



## The effects of experiential training in teaching-learning entrepreneurship in VET schools from Europe

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**Abstract:** *Following the training organized in vocational schools in five European countries, in which were used experiential methods of teaching entrepreneurship, through questionnaires applied to both students and teachers, the results obtained were analyzed, respectively the students' perception on the teaching methods used by the teachers, the knowledge, skills, abilities acquired. In order to carry out the study, three research hypotheses were formulated, and the results obtained have fully confirmed them. The conclusions of the study highlighted the positive effects of the experiential methods on the entrepreneurship teaching-learning process.*

**Keywords:** *entrepreneurship education, experiential teaching methods, VET schools*

**JEL Classification:** L26, I29

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## 1. INTRODUCTION

Entrepreneurship is not only associated with the formation of new firms, but with action in the sense of starting something new. It is a process that often leads to new business formations, but it may very well include innovative and enterprising behaviour inside existing organizations (Cromie, 2000). Corporate entrepreneurship plays an important role in the process of strategic renewal of existing firms (Beugelsdijk, 2007). It may be associated with alertness, finding new product-market combinations and innovation (Wennekers and Thurik, 1999). Entrepreneurs are important for the growth of firms since they provide the vision and imagination necessary to carry out opportunistic expansion.

As organizations committed to educational missions, schools, colleges, and universities are charged with passing along knowledge to students (through exchanges between students and teachers, through exchanges between students and books or other resources, and through exchanges among students themselves). (Petrides and Nodine, 2003).

Besides the knowledge creation and diffusion, schools, colleges, and universities have the mission to develop the creative and innovative spirit among students. As corporate entrepreneurship plays an important role in the process of strategic renewal of existing firms, schools, colleges, and universities are the means through which students can develop their innovative and entrepreneurial spirit.

Entrepreneurship also refers to an individual's ability to turn ideas into action. Entrepreneurial programmes and modules offer students the tools to think creatively and to be an effective problem solver. Education for entrepreneurship can be particularly effective in initial vocational training, as students are close to entering working life and self-employment may be a valuable option for them. Thus, entrepreneurship education should not be confused with general business or economic studies, as its goal is to promote creativity, innovation and self-employment (Best procedure project: 'Entrepreneurship in vocational education and training': final report of the Expert Group, pp. 7-10).

Entrepreneurship education has long been focused on a theoretical approach, preparing a thorough business plan and development of a company in the office. In the last decade, there has also been a shift, towards a more experiential approach in this field, based on developing ideas, practical methods, and tools, fieldwork and development of a business model. The experiential teaching of entrepreneurship has the potential to bridge the gap between the worlds of education and work.

## 2. DEFINING THE RESEARCH PROBLEM

The research on the effects of experiential training in teaching-learning entrepreneurship in VET schools from Europe is based on the questionnaires applied to all the teachers and students from 5 European countries: Germany, Slovenia, Romania, Italy and Croatia who participated in the pilot experiential entrepreneurship training. The study intends to analyse how the entrepreneurial competences and knowledge of VET teachers and students changed after the experiential course, compared with their competences before the training. At the same time, being a pilot training in teaching-learning entrepreneurship, there are several important aspects related to the learning process that must be analysed during and at the end of the process. Thus, there should be an evaluation of methods and type of pedagogy and strategy used to transfer the



knowledge from the trainer to the trainees, as well as the analysis of the effective learning environment from both teachers' and students' perspectives. In order to assess the competences, there were designed questionnaires for the teachers' training and for students' training. The questionnaires used a 5 point Likert scale (1= completely disagree; 2 = disagree; 3 = partially agree, partially disagree; 4 = agree; 5 = completely agree). In analysing the results, we used descriptive statistics – frequencies, average scores and non-parametric coefficients.

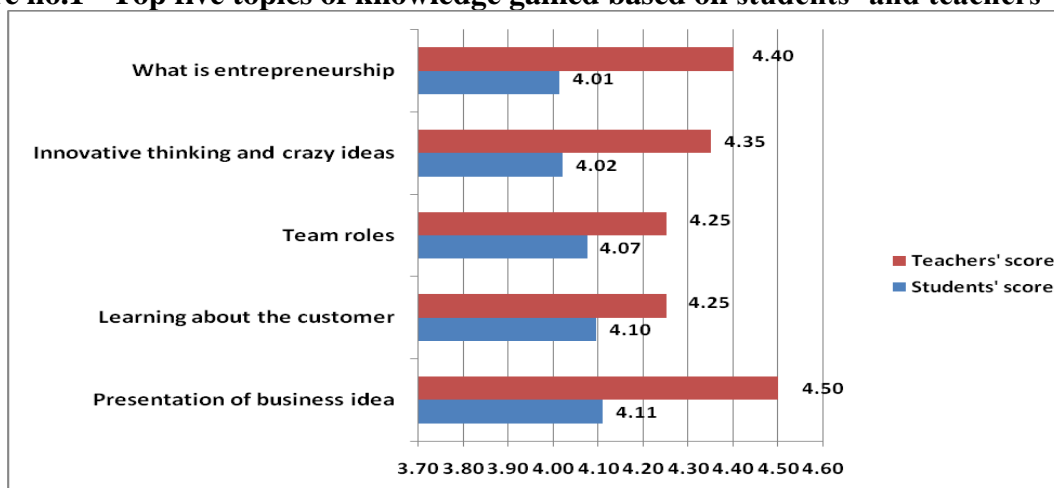
In our research there were formulated the following hypotheses:

1. The teachers improved the teaching methods after their experiential training.
2. There are differences between the countries regarding knowledge gained and skills developed.
3. There are significant differences between the students' and teachers' evaluation regarding the teaching-learning process.

#### 4. PRESENTING THE RESEARCH FINDINGS

An important aspect of the results is to compare the teachers' scores with the students' ones for both analysed aspects: knowledge gained and skills improved after the training. The top five topics of knowledge gained in students' perception, with scores higher than 4, compared with correspondent topics in teachers' perception are presented in Figure 1.

Figure no.1 - Top five topics of knowledge gained based on students' and teachers' scores



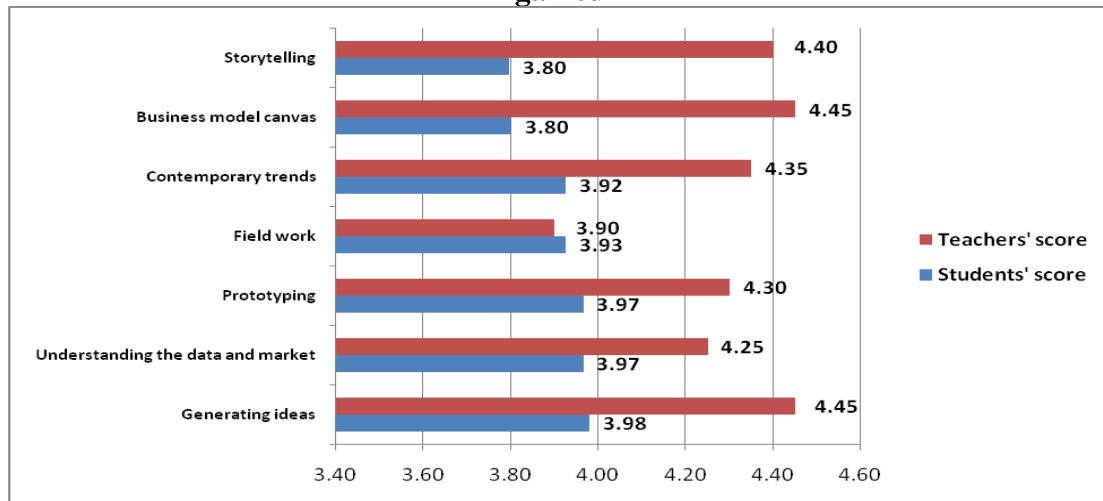
Source: authors' projection

Based on the scores shown in Figure 1, the perception of students and teachers differ significantly. Even if the higher score correspond to the same topic: **Presentation of business idea**, for both students and teachers, the difference is quite important from 4.11, in students' case, to 4.50, in teachers' case, much higher, and maybe overrated. The last from top five, for students, is the topic: **What is entrepreneurship** – 4.01, whilst for teachers it was rated with the second highest score – 4.40, another significant difference.

The scores lower than 4, obtained by students, for topics of knowledge gained, are presented in Figure 2. As we can observe in Figure 2, the difference between the students'

perception and teachers' ones became deeper and deeper, thus the teachers' tendency is to overrate again the knowledge gained by their students.

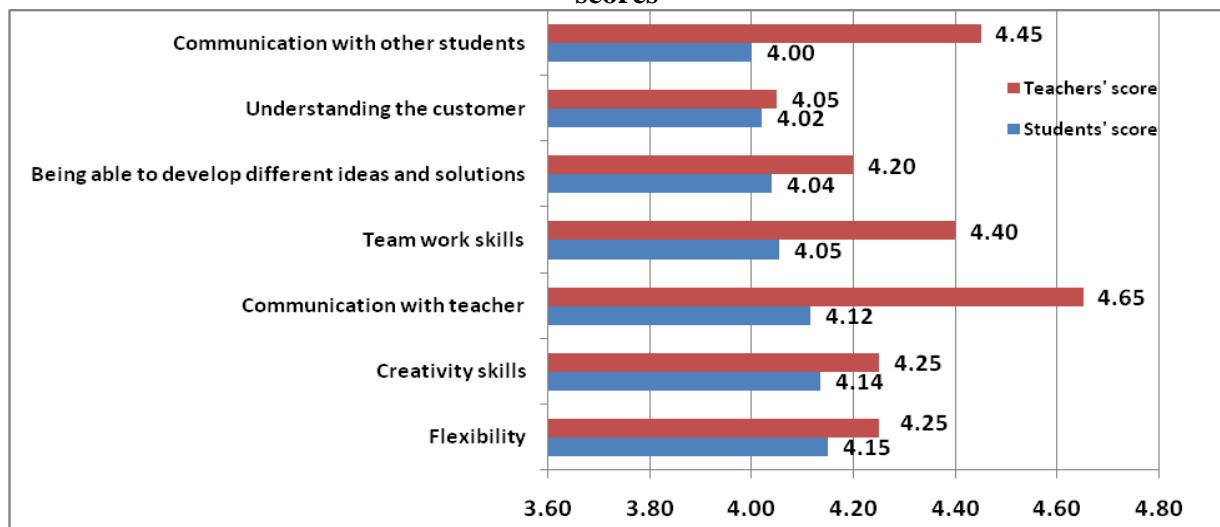
**Figure no.2 - The lowest students' scores compared to teachers' scores for knowledge gained**



Source: authors' projection

Only one topic has similar scores: **Work field**, 3.93 for students, and 3.90 for teachers, being the only case when the teachers' score is lower than the students' one. The highest differences from the two points of view, students and teachers, were determined for **Business model canvas** and **Storytelling**: 3.80, students' score for both topics, and 4.45, respectively 4.40 for teachers' score, two of the highest teachers' score. The perceptions of the two parts involved differ significantly, and it shows that they did not evaluate similarly these issues. If we compare the scores based on an ordinal scale, the students' perception is situated at "good" to "very good", whilst for teachers, the perception tends to be "very good".

**Figure no.3 - Top five skills improved after the training based on students' and teachers' scores**



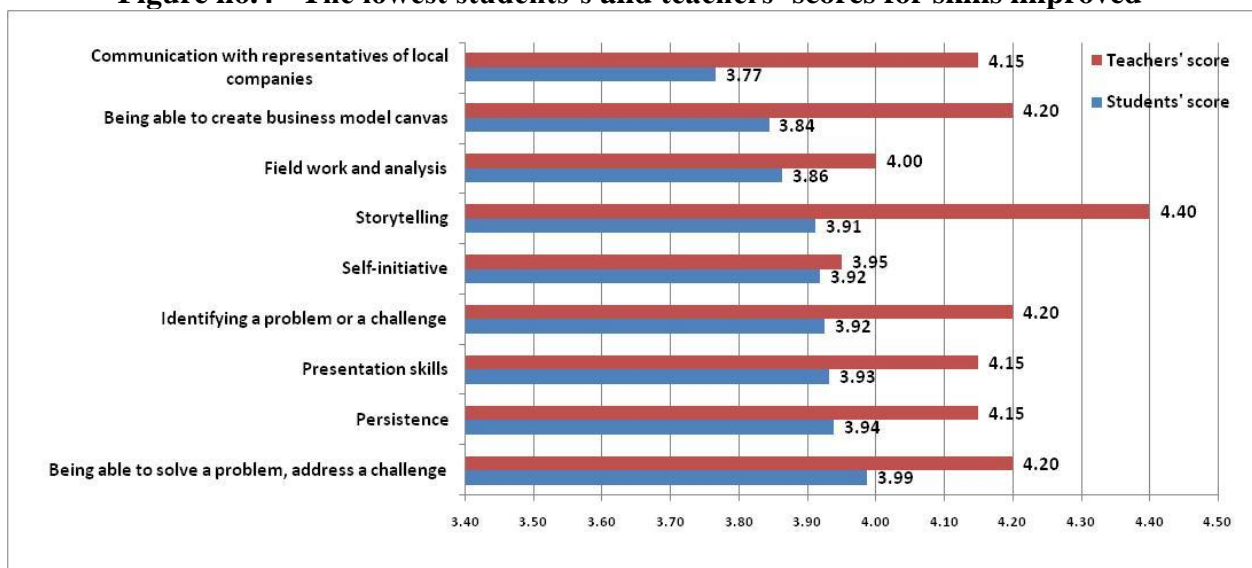
Source: authors' projection



The skills improved after the training, rated over 4 by students and the correspondent teachers' scores are shown in Figure 3. The first observation is that in students' case the scale varies within an interval of only - 0.15, and for teachers the interval is larger – 0.60, aspects that underline the different perception of the two parts, students considering they improved those skills in a similar way; teachers considering that some of the skills were more improved than others. **Flexibility** – with a score of 4.15, was chosen by students as being the most improved skill, followed by **Creativity** – with a score very close to the previous, 4.14, and the third one being **Communication with teacher** – rated 4.12. **Understanding the customer** was rated with similar scores by students and teachers, 4.02, respectively 4.05. An important difference, between students' and teachers' scores, was registered by **Communication with other students**, only 4.00 in students' case and 4.45 in teachers' case.

The skills rated under 4 by students, and the correspondent teachers' scores, are presented in Figure 4. The observations, from the top ranked skills, are the same as for the last ranked skills as well, because in this second case, the students' scale varies within an interval equal with 0.22, and for teachers, this time, the interval is 0.45. These aspects allow us to maintain the idea of a different perception of the two parts, students considering they improved those skills in a similar way; teachers considering that some of the skills were more improved than others.

Figure no.4 - The lowest students's and teachers' scores for skills improved

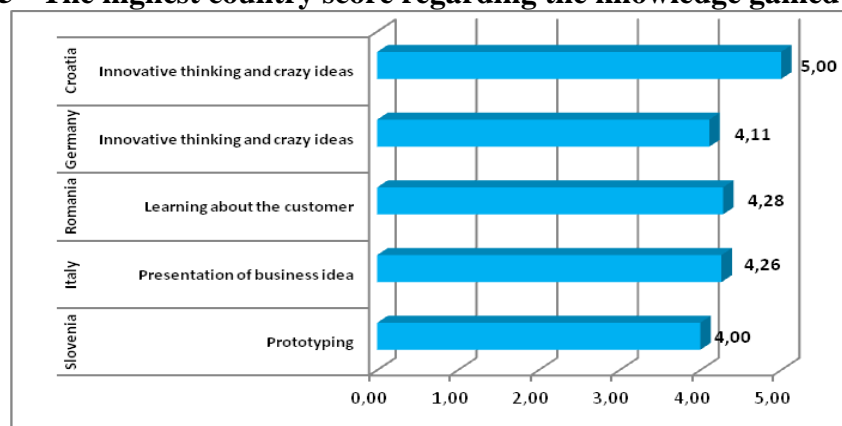


Source: authors' projection

In this case, the biggest difference, between students' and teachers' scores, belongs to the skill **Storytelling**, as students rated it with 3.91 and teachers with 4.40 - for the latter being one of the highest score. The skill **Communication with representatives of local company** – 3.77, was ranked by students on the last place, whilst for teachers the last one was **Self-initiative** – 3.95. This skill, **Self-initiative** is rated similarly by both students and teachers. In all cases, teachers registered higher scores for all the skills taken into consideration to be improved during this training.

Another way to analyse the knowledge gained and the skills improved by the students is to take into consideration the results on each country. Thus, based on the country scores, we obtained a situation regarding the highest rated knowledge gained by students, as we can observe in Figure 5.

**Figure no.5 - The highest country score regarding the knowledge gained by students**



Source: authors` projection

Regarding the knowledge gained, based on a particular topic, in the case of two countries, we noticed that the same topic was considered to be the most important: **Innovative thinking and crazy ideas**, rated in Croatia with the maximum score – 5.00, and in Germany with 4.11. Slovenia registered the lower score from all five countries, 4.00, and it belongs to **Prototyping** topic. The interval between the highest and the lowest score for the first knowledge topic is exactly 1, the lowest belongs to Slovenia – 4.00, and the highest belongs to Croatia – 5.00. Italy has the same knowledge gained, based on a specific topic, as in the overall analysis: **Presentation of business idea**.

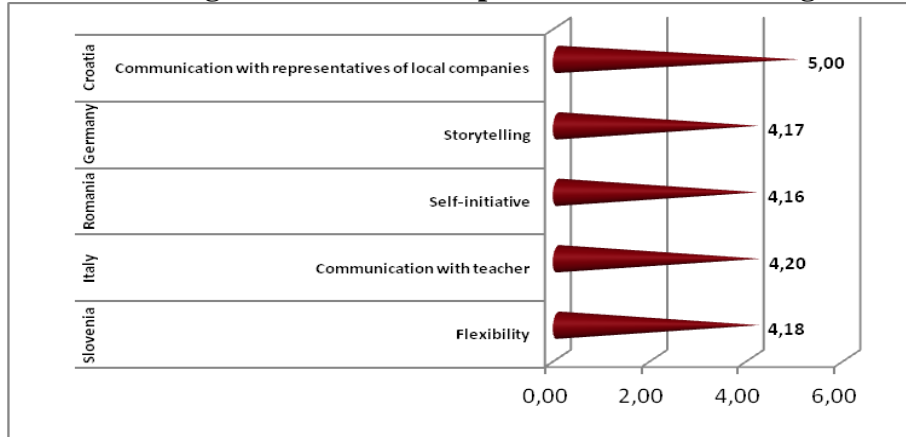
The highest ranked skills improved after the training is different in each country, as it is shown in Figure 6. An interesting issue related to the scores registered by the five countries, is that four out of five have very similar scores, varying within a small interval, from 4.16 to 4.20, thus the difference is only 0.04, meanwhile another country has a gap of 0.8 or more than the others. For some countries, the skills presented in Figure 6 have a powerful connection with entrepreneurship skills, such as **Storytelling** – Germany, **Self-initiative** – Romania, **Flexibility** – Slovenia. At the same time, **Flexibility** was the highest ranked skill in the overall analysis. For Croatia, in this particular project, an important skill was **Communication with representatives of local companies**, which was rated with the highest score as well – 5.00.

In the case of three countries: Germany, Romania and Slovenia, the score is very similar, varying between 3.47 and 3.50, but there are different skills chosen, such as: **Persistence** for Germany, **Communication with representatives of local companies** for Romania and **Field work and analysis** for Slovenia. Only one country has the score higher than 4, Croatia, and the skill improved is **Storytelling** – 4.13. At the same time, **Communication with representatives of local companies** has been rated with the lowest score in the overall analysis, Romania having the same score as well.

At the open question: **Which methods and exercises did you like the most?**, the most common answer given by the students was **Creating the prototype**, followed by **Business model**

canvas and then by SCAMPER. Other examples were as follows: *Generate ideas* and *Brainstorming*.

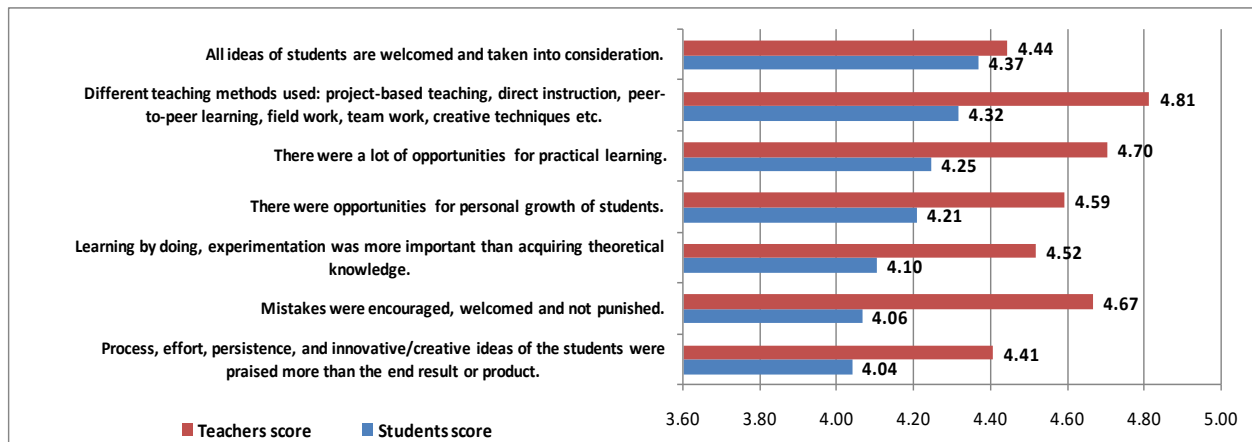
**Figure no.6 - The highest rated skills improved after the training on countries**



Source: authors' projection

There are several important aspects related to the learning process that must be analysed at the end of the process. Thus, in Figure 7, there are presented general aspects related to the learning process from both students' and teachers' perspective.

**Figure no.7 - Students' and teachers' scores related to the learning process and environment**



Source: authors' projection

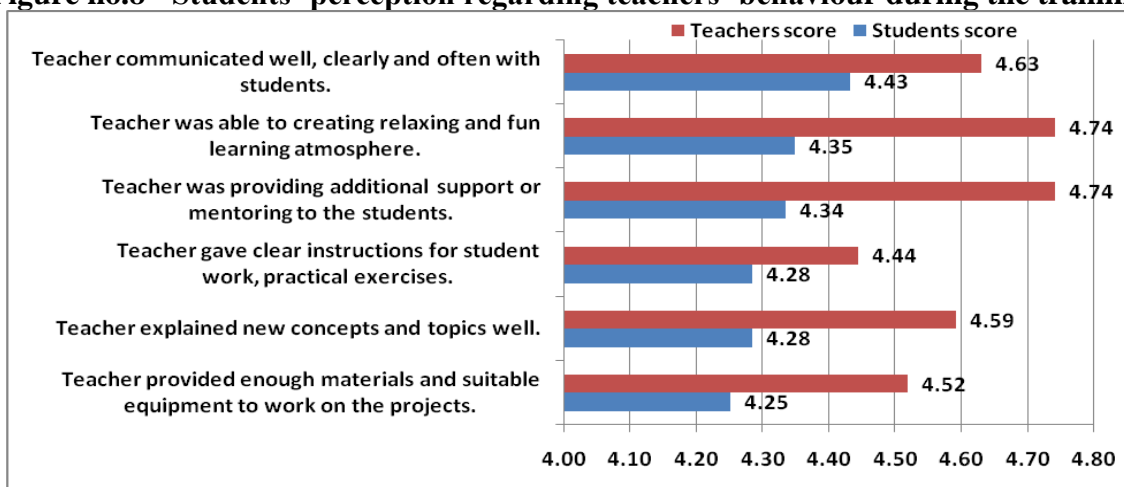
As we can observe in Figure 7, there are differences between students' and teachers' opinions. Their opinions went in the same direction and were very close regarding *All ideas of students are welcome and taken into consideration*. A bigger difference of perception was registered by *Mistakes were encouraged, welcomed and not punished* – students were not so confident as their teachers about this aspect, and *Different teaching methods were used* (project-based teaching, direct instruction, peer-to-peer learning, field work, individual work, team work,



creative techniques etc.) with the same tendency as the previous one. A common aspect that could be noticed in Figure 7, is that in all cases teachers' scores are higher than the students' ones.

Regarding the aspects related to students in the learning process, we obtained different perceptions again, as it is shown in Figure 8. Besides the fact that teachers overrated again all the items considered, students were more cautious about the fact that they were able to carry out properly their field work, or having enough time to work on their projects, whilst teachers were more confident about these aspects, the scores being close to 4.5, and for students less or only around 4.

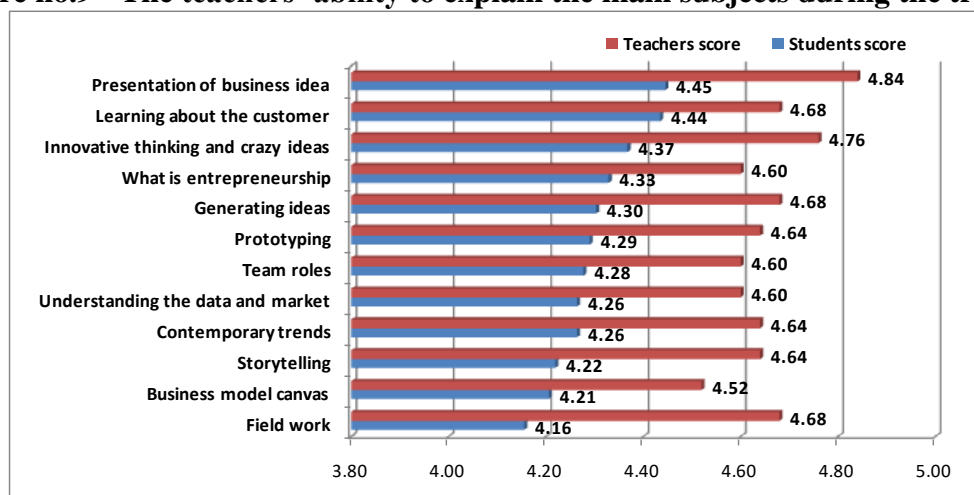
**Figure no.8 - Students' perception regarding teachers' behaviour during the training**



Source: authors' projection

At the questions related to the teachers' ability to explain well and clearly the main subjects of the training, the scores registered for students and teachers are presented in Figure 9.

**Figure no.9 - The teachers' ability to explain the main subjects during the training**



Source: authors' projection

The pattern is the same as it was in the previous analysis: teachers rated higher than students all the issues. More than that, the lowest ranked aspect by students *Field work* - 4.16,





has one of the highest scores for teachers – 4.68. A positive aspect is related to the highest students' score – 4.45, **Presentation of business idea**, which has the highest score for teachers as well, but much higher, being 4.84, so there is a common perception for both parts regarding the clarity and the explanation of teachers. Being asked: **Is it important for students to learn entrepreneurship?** the answers went in the same direction: they agree completely that students definitely need entrepreneurship education.

## 5. CONCLUSIONS

Teachers did not change significantly the teacher-centred approach after the training; the score is slightly higher, which means that teachers prefer to give direct instructions, to delegate tasks to the students, ex-cathedra activities, lectures. Whilst, in student-centred approach case, the difference between the score before and after the training is higher, from 3.72 to 4.14, which means that teacher is a facilitator or demonstrator, giving differentiated instructions, allowing students to work on their own, providing support, encouraging students to learn, ask questions in a great extent. Therefore, the first hypothesis of the study **Teachers improved their teaching methods after the experiential training** is confirmed by the results obtained.

Regarding the knowledge gained based on a particular topic, after the training, only in the case of two countries, Croatia and Germany; we noticed that the same topic was considered to be the most important: **Innovative thinking and crazy ideas**. Slovenia registered the lowest score from all five countries, 4.00 and it belongs to **Prototyping topic**. Italy has the same topic of knowledge gained as in the overall analysis: **Presentation of business idea**.

The highest ranked skills improved after the training is different in each country. An interesting issue related to the scores registered by the countries involved in the project, we discovered that four out of five countries have very similar scores, varying in a small interval, from 4.16 to 4.20. An important observation is that in students' case the scale varies within an interval of only - 0.15, and for teachers the interval is larger – 0.60, aspects that underline the different perception of the two parts, on one hand, students considering they improved the skills in a similar way; on the other hand, teachers considering that some of the skills were more improved than others. Thus, the second hypothesis of the study **There are differences between the countries regarding knowledge gained and skills developed** is confirmed by the results obtained.

Regarding the aspects related to students in the learning process, we obtained different perceptions again. Besides the fact that teachers overrated again all the items considered, students were more cautious about the fact that they were able to carry out properly their field work, or having enough time to work on their projects, whilst teachers were more confident about these aspects, the score being close to 4.5, and for students less or only around 4. Thus, the third hypothesis of our research **There are significant differences between the students' and teachers' evaluation regarding the teaching-learning process** is confirmed by the results obtained.

As an overall conclusion, the students had a positive attitude when they were asked about their opinion on entrepreneurial training and the learning process. Based on the students' opinions, they became more aware about the possibilities out there to develop themselves, they

learnt how to generate new ideas, how they can become self-employed, to distinguish the routine activities within a company and the specific activities of a new business idea.

## ACKNOWLEDGEMENTS

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