THE RELATIONSHIP BETWEEN TEACHING METHODS AND THE FORMATION OF STUDENTS' ENTREPRENEURIAL SKILLS

Associate Professor, Ph.D., Laura-Filofteia PANOIU
"Constantin Brancoveanu" University of Pitesti, Romania
E-mail: laurapanoiu@yahoo.com
Adriana PAUNESCU
Bucharest University of Economic Studies, Romania
E-mail: adriana.paunescu@ase.ro

Abstract: *This work stemmed from the researchers' desire to find the most suitable solutions to prepare students for an extremely dynamic, globalized and competitive labor market. The cultivation of entrepreneurial skills entails the meticulous training and nurturing of young individuals to swiftly adapt, demonstrate mobility, and deliver added value, irrespective of whether they assume roles as employees or entrepreneurs within the labour market in the future. The lack of vision among employees or entrepreneurs, an aversion to taking risks, diminished creativity, or a reduced capacity for innovation could be avoided on numerous occasions if the education system ensures the development of entrepreneurial skills. Following these considerations, the purpose of the present research aimed at identifying teaching strategies that support the development and flourishment of entrepreneurial skills amongst students. The study's results confirmed that choosing the most appropriate teaching strategies leads to increased entrepreneurial skills.*

Key words*: competence, entrepreneurial competence, teaching methods*
JEL Classification*: A13, A23, C93.*

1. Introduction

Competence represents a concept that has been used more and more during present times at an educational level as well as an economic level. Economically, competence takes into account elements that will allow employers to be competitive. The employer's interest is to display these elements at their highest degree. Educationally, competence stands at the core of the curriculum, the qualifications and professional standards. Analyzing the literature indicates a constant concern, regarding both the definition of the term and by relating to the competence's development modality.

In 1959, White Robert introduces the term competence in his paper called "Motivation Reconsidered: The Concept of Competences", defining it as the ability of an organism to efficiently interact with the environment.

In 1996, in the paper "Competences: measuring the unmeasurable", David Robotham Richman Jubb states that the term confidence can be used as the behavior of an individual relative to the way he acts in the process of task performing in organizational environment (Jubb, 1996). Mangham (1996) believes that the term competence can also refer to personal model, achievement models or training and education models, as well as addressing the standards to which comparative evaluation criteria are utilized. Competences are fundamentally behavioural and susceptible to learning (McClelland, 1998).

Another conceptual approach to competence takes into account an individual's ability to effectively raise and combine a wide range of internal and external sources within a type of issue or situation-problem (Serbanescu and Gabureanu, 2025). Competence means the student's proven ability to accurately choose, combine and use knowledge, skills, values and mindsets in some clearly stated situations, in order to efficiently and effectively conduct a learning task. From the point of view of the learning process, competence can be seen as an element that allows the student to act in relation to a previous experience, as well as from the

point of view of the student's potential that he will have to prove in certain cases. Starting and developing a curriculum based on entrepreneurial education is a feasible option that will train students to deal with the multiple opportunities that will appear during their lives. Entrepreneurship in education aims to develop entrepreneurial spirit. People require a set of skills, abilities and knowledge in order to generate creative ideas and need the entrepreneurial initiative to make them happen.

This type of perspective can ensure long-lasting development, the creation of new jobs, the development of new technologies (Munteanu, Iamandi and Tudor, 2014). The entrepreneurial education model identifies four aspects of the individual relative to the socio-economic environment: creativity, faith, support goods, structure and development (Rădulescu, Burlacu, Bodislav & Bran, 2020).

2. Methodology

The aim of the research was to identify those teaching strategies that can generate the growth of not only the students' entrepreneurial knowledge but also the particular skills and mindsets such as critical thinking, creativity, risk taking, decision making ability. Carrying out the research involved defining the goal of the research as registering, overseeing and comparing the results of the students in the initial test and the retest.

The research at the 10^{th} D class of an important school in Rm. Valcea, Romania and the school subject in case was entrepreneurial education.

The arguments that support the idea of using research-action for improving the learning process are highlighted by the study of Chaves that shows that research-action has improved education in business and management (Chaves, 2014). It is stated that if the entrepreneurial education process would be exploited in basic education, it would allow for a continuum that would lead to professional education (Hietanen & Javi, 2015). Building abilities can also be insured by learning through action (Donnellon and Middleton, 2014) or by using surveys in the teaching system (Dumitru, 2012). Isamil, Awang &Pyng (2020) proved that students are more passionate about active learning activities held in class, particularly simulations, group chats, case studies and trips within school premises.

The stages of the research were:

1. Pretesting – during this stage, students took a docimological test that contained items that helped assess the students' knowledge level in entrepreneurial education at that point in time.

2. Intervention – this stage meant teaching the students and introducing new teaching methods in order to measure whether there is a direct connection between the teaching strategies used by the teacher and the student's knowledge level.

The teaching methods used were:

- *Reflection,* which allows students to carry out an introspection exercise which will help them analyze their own behaviour and actions, identify positive and/or negative aspects. Such a method allows students to positively approach the new elements.
- *The cube*- it is a teaching method which offers multiple perspectives for an examined phenomenon. The method allows students to create new connections that will provide them with new outlooks for the researched subject. Every face of the cube will allow students to create a connection with the contents of the analyzed matter.
- *Debating*- the choice of using debate as a teaching method was made as it encourages students to make an assessment of the information and link it with socio-economic reality. Using debate enlarges students' perspective on certain aspects that define the

surrounding world (Panisoara, 2022). Debate can be used as it allows for the improvement of the creativity and critical thinking of students, team work and verbal communication ability. The method allows the student to use the knowledge they possess, to exploit and show their potential, their values and skills.

The docimological test was used in order to examine the results of the intervention. In this case, the students' results in the first and second docimological test answered to the question of whether or not there was an improvement in entrepreneurial education knowledge levels for the students, which was the aim of the research. The subjects that participated in the research are students in the 10th D grade of a school that is representative for the county's educational system when taking into account the results obtained by students in the baccalaureate exam. Therefore, in 2021, this school was ranked 30th nationwide, with an 8.96 average and a 99,5% success rate. Out of 32 students, 28 answered the survey, resulting in an 87,5% success rate. In other words, 7 out of 8 students answered the questionnaire.

The gender structure of students:

- Boys – 18, approximately 2/3, respectively 64,29%;
- Girls- 10, respectively 35,71%.

Regarding age structure, the results of the survey show:

- Number of 15 year old students - 1 student, which means 3,57%;
- Number of 16 year old students – 15 students, which is 53,57%;
- Number of 17 year old students – 12 students, meaning 42,86%.

3. Results

The initial testing of the 28 students took place in order to address the objective of the research, and the average score at the initial moment was named m_0. After teaching the entrepreneurial education knowledge, the students were tested once again, which generated a new average score, at the final moment, noted m_1.

The figure down below shows the procedure in a schematic way:

The 28 students	**Initial testing: Applying test m_0**	□	**Applying the teaching techniques**	□	**Final testing:Aplying test m_1**

Figure 1: Working procedure

The t-test of difference was used in order to highlight whether or not there were significant differences between the two moments.

Based on the collected data, the average score, obtained based on the grades of the 28 students during the first testing, was roughly 7,357 points/student with a standard deviation of ±1,161 points/student. The average score during the second testing was 8,536 points/student, with a standard deviation of ±1,201 points/student.

As it can be noticed, the average score increased by roughly 1,179 points/student. It was statistically tested whether the difference is (H_1) or is not (H_0) relevant. The *Compare Means/Paired-Samples T-Test of the SPSS programme* was used in this matter:

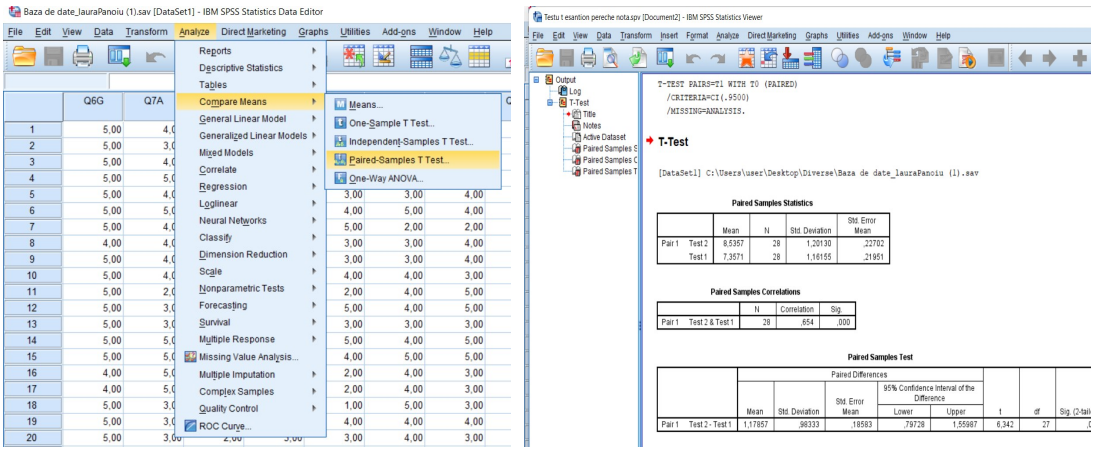

Figure 2 Applying the *Compare Means/Paired-Samples T-Test* procedure for testing the importance of the difference between the average scores in Entrepreneurial Education in 2 distinct moments.

The following information was obtained after applying the procedure shown in figure 2:

The average scores achieved by the 28 students before and after teaching the Entrepreneurial Education course (table 1)

Table 1 Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Test 2	8,5357	28	1,20130	,22702
	Test 1	7,3571	28	1,16155	,21951

We also have information regarding the standard deviations previously mentioned. There is a strong connection between the two moments. The correlation ratio has a value close to 1 and, statistically, it is relevant in a 99% proportion (Sig.=,000).

Table 2 Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Test 2 & Test 1	28	,654	,000

Table 3 Paired Samples Test

	Paired Differences	t	df	Sig. (2-tailed)

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Test 2 - Test 1	1,17857	,98333	,18583	,79728	1,55987	6,342	27	,000

Table 3 presents the information important for us and shows that the difference between the two average values is statistically significant, as the value pf Sig. is .000. In other words, the difference noticed is 99% relevant.

Conclusion

The students scored higher in Entrepreneurial Education after engaging with the taught courses by using reflection, debate and the cube, which highlighted an increase in average scores between the two moments. The objective of the research is confirmed in this way.

Table 4. The dynamic of the evolution in gaining knowledge in entrepreneurial education based on the gender of the students.

Gender	***Average score for test 2 (AFTER)***	***Average score for test 1 (BEFORE)***	***Difference between test 2 and test 1***
F	8,4	6,9	1,5
M	8,611	7,611	1,000
General average score	8,536	7,357	1,179

In order to interpret information in table 4, we need to test whether the differences are statistically relevant or not. The results gained after using the ***Compare Means/Paired-Samples T-Test*** procedure for each of the two genders in two distinct moments are shown in tables 5 and 6 (**BEFORE** and **AFTER)**:

Table 5 Paired Samples Test (Boys)

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			

Pair 1	Test 2 for boys – Test 1 for boys	1,00000	,97014	,22866	,51756	1,48244	4,373	17	,000

Table 6 Paired Samples Test (Girls)

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Test 2 for girls – Test 1 for girls	1,500	,972	,307	,805	2,195	4,881	9	,001

The values of *Sig.* are lower than 0,05 in both instances, which shows that the differences are statistically relevant. This fact allows for the following ***conclusion*** : the average score for the boys is higher than the one for the girls in both cases, although the girls register a bigger progress than the boys (the girls gained a 1,5 point per student increase compared to the 1 point per student increase for the boys). Gender obviously plays an important role in accumulating entrepreneurial education knowledge.

4. Conclusions

The aim of the paper was to highlight the connection between the teaching methods used by the teacher and the level of knowledge that the students have in their entrepreneurial education class. The research showed that there is a correlation between the teaching methods used and students' entrepreneurial skills, therefore using teaching methods such as reflection, the cube or debating generates an increase in students' knowledge, a fact proven through the tests that were taken. It also shows the influence that gender has in assimilating entrepreneurial education knowledge. The research is limited by the group of students, as the results can be influenced by the kids' level of intellect. The class where the research was conducted has a high level of intelligence. The profile that the kids are studying is mathematics-informatics. In order for the results to be relevant to the entire educational system, the research would need to be enlarged in order to include both students with high and lower academic results.

ACKNOWLEDGEMENTS. This research was conducted within the ,,Start in cariera prin master didactic" programme, financed through the Human Capital Operational Programme, priority axis 6 – Education and competences, on the basis of **the financing contract nr. 112360 from 09.12.2020**, POCU/864/6/21/140783.

References:

1. Chaves, M.G.F.A., 2014. Improving Management Students' Skills in Framing "Thought - provoking Questions" An Action Research, *International Journal of Business &Information*, 12(3), pp.490-499.
2. Collins, L., Smith, A.J. and Hannon, P., 2006. Applying a synergistic learning approach in entrepreneurship education. *Management learning,* 37(3), pp. 335-354.
3. Domilescu, G., 2019. Entrepreneurship education in Romania. Realities and perspectives in secondary and high school. *Journal of Educational Sciences, XX,* 1(39), pp.81-89.
4. Drăgușin, M., Sîrbu, O. & Grosu, R.M., 2018. *Advancing entrepreneurship education: a new approach in Romanian Academia, 2018.*
5. Donnellon, W.K. and Middleton, K., 2014. Constructing entrepreneurial identity in entrepreneurship. *The International Journal of management Education*.
6. Dumitru, D., 2012. Communities of inquiry. A method to teach. *Procedia - Socuial and Behavioral Sciences, 33*, pp.238-242.
7. Hietanen, L. & Javi, T., 2015. Contextualizing entrepreneurial learning in basic and vocational education. *Journal of Enterprising Communities People and Places in the Global Economy, 2015*.
8. Ismail, R., Awang, M. & Pyng, Y., 2020. Active learning in Economic Subject: A Case Study at Secondary School. *International Journal of Learning, teaching and Educational Research,* 19(10), pp.19-31.
9. Lăcătuș, M.L. and Stăiculescu, C., 2018. Competențele antreprenoriale și educația antreprenorială în școală. *Conferința națională Cariera Didactică - noi perspective. Educația azi*. Timișoara, 2018.
10. Lăcătuș, M.L. and Stăiculescu, C., 2016. Entrepreneurship in education. *International Conference Knowledge - based Organization. XXII no.2*, pp.438-443.
11. Lăcătuș, M. & Suciu, M., 2014. Soft Skills and Economic Education. *Polish journal of management Studies,* 10(1), pp.161-168.
12. Munteanu, S., Iamandi, I. and Tudor, E., 2014. Evaluation model of the entrepreneurial character in Eu countries. *Amfiteatru Economic,* 17(38), pp.79-95.
13. Pânișoară, I.O., 2022. *Enciclopedia metodelor de învățământ.* Iași: Polirom.
14. Rădulescu, C.V., Burlacu, S., Bodislav, D.A.and Bran, F., 2020. Entrepreneurial Education in the Context of Imperative Development of Sustainable Business. *European Journal of Sustainable Development,* 9(4), pp.93-99.
15. Schelfhout, W., Bruggeman, K. and De Maeyer, S., 2016. Evaluation of entrepreneurial competence through scaled behavioural indicators: Validation of an instrument. *Studies in Educational Evaluation,* 51, pp.29-41.
16. Șerbănescu, L.S. and Găbureanu, S., 2015. *Pedagogie: Fundamentele pedagogiei. Teoria și metodologia curriculumului* (Vol. 1). București: Politehnica Press.
17. Vîlcov, N. and Dimitrescu, M., 2015. Management of Entrepreneurship Education: a Challenge for a Performant Educational System in Romania. *Procedia-Social and Behavioral Sciences,* 203, pp.173-179.
18. White, R.W., 1959. Motivation reconsidered: The concept of competence. *Psychological Review,* 66(5), pp.297-333.