own business claiming that it is very difficult and there is no guarantee of success. Students admitted that they were too young to run their own businesses, because they wanted to have time to relax and socialise.

The attitudes presented here point to an irrational search for explanations and a reluctance to undertake a new initiative. Looking for negatives can be analysed as an explanation for some kind of laziness or an easy way. Thinking about themselves on the labour market, students see themselves as employees rather than as employers. This situation confirms the general mood of reluctance to start your own business. In running their own business, young people are attracted by money and the possibility of flexible working time as values. However, they realise that making enough and satisfying amounts of money can be stretched over time.

For people who already run a business, the "flexible working time" factor meant 24/7 work. This group of respondents eagerly spoke and discussed arguments for and against opening their own business, willingly referred to their own problems and shared their experience. Most often, they were encouraged to run their own business, the opportunity to decide about themselves, build something lasting for their family, flexible working hours and finances. It is optimistic to say people who currently help their relatives in running a business - they want to start their own business in the future. Currently, they want to gain experience working for someone else or save money for their own business.

Some students whose relatives or friends conduct business in the future count on their help in opening their own business. Everyone

emphasised that if they meet everyday business people - satisfied and motivated, this attitude also motivates them. Fulfilled entrepreneurs infect others with their enthusiasm and encourage them to pursue their own plans and dreams of business. Students indicated that they talk to and observe people running their own businesses and derive strength and enthusiasm for starting their own business from these experiences.

It seems that combining all the suggestions would give the best results in terms of entrepreneurship learning. If the respondents had the opportunity to combine theoretical knowledge with practice and activities supported by meetings with entrepreneurs, they would be more willing to take the initiative to open their own business. Unfortunately, in reality, it is difficult to encourage good managers or business owners to find time to share their experiences with students. Such people complain about the lack of time and thus it is difficult for them to arrange time for this type of activity.

Opinions on ideas for improving entrepreneurship education at universities and awakening entrepreneurial spirit among students were divided. Some pointed to an increase in the number of exercises performed independently and making decisions so as to discuss later results in class. Others indicated study visits to companies and institutions as well as meetings with entrepreneurs who could talk about running their own business along with the opportunity to ask questions (Nowaczyk, Sobczak 2016).

The respondents who do not run their own businesses and asked if they had enough information to run the company replied that they did not. They usually search for information on opening a business on the Internet. Few (1%) indicated that when setting up their business they would contact their lecturers from the university.

CONCLUSIONS

A very small percentage of young people undertake to open their business. Young people are afraid to open a business because it is more convenient to work for others. For young people, this is one of the most important arguments when making decisions. Those who have no problem with new technologies and entering new industries are more willing to take up the challenge and open their business. As research

shows, entrepreneurship and the ability to start a business are influenced by the nature of the fields of study, shaped competences during studies, teaching methods used, as well as additional activities enhancing the development of entrepreneurship, but the most important is the attitude to independence. Entrepreneurship education in higher education should be adapted to the level, profile and field of education. In economic faculties, entrepreneurship education should focus on building competences related to setting up a business, while in non-economic faculties entrepreneurship competences should include skills to create and use technological or artistic ideas to a greater extent.

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