



Preparedness of graduates for entrepreneurial environment

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Abstract

Many experts in the field of economics and politics anticipate a dynamic increase in entrepreneurship in the 21 century. Realising that entrepreneurship is crucial for the companies who want to be competitive worldwide, the European Commission pays special attention to supporting entrepreneurship. Entrepreneurial skills have been included into key competencies in the field of education and training and should therefore be acquired continuously within all stages of education, starting from primary through secondary up to the university institutions, including life-long education. The current paper deals with the analysis of entrepreneurial potential of pupils and students in selected schools, including the bachelors of the Faculty of Materials Science and Technology of the Slovak University of Technology. A method of questionnaire was used to identify the chances of the inquired students to succeed in entrepreneurial environment.

The activity of pupils and students is crucial for developing the entrepreneurial skills. Simultaneously, it is mostly the Economy subjects and project teaching that provide a room for developing the abovementioned skills. The contribution shows the results of a questionnaire research aimed at the quality of teaching the Economy subjects in selected secondary schools. The research also focused on the major aspects of teacher's work in developing the students' entrepreneurial skills. Another goal was the implementation of project teaching/learning and the identification of the quality parameters that make the educational process of more effective. The acquired results were compared with the opinions and attitudes of selected entrepreneurs regarding the preparedness of the graduates for entrepreneurial environment. Our proposals and recommendations for the improvement of teaching process in the field of the entrepreneurial skills development are listed in the end of the paper.

1. Analysis of entrepreneurial potential

The diagnostic research carried out within the master thesis of Ing. M. Štúr in the academic year 2009/2010 focused on the analysis of the entrepreneurial potential of pupils of selected secondary schools. The research sample consisted of 118 pupils. Simultaneously, the Department of Engineering Pedagogy and Psychology, Faculty of Materials Science and Technology, Slovak University of Technology (MTF STU) carried out the grant project aimed at the development of entrepreneurial skills of the Faculty students. The research sample involved 639 bachelor students of all the Economy and Technology programmes studied at the Faculty. The number of respondents reached 279 in Economy programmes and 360 in Technology programmes respectively.

In the research, we used a questionnaire developed by I. Turek (Turek, 2005). The questionnaire helped identify the students' chances to succeed in business. The following tables show the results of the investigation; Table 1 shows the results identified in the selected secondary schools, while Table 2 shows the results of the bachelor students of MTF STU.



Table 1 Entrepreneurial potential of pupils of selected secondary schools (%)

Interval	Grammar school	Vocational school of wood industry	Business Academy	Schools Total
35 and more	0%	1%	1%	1%
15 to 34	5%	10%	5%	7%
0 to 14	31%	40%	40.5%	37%
minus 1 to minus 15	49%	39%	40.5%	42%
minus 16 to minus 43	15%	10%	13%	13%
Pupils Total	100%	100%	100%	100%

As shown in Table 1, only less than 1% out of the total number of 309 pupils of all three secondary schools met the requirements for successful entrepreneurial activity, i.e. they have suppositions to achieve excellent achievements in their future business. About 7% of all respondents have talent and abilities to become a successful entrepreneur. The pupils with the chance to succeed in case they acquire necessary skills and knowledge in the field of business represented 37%, i.e. over a third of all respondents. The highest number of respondents (130), i.e. 42%, may succeed in business if they put in extra effort to compensate for their lacks in order to compete with those with better business suppositions. The number of pupils predestined for other than business activities reached 13%. Those pupils were neither recommended nor discouraged from entering entrepreneurial activities.

Table 2 Entrepreneurial potential of MTF STU students (%)

programmes	Technology	Economy	Students Total
interval			
35 and more	0 %	0 %	0 %
15 to 34	14 %	13 %	14 %
0 to 14	37 %	37 %	37 %
minus 1 to minus 15	36 %	37 %	36 %
minus 16 to minus 43	13 %	13 %	13 %
Students Total	100 %	100 %	100 %

The interval of 15 – 35 points indicates the suppositions to succeed in business, i.e. the pupils have both entrepreneurial talent and skills. This concerned 91 students, i.e. 14.2 % of all respondents. The interval of 14 – minus 43 points indicates that, without further training in the field of entrepreneurial skills, the students do not have satisfactory suppositions to succeed in business. This concerns 548 students, i.e. 85.8 % of all respondents.

The comparison of the results of the research into the entrepreneurial potential of the secondary school and university students showed that it is necessary to introduce the subject of entrepreneurship into all types of secondary schools and university programmes. Without the development of entrepreneurial skills, our graduates will not be able to succeed in labour market. When comparing the results of Eurobarometer 2004 with the results of the above-mentioned research, we can confirm a **continuous negative trend in the field of entrepreneurial activity.**

2. Entrepreneurs' opinions on the preparedness of the secondary school graduates to enter business environment

The above-mentioned diagnostic research also focused on the opinions of entrepreneurs regarding the preparedness of the secondary school graduates for entrepreneurial activities. The questionnaire used in the research contained 28 questions and was published on the Internet. Addressed were the entrepreneurs in the region of Brezno (central Slovakia), who were notified of the questionnaire by e-



mail. Out of 68 subjects, 47 ones responded. The research was carried out in co-operation with Ing. I. Kviatková who utilized the collected information in her master thesis.

We were interested in employers' requirements regarding the competencies and skills of the secondary school graduates entering the labour market. The responses of 40 % of the entrepreneurs questioned clearly determined experience and manual skills as crucial for the entrepreneurial sphere. At present, an employer expects to take on a graduate ready to fit in the company after brief instruction course and with no need to be introduced into basic business activities.

This is the area where the secondary schools must take swift corrective action and strengthen the segment of practical training.

Table 3 lists the insufficiencies in the competencies of the secondary school graduates regarding their performance in practice.

Table 3 Evaluation of the secondary school graduates' competencies

List the most frequent insufficiencies in the competencies of the staff with secondary education	
1.	Insufficient knowledge of managing various activities in a company
2.	Insufficient knowledge of laws and legislation
3.	Insufficient problem-solving skills
4.	Low flexibility in thinking
5.	Memorised knowledge acquired in the secondary school
6.	Difficulties in learning new knowledge necessary in a company
7.	Others

Table 3 indicates that it is important to pay special attention to training the entrepreneurial skills necessary to manage a company and to solve all the management-related problems. Regarding the abovementioned, crucial is the requirement of tighter connection between theory and practice.

Another objective of the above-mentioned diagnostic research was to find if the staff with secondary education disposes sufficient knowledge of entrepreneurship, acquired in the secondary school.

We found that, after graduation, a graduate does not dispose enough knowledge of entrepreneurship. The inquired entrepreneurs have performed in the entrepreneurial environment for 10 years at minimum, which is a proof of their high-quality knowledge and experience; their responses can therefore be considered highly credible.

The addressed entrepreneurs recommended the following improvements in teaching entrepreneurial subjects in secondary schools:

- Introduction of new entrepreneurship-oriented subjects,
- Improvement of education by applying the acquired theoretical knowledge in practice,
- Development of autonomy, flexibility, activity and critical thinking.

3. Quality analysis of teaching Economy subjects

In the academic year 2010/2011, we carried out a diagnostic research into the quality of teaching Economy subjects in a selected vocational school. The research involved 70 pupils whose opinions were collected by using an anonymous "Questionnaire on assessing the quality of teaching by students" (Turek, I. and Albert, A.). The following tables show some of the research results.

We were interested in the following opinions:

- whether the pupils would choose Economy subjects if the subjects were just optional, not compulsory;
- what were the pupils' opinions regarding the usefulness of the knowledge acquired in the Economy subjects;
- what were pupils attitudes to the Economy subjects.

The results are shown in Tables 4 and 5.



Table 4 Imagine that the Economy subjects are just optional, not compulsory. Would you choose some of them?

Scale	No. of responses	%
a) certainly yes	16	22.86
b) probably yes	20	28.57
c) I do not know	7	10.00
d) probably no	16	22.86
e) certainly no	11	15.71

In case the Economy subjects were just optional, not compulsory, only 22.86 % of pupils would definitely, while 28.57 % would probably choose one of the subjects.

Table 5 For your practice, you consider the knowledge learnt within the Economy subjects:

Scale	No. of responses	%
a) extremely useful	2	2.86
b) very useful	24	34.29
c) partially useful	37	52.86
d) little useful	4	5.71
e) totally not useful	0	0.00
f) I do not know	3	4.29

The knowledge of Economy subjects is considered to be extremely useful for future career by 2.86 % of pupils, very useful by 34.29 % and partially useful by 52.86 % of pupils.

The pupils were asked to circle the word expressing their attitude to the Economy subjects. We found that 62.86 % of pupils considered the Economy subjects "useful", 41.43 % "complicated", 38.57 % "important" and "suitable", 34.29 % "interesting", 30 % "monotonous", 24.29 % "boring" and 17.14 % "very difficult".

The pupils also evaluated individual aspects of teachers' work within the Economy subjects by circling a grade in the following scale: 1 – fully agree; 2 – agree; 3 – more or less agree; 4 – disagree; 5 – totally disagree; 0 – do not know. The results are shown in Table 6.

Table 6 Pupils' opinions regarding individual aspects of teacher's work [%]

Teacher's work / scale	1	2	3	4	5	0
Activating the pupils	8.57	32.86	32.86	17.14	5.71	2.86
Trying to develop critical thinking of students	8.57	21.43	45.71	15.71	2.86	5.71
Developing creative skills of students	10.00	34.29	34.29	12.86	4.29	4.29
Implementing the latest research results in education	18.57	38.57	22.86	12.86	4.29	4.29
Allowing pupils to express their opinions	27.14	45.71	17.14	4.29	4.29	1.43

It is important that teachers develop pupils and students' determination, autonomy, flexibility, accountability, motivation for self-education, creativity, critical thinking, problem-solving etc. The above-mentioned research revealed that the teachers do activate students, trying to develop their critical thinking and enabling them to express their opinions, yet there is still some space for more intensive development of the above-mentioned skills in the educational process.



4. Proposals and recommendations for improving the quality of educational process regarding the development of entrepreneurial skills

The carried out diagnostic research proved that it is necessary:

- to combine theory with practice,
- to introduce the topic of Entrepreneurship into various subject or to introduce a specific subject devoted to this topic in secondary schools,
- to develop the students and pupils' autonomy, creativity and critical thinking,
- to develop students' ability to solve professional issues within the projects such as setting up a fictitious company,
- to develop the students and pupils' soft skills such as flexibility, risk-taking, self-motivation, stress-resistance etc.
- to support competitiveness.

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