COMPARING STUDENTS ENTREPRENEURIAL COMPETENCES IN A INDIVIDUAL AND GROUP BUSINESS PLAN

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Abstract

The aim of this study is to compare the achievement of students' entrepreneurial competences when developing a business plan, depending on whether this is developed individually or in group.

In order to analyse these effects we present an empirical study to know the role played by business plans and teamwork in achieving entrepreneurial competences. We will conduct the analysis from the point of view of the perception of student's achievement of competences and from the point of view of the real achievement of these skills. In this sense, we use data obtained from assessment rubrics and questionnaires distributed among 254 students of the Bachelor in Business Administration at the Universitat Oberta de Catalunya (UOC). The questionnaires measure the students' perception of competences achievement, while the assessment rubrics measure the students' real competences achievement according to their grades.

To sum up, we can point out that teamwork involves a greater perception and a greater achievement of entrepreneurial skills when they are developed through a business plan. We must therefore encourage teamwork skills among students as they generate positive results in terms of entrepreneurial skills.

Keywords: business plan, entrepreneurship, competences, teamwork.

1 INTRODUCTION

1.1 The concept of competence

In the academic world, there are as many definitions of the concept of competence as there are studies that have been undertaken on this subject. Barraycoa and Lasaga (2009) [1] warn us that exploring the concept of competence is a complex, arduous task.

The goal of educational programmes is to foster competencies. As González and Wagenaar (2006) [2] point out, competencies are described as reference points for the design and assessment of programmes of studies.

The field of entrepreneurship has also tried to give definitions for entrepreneurial competence, although, as in the definition of academic competence, a multitude of approaches have been proposed. Chandler and Jansen (1992) [3] argue that there are three main families of competencies that entrepreneurs need to have to be successful: management competencies, technical/functional competencies, and entrepreneurial competencies.

1.2 Business plans

A large number of studies have focused on teaching entrepreneurship, but many researchers maintain that the real issue in this field is “learning for entrepreneurship, rather than learning about entrepreneurship” (Lans et al., 2008 [4]). Thus, according to Lautenschläger and Haase (2011) [5], teaching should focus on the development of entrepreneurial competencies instead of how to start a business. These competencies are important not only for people specialized in teaching entrepreneurship but also for all those agents involved in providing support for entrepreneurship (Lans et al., 2011 [6]). In recent years, the development of entrepreneurial competencies has become a priority for local authorities as part of their endeavour to foster innovation and business creation (Russell et al., 2008 [7]).

With implementation of the Bologna Process, competencies have become a tool for evaluating a programme's relevance from the student's viewpoint. As our goal is to evaluate entrepreneurial competencies, we have tested them against business plans.
A business plan is a maturing process that helps an idea to progress to a finished project (Honig, 2004 [8]). Many researchers agree that creating a business plan is essential for materializing a project (Barringer & Gresock, 2008 [9]). Some, such as Brinckmann et al. (2010) [10] and Giunipero et al. (2008) [11], even say that it increases the likelihood of success when launching a company, facilitates risk-taking and encourages the performance of certain activities in the initial start-up phase. According to Honig (2004) [8], preparing a business plan allows students to accrue indispensable knowledge for creating a business. Taking this a stage further, Ashamalla et al. (2008) [12] say that creating a business plan offers a learning context in which students can build their skills in reflection and planning.

Our goal will be to analyse the degree of perception and attainment of entrepreneurial competencies by students on the basis of whether the final project is developed individually or in a team. To analyse this goal, we will ask the following research questions:

RQ1: Are there significant differences in the entrepreneurial competencies perceived by students when developing a business plan depending on whether the students draw up a business plan individually or in a team?

RQ2: Are there significant differences in the entrepreneurial competencies attained by students when developing a business plan depending on whether the students draw up a business plan individually or in a team?

2 METHODOLOGY

2.1 The Undergraduate Dissertation in the Entrepreneurship specialization

The Undergraduate Dissertation is a 6-credit course in the programme of studies for the Universitat Oberta de Catalunya's Bachelor's Degree in Business Administration and Management that the student must take to complete the degree and which is closely tied with the other subjects studied during the programme. The Undergraduate Dissertation seeks to bring into play, in an integrated manner, the knowledge and competencies that the student has acquired during the degree course, and to accredit that the student has the skills that he or she will need in the professional environment.

The degree offers students the possibility of performing a final bachelor's degree project in the Entrepreneurship or Business Plan specialization. Its goal is to carry out a study related with creating a company by developing the idea and business model.

2.2 Research strategy

Because of the nature of our research and in order to attain the purpose pursued by this study, we have adopted a positivist research philosophy. Applying this research methodology, we will be able to test the entrepreneurial competencies that we have defined against the primary sources and accept or reject the research hypotheses proposed on the basis of the data obtained.

We will use a deductive research approach, consisting of a structured methodology which develops theories from existing knowledge in order to test them empirically against quantitative data.

In order to answer the research questions, we will perform a quantitative analysis, collecting quantitative data about the target population and analysing this data quantitatively with the help of descriptive, inferential and multivariant statistics.

2.3 Research design

One of the purposes of this study is to improve understanding of the factors that affect development of a unique type of competence, namely, entrepreneurial competencies, in a university entrepreneurship development environment. Thus, the analysis unit chosen has been the population of students enrolled on the Undergraduate Dissertation course, in the Entrepreneurship specialization, for the UOC’s Bachelor's Degree in Business Administration and Management, during the second semester of the 2014-15 academic year and both semesters of the 2015-16 academic year. These students are the best representatives for our study, as they develop a business plan as part of the course.

In order to achieve the goals initially considered, the information was obtained from two types of source, depending on whether the goal was to analyse perceived competencies or attained competencies.
The information about the students' perceived competencies was compiled from a questionnaire, using a 5-point, non-comparative Likert scale (Likert, 1932 [13]). This is a commonly used method in this type of research. The questionnaire was designed to ascertain students’ perception of entrepreneurial competencies and the learning process facilitated by development of a business plan. A total of 262 replies were obtained using the online questionnaire.

The information about attained competencies was compiled from the assessment rubrics used in the course, which detail the levels of attainment of entrepreneurial competencies during development of the business plan. The rubrics consist of criteria and standards for assessing students’ attainment of a certain aspect of the subject and they are one of the tools used to avoid subjectiveness and ensure the greatest possible objectiveness in the assessment (Stevens & Levi, 2005 [14]). A total of 267 assessment rubrics were obtained, corresponding to the students who took the course during the semesters included in the study.

In order to analyse the research questions, we have standardized the measurement scales to a 5-point scale.

As we have said earlier, the goal of the research is to perform a comparative analysis between perceived competencies and attained competencies. Accordingly, when choosing the sample, we only considered those students who had answered the questionnaire on perceived competencies and for whom we had the assessment rubrics. Thus, the study sample finally totalled 254 students.

3 RESULTS

3.1 Variables

It should be pointed out that not all the perceived competence variables follow a normal distribution. Therefore, we will use the Mann-Whitney U test.

Considering all the attained competence variables analysed, we can identify two groups: attained competencies that have a normal distribution (CA7, CA8, CA9, CA13, CA14, CA21, CA25, CA26, CA31 and CA33), and attained competencies that do not have a normal distribution (CA1, CA2, CA3, CA4, CA5, CA6, CA10, CA11, CA12, CA15, CA16, CA17, CA18, CA19, CA20, CA22, CA23, CA24, CA27, CA28, CA29, CA30, CA32 and CA34). Consequently, for the variables having a normal distribution, we will use Student's t test for independent samples and, for the variables that do not have a normal distribution, we will use the Mann-Whitney U test.

<table>
<thead>
<tr>
<th>Table 1. Variables</th>
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<tbody>
<tr>
<td><strong>Block 2: Generic competencies that the business plan has helped develop or acquire</strong></td>
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<tr>
<td>[C1] Process and analyse a body of general information referring to a company</td>
</tr>
<tr>
<td>[C2] Process and analyse partial information referring to parts of a company</td>
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<tr>
<td>[C3] Make decisions</td>
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<td>[C4] Draw conclusions from the information obtained or provided</td>
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<td>[C5] Relate information or data</td>
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<td>[C6] Apply theoretical decision-making concepts</td>
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<td>[C7] Manage time</td>
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<td>[C8] Solve problems related with deadlines</td>
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<td>[C9] Use new technologies</td>
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<td>[C10] Creativity</td>
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<td>[C11] Innovative ability</td>
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<td>[C12] Ability to work with uncertainty</td>
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<td><strong>Block 3: Specific competencies that the business plan has helped develop or acquire</strong></td>
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<td>[C13] Improve a company's competitive position</td>
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<td>[C14] Develop strategies</td>
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<tr>
<td>[C15] Manage risk</td>
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<tr>
<td>[C16] Process and analyse financial information</td>
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<tr>
<td>[C17] Identify and work with sources of relevant financial information</td>
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<tr>
<td>[C18] Integrate ethics in organizational decisions</td>
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</table>
3.2 Perceived competencies

As regards the Group segmentation variable, it is seen that, for most competencies, the perception of the students who have performed the project in a team is greater than the perception held by those who have worked individually. However, the level of significance of the Z-score of the comparison leads us to accept the null hypothesis of no significant differences between the means of most of the perceived competencies, with a risk α=0.05, except for variables CP19, CP23 and CP24, which show significant differences between the means of the perceived competencies for students who have created a business plan in a team or individually. Thus, the 23 students who have performed the final bachelor's degree project in a team have a better perception of the competencies related with ethics, group work and negotiation. Specifically, the means obtained for these competencies are 4.17 vs. 4.48, 3.07 vs. 4.17, and 3.40 vs. 3.91.

It can be inferred from these results that teamwork is much better rated by those students who have had the opportunity to develop this skill during performance of the final project and, therefore, performance of the final bachelor's degree project in a team is highly recommendable for attaining this competence typology.

3.3 Attained competencies

The results for the Group segmentation variable show that, in almost all competencies, the level of attainment is higher for the students who perform the project in a team, except for the competence CA34 (focus on results), which has a higher value for students who perform the project individually. Therefore, it can be inferred that, as a general rule, working in a team leads to a higher level of competence attainment.

If we analyse the significance of these differences, we find that there are several normal variables that show significant differences in the means, depending on whether the final bachelor's degree project is carried out in a team or individually, specifically, the variables CA9 (use of ICT), CA14 (develop strategies), CA26 (use of ICT) and CA33 (manage projects). However, if we analyse the results using the non-parametric test, we find that a large number of variables show significant differences in the means, specifically, the variables CA1, CA2, CA3, CA4, CA5, CA6, CA10, CA11, CA17, CA20, CA22, CA27 and CA30.

4 CONCLUSIONS

In the introduction of this paper, we highlighted the dearth of studies on this subject. This study has enabled us to broaden knowledge on the perception and attainment of competencies within the
framework of an undergraduate dissertation in the field of entrepreneurship when we segment by the group variable.

The results show that in recent years, with the reforms involved in the Bologna Process, studies on entrepreneurial skills and their relationship with the teaching/learning process have risen considerably. Thus, we have seen that there are many experiences in the scientific literature addressed to the study of competences or entrepreneurial competences, in general, and their relationship to education. However, to our knowledge, there are not studies that analyse the achievement of entrepreneurial competences by students when developing a business plan, and more specifically, the potential influence of teamwork.

Our main aim is to analyse whether or not there are differences in how students involved in the development of a business plan perceive and achieve entrepreneurial skills, comparing students who develop the business plan individually and students who work in teams.

The results show that, the students’ perception on their acquisition of entrepreneurial skills is superior for most of these competences when they work in teams. However, we haven’t found significant differences in the mean values of the majority of perceived competences, except for the ones related to ethics, teamwork and negotiation. From these results we can conclude that the implementation of the business plan in teams is highly recommended in order to achieve these three entrepreneurial skills. This result highlights that these competences are closely related to teamwork and are essential for the proper functioning of teams.

Regarding the real achievement of entrepreneurial competences, we obtained similar results. So, in the same way of perceived skills, the achievement of entrepreneurial skills was higher for students working in teams, except for the competence “orientation to results” which was higher valued by students who developed the business plan individually. Therefore, we can conclude that usually teamwork involves a higher achievement of entrepreneurial competences. In this case, we obtain significant differences in the mean values of many achieved competences, when comparing students who work individually and in teams.

The aim of our study is fully justified because of the consensus on the importance of entrepreneurial competencies in the academic and professional world. We also wish to contribute knowledge and to try, resolve and study some of the research that has not been previously analysed in depth, in the absence of any previous study with the same characteristics designed for a completely virtual learning environment.

REFERENCES


