Lessons Learned from an Innovative Approach on an Introductory Entrepreneurship Course: The Case of ESPOL

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Abstract

This paper reports an exploratory study regarding the issues involved in an introductory entrepreneurship course. The study discusses key features of the design and implementation process along with the lessons learned after one year of experience teaching the course at an Ecuadorian university. This study is based on the analysis of perceptions of 12 instructors and 145 students about the impact of the course on their teaching and learning skills, respectively. The gathering of data was carried out by using two survey instruments and a focus group. Kirkpatrick’s Model was used to develop the questionnaire administered to students in order to measure reaction and learning. With regards to instructors, a questionnaire and a focus group were used to gather their impressions about methodological issues and their perceptions on the expected impact on students’ learning. Results indicate that the course approach, from the instructors’ perspective, has a positive impact on their teaching in the sense that it facilitates the development and implementation of active and meaningful learning. The instructors emphasized that the implemented methodology allowed them to make a continuous evaluation of the students’ performance and to discuss and give feedback on the topics covered in class. In addition, they claim that their students have become more self-reflective on the importance and consequences of an entrepreneurial career. The findings also reveal that more than 85% of the students considered that the topics covered met their expectations. Discussion of the findings and implications for future research are presented.

Keywords: Entrepreneurship, Course Approach, Students, Instructors.

INTRODUCTION

Although the contribution of entrepreneurship to the world economy is well recognized, there is still debate about whether we can teach students to become entrepreneurs (Fiet, 2000a; Garavan & O’Cinneide, 1994a). Other questions that have been consistently on debate are: can entrepreneurship be taught? (De Faoite, 2003) and if so, what should be taught?, how should it be taught? (Fayolle, 1998), what opportunities does an entrepreneurship course offer?, what are the limitations in implementing it and how can its effectiveness be assessed? (Moro, Poli & Bernardi, 2003). These are difficult questions to be answered and debate will continue to exist throughout the years. Entrepreneurship is a complex subject to study in the context of learning and teaching because it depends on the individuals’ self-regulated actions and on characteristics that may not be easy to influence (Pihkala & Miettinen, 2003). Some researchers maintain that entrepreneurship can be taught or, at least, certain features of it -through socialization and formal training- as opposed to something genetically conceived (Chell and Allman, 2003; Falkang & Alberti, 2000; Kirby, 2002; Klandt, 1998; Kuratko, 2003). However, Fiet (2000a) contends that the courses offered in colleges and universities have undergone many influences, which seems to be the cause of a heterogeneous content. Some of these influences are related to academic autobiography, lack of theoretical rigor and entrepreneurship textbooks. The first issue refers to the possibility of being biased by one’s own training and the inability to view the world differently. The problem with the second issue is that the
entrepreneurship field might not be taken seriously as an academic discipline. The third issue has to deal with mixed preferences over textbooks mainly caused by a lack of theoretical rigor. Then, it becomes apparent why there is still none uniformity in courses’ content and approach (Falkang & Alberti, 2000; Fiet, 2000a). Addressing these issues, Fiet (2000a) proposes that entrepreneurship education should be oriented to add more theoretical content. By doing so, students are called to learn theories that teach them what they should do to succeed in a business context. A next step is to involve students in theory-based activities to challenge them to develop entrepreneurial competencies through practice.

In sum, the extant entrepreneurship literature suggests that substantial changes are to be made in both the content and process of teaching and learning in order to develop and enhance the students’ entrepreneurial capabilities (Kirby, 2002). Following this suggestion, the study builds upon previous research and presents the key features on the design and implementation process of an introductory entrepreneurship course. The study makes the following contribution to the entrepreneurship field: 1) we attempt to shed some light on the ongoing debate over what and how should be taught in an introductory entrepreneurship course; 2) we present the lessons learned after one year of experience teaching the course to undergraduate engineering students; 3) we provide valuable information for educators to help them adjust their course content and curricula in order to instill in students’ entrepreneurial awareness in future career perspectives. The remainder of this paper is organized as follows. Section 1 briefly reviews approaches for entrepreneurship education. Section 2 describes the course design. In section 3, the method is described. Section 4 presents the results and discussion followed by some implications for future research in section 5.

APPROACHES FOR ENTREPRENEURSHIP EDUCATION

Traditionally, the use of books and lectures has been the main tools to teach entrepreneurship or any other subject. Although these tools might be somehow effective, they have been criticized for its predictability and boredom effect on students (Fiet, 2000b). Not only do students get bored but also instructors can get contaminated when a class session becomes predictable which, in other words, means that students are never surprised. Fiet (2000b) contends that some of the drawbacks of predictability are reflected on having students who daydream, students who are not willing to cooperate, and students who may not learn what they are supposed to. To avoid these inconveniences, educators are challenged to look for more effective learning opportunities to stimulate and foster entrepreneurial activity on university students. Klandt (1998) presents an interesting discussion on the relevance of an entrepreneurial learning mode in contrast with traditional learning. In the latter, the learner takes a passive role when, for instance, listening to a lecture, whereas in the former the learner assumes an active role and learns by doing. Notable characteristics of entrepreneurial learning have to deal with: learning through face-to-face exchange of information instead of media-based mechanisms (e.g. using books); learning from other colleagues instead of just one person in a hierarchical position; learning under deliberate pressure instead of contemplative learning (Klandt, 1998). As traditional techniques are giving the way to new methods, the arousal of innovative approaches to increase the students’ knowledge, capabilities and attitudes are certainly welcome. Scholars have proposed that teaching methods should include the implementation of activities such as business simulations, case discussion, role playing, interaction, team work, creativity development, games, term projects, listening the testimony of guest entrepreneurs, and development of commitment (Kland, 1998; Moro et al., 2003). New techniques can be more effective
when they become more practical or real-world based (Saee, 1996). Advocates of new approaches suggest that students should have a more active involvement and be central to the learning process. Fiet (2000b), for example, proposes the use of a student-approved system through which students are committed to practice specific skills during class sessions. By following this system, students are encouraged to acquire competencies through their practice with theory-based activities. The underlying assumption of having a student approval is that any system is expected to work better if students feel good about it and decide about their learning. Similarly, Bird (2002) proposes a self-directed learning approach, as a suitable method for adult learning. As the individual is central to the learning process, the instructor plays a role of facilitator rather than an evaluator of performance. Thereby, students are assisted to understand and apply underlying course concepts. In line with these approaches, scholars incorporate the experiential learning model for entrepreneurship education (Bird, 2002; Carland and Carland, 2001) that involves a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984). Moreover, previous research has found useful to link an individual’s learning style with entrepreneurial abilities to get better insights of the learning process (Ulrich, 2001). As explained elsewhere, Kolb’s model concerning with learning-style is a four-stage cycle. Beginning with stage 1, an individual gets a concrete experience, which form the basis for reflective observation and abstract conceptualization. Students can have a concrete experience, for example, when they are exposed to hear the testimony of an entrepreneur about the incidents that he/she has faced when starting and running a new business. Another possibility is to have worked for an entrepreneurial company as an internship-type activity. Following the first stage, students may self-assess on their own entrepreneurial profile at stage 2, while in stage 3 they may try to link previous experience with formal concepts and the possibility of creating a new business (Bird, 2002). It is at this point when individuals may form their intentions to start their own businesses. At the four stage, students may end up with thinking about experimenting themselves the required steps towards creating a new venture.

COURSE DESIGN

Several perspectives have played a role in the design of the introductory entrepreneurship course offered at ESPOL. Three of the major sources of inspiration originated from training offered by the University of Texas at Austin, USA, the University of Ghent, Belgium, and the “Universidad de la Frontera”, Chile. The designers and instructors have received similar training that fit into the experiential learning model and adult education paradigm. Therefore, the instructors are fully acquainted about the role they play as facilitators and coaches of students. Thereafter, the course design has taken into account the cumulative experiences gained by the educators and its coaching team when putting into practice an activity-based course, influencing on entrepreneurial skills of the students and expecting to have an impact on their entrepreneurial awareness in future career perspectives. Overall, the course design is in line with the common view that a right combination of coaching, reinforcement, motivation and intention can help change the levels of students’ entrepreneurial skills (Bird, 2002) and attitudes, which is the long-term aim of the proposed course.

Educational Framework

The course was conceived under two premises: the students enrolled in it are adults and the course is based on activities that promote significant learning experiences. Regarding the first premise, Wlodkowski (2004) states that adults need to be highly
motivated to learn. According to the latter, the course integrates a set of activities that allows students to fuel their motivation to learn. The activities have been designed to fully engage students as they are central to the learning process. The proposed activities are intended to foster interaction between the students and course content, other students, contexts, situations, values, and beliefs. By following this approach, significant learning outcomes are expected at the end of the course. The characteristics of these activities are closely in line with learning experiences categorized as situated and meaningful (Driscoll, 2000; Fink, 2003; Herrington & Oliver, 1999; de Jager, Reezigt, & Creemers, 2002; Schunk, 2004). Situated learning is understood as learning that occurs when knowledge is presented in settings and applications that would normally involve that knowledge (Lave & Wenger, 1991). Meaningful learning refers to the process of relating potentially meaningful information to what the learner already knows in a non-arbitrary and substantive way.

The teaching approach of the course is centered on activities that follow the experiential learning model (ELM). This model has attracted interest of educators in various disciplines (Carland and Carland, 2001), and successfully used in several entrepreneurial educational interventions as well as in formal entrepreneurial adult education (Corbett, 2005; Farooqui & MacDonald, 2005; Mitchell & Chesteen, 1995; Shepherd, 2004). Experiential learning is characterized by the process whereby concepts and ideas are formed and re-formed through experience in a direct encounter with a phenomenon being studied (Brookfield, 1984; Jonassen & Grabowski, 1993). ELM integrates previous knowledge, perception, cognition, and experience through a cycle that involves four learning modes: concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984). This cycle is widely used during the course delivery and it is a distinctive feature of the course design.

Other techniques are also used to support and complement ELM; they are oriented to achieve situated and meaningful learning experiences. These techniques involve in-class discussions, discussion forums supported by learning management systems (LMS), simulations and case studies. Most of these techniques are suitable towards skills and competencies development via the students’ involvement in real world-based activities. Brookfield (2004) argues that discussion is an effective learning technique when we require students to solve problems, explore concepts, and change attitudes. Moreover, discussions through electronic media are also powerful tools, especially to support some of the modes of experiential learning, as it offers the opportunity for students to take time to reflect and conceptualize recently acquired knowledge (Gunawardena, Lowe, & Anderson, 1997; Schellens & Valcke, 2005). Simulation is another technique exercised at the ESPOL’s course, which usually involves role playing. Simulations are very helpful when the instructor requires the learner to get involved cognitively and emotionally in course’s activities. This is especially true when highly complex cognitive skills such as decision making, evaluating and synthesizing are sought (Gilley, 2004). For instance, students participating in a role playing activity get involved in the simulation, share their experiences, process gathered information, and then generalize the findings of the experience. Case studies are another way of instruction -based on actual situations- that allow students to apply learnt principles to problem-solving. This analytical tool has been extensively used in business schools and extended to other study fields (Marsick, 2004; Schaper, 1999).

In conclusion, the course design fosters situated and meaningful learning that enables students to learn by doing. It also aims at promoting the exposure of
students to challenges that mimic real-world situations faced by entrepreneurs when starting and managing a new business.

**Structure, content and teaching approach**

The introductory entrepreneurship course is mandatory for all undergraduate students, being offered halfway in their curricula. It is important to point out that this course is supported by a LMS media tool similar to Blackboard® or WebCT®. The goals of the course are fourfold: 1) having an impact on students’ awareness in future entrepreneurial career perspectives; 2) providing students with insights into the entrepreneurial process; 3) confronting students to entrepreneurial competencies and traits; and 4) letting students explore their own entrepreneurial skills and motivations.

Overall, the course is divided into six basic units: a) entrepreneurship and its contribution to the world’s economy; b) creativity and its link to the innovation process; c) identification and evaluation of business opportunities; d) review of entrepreneurial competencies; e) issues related to new venture creation; and f) development of a feasibility study or an early stage business plan as we interchangeably use in this paper. The first unit is oriented to get students aware of the impact of entrepreneurship on the economy and regional growth as well as barriers to entrepreneurial activity in a developing country context. The second unit reviews aspects of creativity whose role is well recognized in the innovative process (Kuratko & Hodgetts, 2004). As most innovations are the result of deliberate search for new opportunities (Josty, 1990), the innovation process departs from the analysis of the sources from which the opportunities are identified (Kuratko & Hodgetts, 2004). To understand why and how an invention should be protected, this unit also reviews issues on intellectual property rights. The third unit involves the examination of business opportunities from the innovation and marketing perspectives. Aspects of interest on this section address value proposition, preliminary market analysis and development of strategies to exploit a given opportunity. The fourth unit presents entrepreneurship definitions and myths followed by an examination of entrepreneurial competencies. The fifth unit reviews the meaning of a business concept and how this concept is developed into a viable business model. Finally, the structure and content of a business plan as well as guidance on how to convincingly present a business idea are reviewed.

All class sessions are structured in such a way that students exercise theory-based activities on an individual or group basis. Next, an open discussion is carried out among students about their findings. Thereafter, the instructor presents the underlying theoretical concepts and gives feedback as related to the exercised activity. Finally, the instructor opens a plenary discussion to draw final conclusions on the learnt concepts. The implementation of this course approach is supported by the use of a mix of techniques in a flexible way to promote meaningful learning. Moreover, this approach seeks to confront the students’ beliefs, traits and capabilities with real-world situations, frequently faced by entrepreneurs when starting and running an enterprise. The class sessions and learning techniques are intended to follow the experiential learning model. Role playing, for example, is one of the relevant techniques utilized to drive students through the four modes of ELM. One of the role playing activities is a business game entitled “Buyers and Sellers”, in which a group of students are the buyers and the others are the sellers. Each of the groups is given specific instructions. Buyers play one of the three roles: innovators, mainstream, or laggards. The various groups of sellers, on the other hand, are asked to specify the characteristics of an innovative digital camera and to sell it to the three types of buyers. The complete task is carried out in a cycle of two rounds. By using this game, students are exposed to concrete experimentation. In between the
two rounds, students are allowed to sit back from the experience and review the drawbacks on the first round. The two-round business game gives students the possibility of modifying their strategies and trying them again to be competitive. The relevance of this activity is that it allows students to experience with a business that simulates real-world conditions related to value proposition and customer knowledge. Also, it gives the opportunity for open discussions among students and feedback from their peers and instructors.

The use of cases and videos are also important components of the entrepreneurship course. Indeed, six cases and eight short videos that portray real-world entrepreneurial endeavors are included for analysis and discussion either in-class sessions or via virtual forums. Two of the cases and six videos have been taken from the experiences of Ecuadorian entrepreneurs. We contend that having contact with or listening to the testimony of Ecuadorian entrepreneurs is important for including a meaningful learning experience into the course activities. Two other activities to provide the means for active experimentation are: 1) a mini-enterprise initiated and run for a week by students enrolled in the course; and 2) a term project, in which students are committed to develop an early stage business plan. The first is aimed to challenge students to issues that an entrepreneur has to deal with when creating and running a new venture. This activity is relevant for entrepreneurship education as it helps to create an entrepreneurial culture among students (European Commission, 2004). For the development of the mini-enterprise, students gather and manage resources and time in order to develop product or service to be offered within the university campus. Advice is given to students not to use class time, nor to run any illegal business, nor to cause any disturbance to the university community. Their goal is to obtain the largest profits during the week time schedule. Mini-enterprises compete among each other for a prize. A three-page report must be written and used for discussion and reflection on the experiences gained by the students. In the term project, students develop a feasibility study, doing a preliminary market research with limited resources (Sarasvathy, 2001). Having limited resources is usually the case of entrepreneurs (Hisrich & Peters, 2002). Rather than only presenting the whole document at the course completion, students are asked to present the progress on their feasibility study in several class sessions. The progress of a specific stage on the feasibility study is usually presented the week that follows the session where the underlying concepts were discussed. Fourteen from a total of 56 hours of class are devoted to review and discuss the various sections of the term project. Again, the mini-enterprise and the term project developed in and out class sessions are oriented to expose students to complex situations, such as lack of information, uncertainty, development and use of personal contacts, search for advice from experts, and so on.

Finally, an important feature on teaching the course is the cooperative openness of instructors to get together and share teaching materials and relevant information. In fact, the instructors and its coaching team interact at a regular basis through meetings or virtual forums. Since written guidance is provided at the outset, this interaction is crucial to review the progress of planned activities and to overcome any setback on implementing the course.

METHOD

This article reports the findings of data collected from instructors and students enrolled in the introductory entrepreneurship course offered at ESPOL. Specifically, the analysis of perceptions of 12 instructors and 145 students on the educational
experience, after one year delivering the course, is presented. The gathering of data was achieved by using two questionnaires and a focus group. One of the two questionnaires and the focus group were used to gather information from instructors about the impact of the course on their teaching and students’ learning, more specifically on the instructional approach. The questionnaire administered to instructors included 11 items: 8 items concerning teaching issues and the remaining items addressed aspects on students’ learning. The variables were measured by the use of a five-point Likert scale, being 1 “Strongly disagree” and 5 “Strongly agree. This questionnaire was intended to measure to what extent the course content and the instructional approach had an impact on the instructors’ teaching and follow-up of the course as well as on students’ learning of specific skills. The focus group was used to collect a more qualitative data from instructors, as it offers the opportunity to share ideas, beliefs and attitudes in a group of individuals with similar profile. By using this technique, researchers can also amass valuable information to complement data collected from other sources (Flick, 1999; Madriz, 2000). The focus group was carried out through two open-discussion sessions in order to get better insights of the data gathered by means of the questionnaire. Kirkpatrick’s Model was used to develop the questionnaire administered to students in order to measure reaction and learning (Kirkpatrick, 1999). These aspects are the two first levels of evaluation suggested by the Kirkpatrick’s model. The first level is the same thing as measuring customer satisfaction which, in other words, means that trainees must react favorably to training if we expect it to be effective. The second level is oriented to measure whether the learning objectives have been accomplished. Based on these two levels, the questionnaire for students consisted of 14 questions, in which 7 items measured reaction and the other 7 addressed perceptions on students’ learning.

RESULTS AND DISCUSSION

This section presents key findings on the educational experience by delivering the course to undergraduate engineering students. First, the instructors’ perceptions about the impact of the instructional approach on teaching and their students’ learning are presented. Then, data regarding students’ reaction and learning are analyzed.

Instructors’ perceptions

From the instructors’ perspective, results indicate that the instructional approach has a positive impact on their teaching in that it facilitates the development and implementation of meaningful learning. The findings also indicate that the implemented approach contributed to keep track of their students’ progress and to provide effective feedback. Approximately, 73% of respondents agreed or strongly agreed that the course approach facilitated the follow-up of students’ performance (see Table 1). Similarly, 36.4% of instructors agreed and 63.6% strongly agreed that the course approach helped them provide more effective feedback to students. Another interesting finding is that all the instructors perceived the course approach as supportive for reflective teaching. It means that the proposed methodology allow instructors self-assess and analyze their teaching in order to find alternative strategies for an outstanding course delivery. Although 63.6% of respondents agree with the appropriateness of using the proposed approach to achieve learning goals, some of them disagree (36.4%). This result should not be surprising since ELM and the techniques exercised in the entrepreneurship course were for them rather new. Certainly, evidences indicate that the application of newly learned teaching strategies
is a slow and complex process (Lowther, Ross, & Morrison, 2003; Richardson & Placier, 2001).

Table 1. Instructors’ perceptions on the impact of instructional approach on their teaching

<table>
<thead>
<tr>
<th>Perceptions of instructors and follow-up of the course</th>
<th>Percentage of instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>Instructors felt comfortable with the approach</td>
<td>-</td>
</tr>
<tr>
<td>The approach is supportive for reflective teaching</td>
<td>-</td>
</tr>
<tr>
<td>ELM is transferable to courses in other study fields</td>
<td>-</td>
</tr>
<tr>
<td>The approach is useful to achieve learning goals</td>
<td>-</td>
</tr>
<tr>
<td>The approach facilitates follow-up of students’</td>
<td>-</td>
</tr>
<tr>
<td>performance</td>
<td></td>
</tr>
<tr>
<td>The approach facilitates to provide effective feedback</td>
<td>-</td>
</tr>
<tr>
<td>The approach promotes interaction with instructors</td>
<td>-</td>
</tr>
<tr>
<td>The approach fosters interaction among students</td>
<td>-</td>
</tr>
</tbody>
</table>

N=12

Taking together the “Agree” and “Strongly agree” answers, more than 80% of instructors perceived that the course approach has a positive impact on their students’ skills. These skills include: reflection about learnt concepts, exploring ideas and emotions, and presenting and defending own ideas (see Table 2).

Table 2. Instructors’ perceptions on the impact of instructional approach on students’ learning

<table>
<thead>
<tr>
<th>Perceptions of instructors</th>
<th>Percentage of instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructional approach facilitates to:</td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>reflect about learnt concepts</td>
<td>-</td>
</tr>
<tr>
<td>explore ideas and emotions</td>
<td>-</td>
</tr>
<tr>
<td>present and defend own ideas</td>
<td>-</td>
</tr>
</tbody>
</table>

N=12

By using the focus group, we were able to confirm and expand the findings presented in Tables 1 and 2 into more specific information. For instance, instructors indicated that students have benefited from the way the entrepreneurship course is taught as they demonstrated an improvement on their oral and writing communication skills. In addition, instructors claimed that students evidenced better performance on abilities such as self-reflection, team work, critical thinking, and problem solving. Previous studies have noticed that students usually do not have many opportunities to be self-reflective because of the intensity and time-demanding world of graduate business education (Bird, 2002). The focus group also revealed that instructors found themselves more effective in coaching and planning their class sessions. Nevertheless, the findings evidence to a certain extent a lack of agreement in the usefulness of the proposed course approach to attain learning goals. Indeed, instructors pointed out that some drawbacks to hindering learning goal achievement were the excessive work load for instructors and lack of commitment to finalize assigned tasks by some students. These findings may be explained by the newness for the instructors of the proposed instructional approach. Moreover, students may have experienced some difficulties because this approach has its roots on constructivism, which demands that students learn by doing. Constructivism is generally believed as relatively complex and sophisticated paradigm in that it demands a lot of reflection and meaning making is needed for an educator to feel comfortable with it (Conlon & Simpson, 2003; Spector, 2001; Tato, 1999).
Evaluation of the course

To evaluate training, students were asked to respond to questions on reaction and learning. As presented in Table 3, overall students’ reaction was favorable. In fact, combining the “Agree” and the “Strongly agree” answers, more than 80% of students reported that the entrepreneurship course offered at ESPOL was good and what they expected. Specifically, students indicated that the course met their expectations and attracted their interest in the subject. When required to provide an overall rating, 33.1% of respondents rated the course as good and 62.1% very good. These results are a good indication that the proposed instructional approach is a valid method for teaching entrepreneurship to university students.

Table 3. Evaluation of training by measuring students’ reaction

<table>
<thead>
<tr>
<th>Measurement of students’ reaction</th>
<th>Percentage of students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>Course met my expectations</td>
<td>4.1</td>
</tr>
<tr>
<td>Course material relevant for my personal and/or professional development</td>
<td>4.8</td>
</tr>
<tr>
<td>Audiovisual aids effective</td>
<td>2.1</td>
</tr>
<tr>
<td>Material for homework and activities clear and precise</td>
<td>2.8</td>
</tr>
<tr>
<td>Course approach appropriate</td>
<td>3.4</td>
</tr>
<tr>
<td>Approach attracted my interest in the course</td>
<td>3.4</td>
</tr>
<tr>
<td>Agenda for homework and activities appropriate</td>
<td>4.8</td>
</tr>
<tr>
<td>Good balance between individual and group work</td>
<td>2.1</td>
</tr>
</tbody>
</table>

N= 145

The last section of the study investigated about the students’ perceptions on learning. Students were asked to self-assess the extent to which the course helped them develop relevant entrepreneurial abilities. In general terms, the students’ responses mostly fall under the “Agree” or “Strongly agree” ratings as shown in Table 4. Nearly 50% of students believe to be better prepared to identify business opportunities than at the start of the course. This result is a promising outcome for the entrepreneurship field since identifying business opportunities is viewed as a key step in the entrepreneurial process (Baron, 2004; Lindsay & Craig, 2002; Venkataram, 1997). Similar results were observed for all other items presented in Table 4. Particularly important is the self-perceived ability to evaluate business opportunity, which is a topic closely related to opportunity recognition (Hills & Lumkpin, 1997).

Table 4. Evaluation of training by measuring students’ learning

<table>
<thead>
<tr>
<th>Measurement of students’ learning</th>
<th>Percentage of students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>Students perceive that they are better prepared to:</td>
<td>2.8</td>
</tr>
<tr>
<td>deal with business-related issues</td>
<td>2.8</td>
</tr>
<tr>
<td>cope with uncertainties</td>
<td>2.8</td>
</tr>
<tr>
<td>identify business opportunities</td>
<td>2.1</td>
</tr>
<tr>
<td>evaluate business opportunities</td>
<td>2.1</td>
</tr>
<tr>
<td>make decisions in a business context</td>
<td>3.4</td>
</tr>
<tr>
<td>develop a network of personal contacts</td>
<td>4.8</td>
</tr>
</tbody>
</table>

N= 145

Combining the findings presented in Table 3 and 4, we can realize that the course approach and content were somewhat effective. Said differently, students reacted favorably to the course approach and they perceived that the theoretical and practical issues had meaning for them.
IMPLICATIONS FOR FUTURE RESEARCH

Although more research is needed to validate the findings, the study is worthwhile because it gives initial indications about the effectiveness of the instructional approach proposed in this paper. Moreover, the study gives some clues as to how educators can reorient their efforts and existing practices for outstanding teaching. The positive outcomes reported in this paper enable us to contend that the use of theory-based activities is a valid and suitable approach to teach entrepreneurship for university students. It means that educators are encouraged to include in their teaching in and out-of-class activities to instill in students the development of relevant competencies and an attitude change towards entrepreneurship. Despite of the promising results, a follow up research study is needed for a better understanding of the potential benefits offered by the proposed instructional approach. It is advisable to conduct research to find out the impact of each of the tools and a combination of them on the development of entrepreneurial competencies. By doing so, research should be oriented to quantitatively measure the extent to which students are able to develop specific abilities.

This research study has one main limitation. This limitation is associated to subjectivity because the measures are only based on perceptions. A more objective instrument, for example based on special tests and observations, is clearly needed for more accurate and better interpretations of the findings. Although this study did not implement such measures, the findings presented here are nevertheless still of great value. Educators are called to reflect on their teaching as to possibly adjust their course content and approach to nurture entrepreneurial activity among university students.

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