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BRACING ENTREPRENEURSHIP COURSE IN HIGHER EDUCATION TO BUILD OUR FUTURE ENTREPRENEURS

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Abstract:

Entrepreneurship education seeks to provide students with the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings. Variations of entrepreneurship education are offered at all levels of schooling from primary or secondary schools through graduate university programs. What are the effects of entrepreneurship education on the attitudes and intention of participants toward entrepreneurial behavior? What are the factors (participants profile, teaching models, time . . .) influencing those effects? Both entrepreneurship researchers (Fayolle 2005; Hytti and Kuopusjärvi 2004; Moro, Poli, and Bernardi 2004; Oosterbeek, Van Praag, and Ijsselstein 2010; Peterman and Kennedy 2003; Souitaris, Zerbinati, and Al-Laham 2007) and entrepreneurship education stakeholders (public institutions, academic authorities, teachers, etc.) have been interested in this question for a while, often with a view to validating the efficacy of such programs. What role can entrepreneurship education play, compared with other influencing factors (personal or environmental) that affect entrepreneurial behavior (Lüthje and Franke 2003)? Do the factors that influence entrepreneurial intention and/or behavior (Begley et al. 1997; Matthews and Moser 1995; Scott and Twomey 1988) also influence the predisposition of the participants toward these courses or the persistence of their potential effects? The authors of this paper propose to operationalize the concept of entrepreneurial intention and its antecedents in the entrepreneurial context1 in an attempt to address those issues.

Introduction:

In recent years, the concept of intention and its antecedents have received growing attention in entrepreneurship research for its usefulness in predicting entrepreneurial behavior on the one hand, and understanding how intentions are formed on the other. As an example, Krueger and Carsrud (1993, p. 327) state that "the theory of planned behavior could be a particularly useful tool for researchers seeking to analyse how business plan preparation processes or entrepreneurship training programmes affect entrepreneurial intention." The theory of planned behavior (Ajzen 1991, 2002) is probably one of the most widely used models of intention to this day. Numerous research works have used it to improve our understanding of the entrepreneurial intentions of students (Audet, 2004a, 2004b; Autio et al. 1997; Boissin and Emin 2006; Fayolle and Gailly 2004; Linan 2004; Tkachev and Kolvereid 1999; Tounes 2003) and of other categories of individuals.

In this context, the purpose of this paper is to present and discuss the results of an experiment aimed at measuring the impact of a short and compulsory entrepreneurship education program (EEP) as well as the factors (predispositions, time) influencing this impact. Compared with other research that has studied the impact of six-month entrepreneurship programs chosen by the students and mainly based on the development in teams of new venture business plans (Peterman and Kennedy 2003; Souitaris, Zerbinati, and Al-Laham 2007), our study differently refers to a shorter awareness compulsory course, following the statement of Zhao, Hills, and Seibert (2005), who underlines a gap in the literature and a need to fully evaluate the effectiveness of different types of entrepreneurship programs depending on their key

components (content, design, and delivery). Moreover, our research takes in consideration the mediating effect of previous entrepreneurial exposure and pays attention to the persistence of the impact, both issues that have not been addressed in past research. Our results show that for this type of entrepreneurship program, there is an impact on the chosen indicators only for the students having never been exposed to entrepreneurship and, more interestingly, there is a persistence of this impact six months after the program.

Bracing Entrepreneurship:

Bracing Entrepreneurship course in higher education to build our future entrepreneurs naturally leads to studying the question of its evaluation, which cannot be totally disconnected from that of its pedagogical engineering, both at the design level and at program implementation level (Bechard and Gregoire 2005; Mialaret 2005). Indeed, the evaluation of education programs appears to be a complex question (Dionne 1995; Ng and Feldman 2009; Ostroff 1991), because there are numerous types, objectives, and methods of evaluation. One may, for instance, assess the relevance of a training program (the relation between the needs and expectations of society), its coherence (whether contents, pedagogical resources and means are coherent with the objectives), its efficacy (whether the objectives have been met), and its efficiency (whether the objectives are met and resources optimized). Measuring the efficacy of training programs is probably one of the most widely studied evaluation issues, and it has been done from various perspectives (Baldwin and Ford 1988). For over 30 years, Kirkpatrick's (1959a, 1959b, 1960a, 1960b) works have been the reference in the field (Alliger and Janak 1989). Kirkpatrick's model distinguishes four interlinked levels of evaluation, each serving as a base for the next level. The first level is called "reactions" and measures the general feeling of the participants about the training program on various aspects: the subject, the teacher, the schedule, and so forth. All in all, it measures the degree of satisfaction of the clients/students. The second level, "learning," assesses the skills and techniques acquired as well as attitude changes. The third level, "behavior," studies whether the newly acquired knowledge and skills are being applied or "transferred" by the participants into their day-to-day activities and professional behaviors. The fourth and last level is called "results" and measures the consequences of these behavioral changes in relation to indicators of activity, performance, or productivity. In Kirkpatrick's (1996) model, evaluation becomes more difficult, complex, and costly as it moves from the first level ("reactions") toward the fourth level ("results") but also more precise and more relevant. The first two levels in particular ("reactions" and "learning") are issues that have been more extensively studied in the literature than those linked to "behavior" and "results" (Ostroff 1991)

Several empirical research studies have shown that the availability of entrepreneurship training courses in academic programs combined with a positive image of entrepreneurs within university campuses are two major factors encouraging students to opt for an entrepreneurial career (Autio et al. 1997; Johannisson 1991). As suggested by Tkachev and Kolvereid: "entrepreneurial intentions are determined by factors that may be altered. [...] courses in entrepreneurship, education in small business management and network programmes aimed at changing values, attitudes and norms are likely to have a positive effect" (1999: 279). These studies underline the impact of the university environment on students' attitudes toward entrepreneurship. Some research findings have also highlighted the positive effects on levels of entrepreneurial intention of the number of management electives taken by students enrolled in academic programs other than management (Chen, Greene, and Crick 1998).

Some researchers have tried to compare students' intention and/or behavior within various groups. For instance, Varela and Jimenez (2001), in a longitudinal study, chose groups of students who followed five distinct programs in three Colombian universities. The highest scores regarding the indicators of entrepreneurial intention and a possible entrepreneurial career orientation were observed in the universities that had invested in entrepreneurship support and training. Noel (2001) specifically studied the impact of entrepreneurship training on the development of entrepreneurial intentions and the perception of self-efficacy. All the students in the sample were graduates of entrepreneurship, management, or other disciplines and had enrolled in an EEP. Noel's results partially confirmed the hypotheses that entrepreneurship graduates had a higher level of intention and a better perception of their self efficacy than other students

In short, EEPs seem to influence entrepreneurial intentions and behaviors (Fayolle 2002; Kolvereid and Moen 1997; Lans, Gulikers, and Batterink 2010; Peterman and Kennedy 2003; Souitaris, Zerbinati, and Al-Laham 2007; Tkachev and Kolvereid 1999). In other words, there seem to be significant differences between students who have taken part in EEPs and those who have not. However, it remains to be seen whether and how those results can be generalized to various settings (Zhao, Hills, and Seibert 2005). Furthermore, little is known regarding the potential causal link between some educational variables (participant selection and past exposure, course contents, pedagogical methods, teacher's professional profile, available resources, etc.) and the impact of the EEP on the antecedents of the intention and/or behavior (attitudes, values, skills, etc.).

Finally, attitudes, perceptions, and intentions toward entrepreneurship may vary over time (Bird 1992; Bruyat, 1993; Shook, Priem, and Mcgee 2003). Some authors even claim that evidence of the stability (or persistence) of intention has not been shown (Audet, 2004b; Moreau and Raveleau 2006). Moreover, studies that explicitly take into account the time variable in the field of entrepreneurial intention (Shook, Priem, and Mcgee 2003) or the dynamic of the phenomenon (Moreau and Raveleau 2006) are few and far between. We wish to shed some light on this aspect by measuring the variations in attitudes, perceptions, and intention levels not only immediately after but also six months after the completion of the program. From a general point of view, we believe that the effects of an EEP may erode with time, but we put forward the idea (in this study) that the impact, six months later, can remain relatively strong. From a general perspective, we believe, along with other researchers, that the impact of EEPs in terms of changes in attitudes, perceptions, and intention has received too little attention and deserves to be studied further (Gorman, Hanlon, and King 1997; Krueger and Brazeal 1994; Krueger and Carsrud 1993; Peterman and Kennedy 2003; Souitaris, Zerbinati, and Al-Laham 2007). In particular, recent results such as (Souitaris, Zerbinati, and Al-Laham 2007) focus on programs that were both of long duration and electives. Those approaches might by design suffer from selfselection biases and do not allow discriminating between the impact of the various teaching models mobilized (traditional classes, business cases, testimonies, etc . . .).

Impact of Emulation and Prior Experience

New graduates' behavior and orientations regarding entrepreneurship are influenced by a number of personal and environmental factors. Researchers have thus demonstrated the importance of the social status of entrepreneurial activities and situations in the participant's environment (Begley et al. 1997; Schmitt Rodermund 2004) and the impact cultural values and norms may have on entrepreneurial attitudes,

intention, or behavior (Fayolle, Basso, and Bouchard 2011; Hayton, George, and Zahra 2002; Turker and Sonmez Selcuk 2008). The role of close relatives in particular as models to emulate (role models) in opting for a selfemployed career has been demonstrated empirically (Matthews and Moser 1995; Scott and Twomey 1988). Furthermore, Shapero and Sokol (1982) have demonstrated that family, chiefly the mother and father, plays an important role in developing the perception of feasibility and desirability of entrepreneurial initiatives. Scott and Twomey (1988) have observed that individuals whose parents own (or have owned at some point in their life) a small business express the strongest preference for self-employment and, conversely, the least preference for an employed situation in a large firm. Matthews and Moser (1995, 1996) have identified a significant relationship between the presence of family role models and the level of entrepreneurial intention.

Prior entrepreneurial experience also appears as a factor likely to influence entrepreneurial intention (Hills and Welsch 1986; Kent et al. 1982). Entrepreneurial experience here may correspond to four types of entrepreneurial exposure: a concrete entrepreneurial experience within the family of the individual, that of a relative or a close friend, a past or present job experience in a small firm, and finally, having started his or her own business (Krueger 1993). This definition thus includes the emulation of close relatives or friends. Krueger (1993) includes, in his research, the quantitative (breadth) and qualitative importance (positiveness) of these experiences and finds significant links between prior entrepreneurial exposure and the antecedents of entrepreneurial intention. His results are substantially supported by Peterman and Kennedy's (2003) research based on a sample of high school students in Australia or by Tkachev and Kolvereid's (1999) study concerning Russian students. In the French context, Fayolle (1996) underlined the existence of significant correlations between engineers' entrepreneurial intention and behavior and such factors as taking part in setting up or managing a student organization, or even living abroad for a certain period of time (at least six months). The studies mentioned previously highlight the important role that prior entrepreneurial experience plays with respect to the antecedents of intention and the level of entrepreneurial intention. Little is known, however, regarding how prior entrepreneurial experience affects how participants to an EEP are influenced by that EEP. The question remains therefore open as whether there is a "virtuous circle" effect, where highly "aware" students attending an EEP (in particular an elective one) will benefit disproportionally from it, or whether there are some compensation/saturation effects, where highly exposed students will be marginally, or even negatively affected by EEP, whereas less "aware" students (e.g., attending a compulsory course) could be very positively impacted. We can indeed expect that an EEP aimed at "average" students could "push" positively students with a lower prior exposure to entrepreneurship and hence a lower initial intention while simultaneously "pulling" down those with a higher initial level of intention.

Over recent years, interest in entrepreneurship education has grown because of the belief in its contributions to improving innovation in organizations and promoting the creation of new companies and jobs, which strengthen social, economic, and regional development (Fayolle, Gailly, and Lassas-Clerc 2006; Guerra and Grazziotin 2010; Lanero et al. 2011). For this reason, higher education institutions have been impelled to create environments, activities, and courses in the field. In association with that evolution, entrepreneurship in general has achieved a respectable academic space supported by more than 40 academic journals. Among them, special issues have been written on entrepreneurship education, such as the July 2013 issue of the Journal of

Small Business Management and the July 2005 issue of Entrepreneurship: Theory and Practice. However, the search for empirical evidence concerning the effects of entrepreneurship education is still necessary. Von Graevenitz, Harhoff, and Weber (2010) state that the work in the field is still weak. The studies on the effects of entrepreneurship education are somewhat inconclusive. There are two main streams of research results. The first and predominant one indicates that entrepreneurship education magnifies the development of entrepreneurial intention and belief of being capable of successfully performing the roles and tasks of an entrepreneur (entrepreneurial self-efficacy; according to Chen, Greene, and Crick 1998). The second one, however, demonstrates indifference (lack of effects) or diminishing effects of entrepreneurship education, and initiatives related to it, on entrepreneurial intention and perceived competencies for entrepreneurship

First Stream of Results: Magnifying Effects According to Alvarez and Busenitz (2004), if universities do not offer entrepreneurship education, students will be less likely to become entrepreneurs. This lack of offering leads to a low level of student entrepreneurial intention (Franke and Luthje 2004). In fact, Peterman and Kennedy (2003) present evidence that students' contact with entrepreneurship awakens or strengthens their desire to create new businesses. In addition, higher education focusing on entrepreneurship helps to develop positive attitudes about entrepreneurship as a career choice (Kourilsky and Walstad 1998; Peterman and Kennedy 2003). Entrepreneurship education also has a positive effect on the perceived feasibility of entrepreneurship or on entrepreneurial self-efficacy (Wilson, Kickul, and Marlino 2007). Thus, even if students do not plan on having their own businesses, they can benefit from the development of entrepreneurial knowledge and competencies. Entrepreneurship education enhances student self-efficacy in entrepreneurship, offering them role models, social persuasion, experience of mastery, and support involving hands-on activities, business planning, and simulated or real operation of a small business (Segal, Borgia, and Schoenfeld 2005 in Pihie 2009).

Second Stream of Results: Lack of Effects and Diminishing Effects On the other hand, Souitaris, Zerbinati, and Al-Laham (2007) describe initiatives' lack of impact on the desirability and attitudes toward entrepreneurship. In a different study evaluating an entrepreneurship teaching program, Fayolle, Gailly, and Lassas-Clerc (2006) notice a reduction in entrepreneurial intention for students having previous knowledge in entrepreneurship. Studying another program, Oosterbeek, van Praag, and Ijssel stein (2010) remark that the program did not have the intended results: the effect on students' self-assessed entrepreneurial skills was insignificant, and it was even negative on entrepreneurial intention. Complementarily, von Graevenitz, Harhoff, and Weber (2010) show that entrepreneurial intentions somewhat decrease instead of magnify effects on student's self-assessed entrepreneurial skills. With the second stream of results, some critiques should be considered. Lautenschläger and Haase (2011) note that entrepreneurship education is not a precondition for more entrepreneurs to start and grow new firms. They question the way in which entrepreneurship education is currently offered at universities based on the rational-oriented educational system, which does not promote creativity, opportunity recognition, and problem-solving abilities. For them, this type of system causes deficits in the entrepreneurial intention and abilities of young people. This criticism emphasizes a potential relation: The lack of effects and/or the diminishing effects of entrepreneurship education may be associated with problems in quality and content. If the entrepreneurship education is inappropriate for the students, the intended results tend not to come.

Entrepreneurial Intention Previous studies on the factors that influence people in their entrepreneurial career preferences or choices center on demographic and personal variables and on the context in which these people live. However, the factors offer but a poor explanation as they are far from the behavior they should explain (Rauch and Frese 2000). The studies also indicate that personal and situational characteristics are not sufficient for predicting entrepreneurial behavior. This reaffirms the importance of understanding entrepreneurial intentions (Krueger, Reilly, and Carsrud 2000). One of the most important models used in academic research on entrepreneurial intention is the theory of planned behavior (TPB) (Ajzen 1991, 2002; Fishbein and Ajzen 1975). All human action depends on a dose of planning, even if minimal, and intention precedes action; intention is a predictor of action (Fishbein and Ajzen 1975). Our study uses the TPB model. Its utility has been justified by its contributions in many empirical studies on entrepreneurship in higher education (Fayolle, Gailly, and Lassas-Clerc 2006; Liñán and Chen 2009; Miller et al. 2009; Souitaris, Zerbinati, and Al-Laham 2007; Tran 2011). Furthermore, this model is used in the 2011 international Global University Entrepreneurial Spirit Students' Survey (GUESSS; http://www.guesssurvey.com) that we took as reference to offer a better understanding of the 2011 Brazilian GUESSS (http://www .guesssbrasil.org) statistics on which our study is based. Lima et al. (2011) describe this Brazilian study in detail. Although the TPB model has confirmed usefulness as a predictor of future entrepreneurial behavior, it has been criticized because entrepreneurial intention does not ensure that the potential entrepreneur will effectively become an entrepreneur. Therefore, the TPB produces more contributions for understanding the formation of entrepreneurial intentions than the transition to entrepreneurial action (Tran 2011). It allows for studying and understanding the different attitudes that underlie entrepreneurial intention.

The elements in the figure may be described as follows:

- ✓ The attitudes refer to the evaluation of the entrepreneurial idea, whether favorable or not, made by the actor in question.
- ✓ The subjective norms relate to the perception of social pressure, whether favorable or not, of people important to the actor in question about whether or not he or she may perform a behavior concerning his or her entrepreneurial idea.
- ✓ The perceived behavioral control concerns the perception of the difficulty or ease of developing a behavior, taking into account past experiences, deficiencies, and obstacles. Thus, it is related to the feeling of entrepreneurial capability and also to the person's perceived degree of control over his or her behavior to act in an entrepreneurial way.

Possible Improvements Based on Student Perception Student perception and evaluation is acquiring recognition as an important perspective to be considered in initiatives for improving education, primarily when complemented by the opinions of experts and teachers/professors (Ackerman, Gross, and Vigneron 2009; Lam 2006; Provençal 2012), as we do in this paper. According to Provençal (2012), faculty, administrators, and students share the criticism of seeing student evaluation of teaching and courses as little more than a "fire alarm" function—when it is used ineffectively, which is common in universities (Edström 2008). With this function, it would be useful only in emergencies when students indicate a significant problem that requires fast and important corrections. However, when it is developed and well employed, it presents important benefits: "[1] Students know best what was effective for their learning; [2]

Students observe the whole class; [3] Student samples are larger [than is the case with peer evaluation, for example]" (Ackerman, Gross, and Vigneron 2009, in Provençal 2012, p. 16). It is also important to consider that "there are generally high correlations between students' and faculty members' evaluations of teaching" (Goldstein and Benassi 2006 in Provençal 2012, p. 16). According to Perrin (2009), to improve education, "we need to involve our students. Many students know what they need for their professional development even better than we [teachers and professors] do. They have time for research and intimate contact with the realities of their profession and their daily lives" (p. 2). There are very few studies based on what improvements in entrepreneurship education are required from a student perspective. It is much more common to find studies in which the sources are professors/teachers or experts. Here is an exception. Gasse and Tremblay (2011) compared the results of a 2,053-student-sample study, composed of Management and Engineering students, from seven different countries: Canada (Quebec Province), Tunisia, France, Romania, England, Colombia, and Germany. The contribution of the general system of education for entrepreneurship development was only highlighted by the students from Colombia and Germany (57 and 61 percent, respectively). However, concerning the general contribution of academic activities to encourage entrepreneurship, all groups indicated that projects, initiatives, simulations, internships, and work experiences helped (between 79 and 95 percent). When asked specifically about the contribution of entrepreneurship courses offered for the development of entrepreneurial spirit, the numbers declined substantially to between 20 and 40 percent. Colombian students were the exception: 82 percent responded that the courses stimulated and helped them to develop entrepreneurial spirit. In short, the general result of the research by Gasse and Tremblay (2011) shows little perceived contribution of courses on entrepreneurship and strong perceived usefulness in entrepreneurial preparation from activities requiring student participation and practical activities.

Discussion

Experiential entrepreneurship education uses real-world experience to teach new business creation, and participants learn via immersion into business challenges. Instead of focusing on a set of concepts or terms, it teaches a problem solving methodology that can be applied to a range of business settings. This methodology is more robust than theoretical education, which often cannot anticipate the highly variable nature of business creation. While results have been initially promising, further investigation is needed to better understand the comprehensive impact of experiential programming for entrepreneurship education

Based on empirical research and a moderate review of the literature, its objective is to generate contributions for enhancing Brazilian entrepreneurship education. The analysis of entrepreneurial intention and students' demand, including the tests of the three hypotheses, is intermediary to attaining this goal. For Brazil, the results clearly show high entrepreneurial intention and demand for entrepreneurship education at universities and colleges. Both are considerably higher compared with the international results. These results are complementary to and convergent with the Brazilian 13.38 percent average for the GEM index of entrepreneurial activity for the period from 2002 to 2010, which is higher than the international average for the same period (Greco et al. 2010). Curiously, the tests of hypotheses suggest that entrepreneurial intention negatively affects the demand. Nevertheless, one must remember a fact demonstrated by Figures 4 and 5: the lower the entrepreneurial intention, the greater the number of students. In other words, the highest level of

demand in Brazil primarily comes from nonpotential entrepreneurs, from the 51.1 percent of the respondents not included in

Figure 4, and from the 10.8 percent of the total sample who answered "nothing done so far" (this percentage is considered in Figure 4). As Liñán (2007) sustains, for this majority of students, "entrepreneurship education should integrate substantial 'awareness' contents" (p. 244). Education for starting-up, based predominantly on business planning, should be directed to "individuals already having a high level of intention, and having identified a viable business opportunity, to take the specific steps to start their venture" (p. 244). Combined with the high and much diversified student demand—not restricted to business planning— this highlights a considerable gap in Brazilian entrepreneurship education, which has always been concentrated on business planning (Degen 2009; Guerra and Grazziotin 2010). Thus, this also underscores the importance of increasing and diversifying entrepreneurship education beyond business planning (Challenges 1 and 5). For Liñán (2007), "Only then would the supply of potential entrepreneurs in a society be significantly increased" (p. 244). Table 1 shows that diversification in offerings is a student demand (convergent with Challenge 5), as is greater proximity to and contact with entrepreneurs and their reality (convergent with Challenge 3). This aligns with Neck and Greene's (2011) criticism of the current emphasis on prediction and business planning for new businesses. For them, the priority must be learning a method of entrepreneurship, which primarily depends on practical activities (convergent with Challenge 4). The importance of overcoming the challenges of fostering learning through practice and relations—apparently the main one among those presented here—is also emphasized by other authors (European Commission 2008; McCoshan et al. 2010; Surlemont and Kearney 2009).

In a future project to reach this desirable mode of entrepreneurship education in Brazil, much would be needed to train more professors and teachers (Challenge 2), as sustained by Lima and Rodrigues (2008). According to them, Brazil has made an important advancement in the first phase of developing entrepreneurship education—its insertion and diffusion in the country. However, training professors/ teachers, as well as improving Brazilian studies on entrepreneurship, is still a challenge to be overcome. If these challenges cause some concern, the problem can be intensified when considering the counter effects of entrepreneurship education on entrepreneurial intention and perceived entrepreneurial self-efficacy (results of the test of H1 and H2) in spite of students' good evaluations of education quality. However, the effects are not necessarily harmful. A possible explanation for these results is a sorting process, in which entrepreneurship education makes students more conscious about what an entrepreneurial career is and what it would demand of them. This consciousness could help them determine more clearly the attractiveness of having a business. The fact that Brazil has a higher entrepreneurial intention among students in comparison with other countries may possibly cause a greater need for adjustment of their career intentions to a more realistic perspective. This is another possible explanation for entrepreneurship education's counter effects in Brazil, whereas studies of other countries tend to show positive effects. In the end, the informative signals students may receive from entrepreneurship education about their entrepreneurial aptitude, even if diminishing entrepreneurial intention, can be beneficial for students and society (von Graevenitz, Harhoff, and Weber 2010). Surely, as sustained by these last authors, entrepreneurship education should not convince those not suited to having a business to choose an entrepreneurial career. Nevertheless, it is important to understand precisely what determines results such as those of the test of H1 and H2 and if the determinants in

question are beneficial or not. To do so in future studies, some questions should be answered: Specifically which courses and activities in entrepreneurship are students taking? What are their contents, pedagogical approaches, and pedagogical methods? What are the effects of each one? Considering Lautenschläger and Haase's (2011) criticism of the current rational-oriented entrepreneurship education, are their contents, pedagogical approaches, and pedagogical methods appropriate for the students? What are the specificities of Brazil and its universities and their impact on entrepreneurial intention and selfefficacy? These questions bring to mind the complex nature of entrepreneurship education, whose characteristics include a great variety of approaches and practices rather than uniformity. This complexity is one of the main diffi- culties for research in the field and seems to be an important determinant for the existence of the two inconclusive streams of research results presented in this paper.

Conclusion:

Universities and colleges can always do more to provide quality assistance in fomenting students' entrepreneurial intention and good career choice, in general. As sustained by contemporary literature, the ideal would be to offer an experiential context to test entrepreneurial ideas with the support of professors and teachers, practitioners, and other well-prepared collaborators. One of the students' demands points to this type of improvement. The 66.5 percent of Brazilian students who have already developed their first entrepreneurial ideas could benefit particularly from this type of initiative. Instead of the imprecisions about the nature and consequences of the aforementioned counter effects, some opportunities drafted in this paper could facilitate the task of overcoming the challenges to improve entrepreneurship education:

- ✓ The propitiousness of students' positive attitudes and high demand for entrepreneurship education; such an opportunity seems especially attractive to private colleges and universities, more directly dependent on meeting the demands of their tuition-paying students.
- ✓ The improvement potential offered by the growing dynamic academic context and professor/teacher interactions, which foments frequent conferences, meetings, and studies dedicated to entrepreneurship and small business
- ✓ The possibility of improving entrepreneurship education through the exchange of experience between higher education professors, teachers, and directors in conferences

Taking advantage of these opportunities to overcome the five challenges cited could have a positive impact on the careers of many students. Over the medium and long terms, they could even have beneficial impacts on the development of the country, as suggested by the UNCTAD Secretariat Report (UNCTAD Secretariat 2011). Given the potential benefits of the opportunities, their exploitation deserves the attention of students, teachers, professors, researchers, university directors, the government, entrepreneurs, and society in general. For example, these opportunities could be of interest to directors of universities looking to improve higher education by offering courses and activities such as those in Table 1. Our study presents a number of helpful elements to be taken in consideration for this. Entrepreneurship centers have an important role to play at colleges and universities in improving entrepreneurship-related offerings and other activities. One fundamental reason is that their purpose is to promote interest in the theme through lectures, workshops, and other strategies, and also provide practical activities and relationship networks to fortify entrepreneurship among students, professors, and teachers. In fact, it is common for these centers to have links with business incubators and established entrepreneurs to take their role even

further. Thus, the idea of creating or improving such centers seems attractive. Some suggestions can also be made for new studies in the field:

- ✓ More studies focused on comparing institutions, both nationally and internationally, could identify and promote the use of best practices.
- ✓ More in-depth studies of one or a few institutions could recommend contextualized precise improvements for them. This suggestion is not limited to Brazil.
- ✓ Further academic research on precisely what it means to be an entrepreneur in Brazil and what is required to be a successful entrepreneur in Brazil would help align educational offerings with the national, economic, social, and cultural contexts. Finally, entrepreneurship and business creation are closely related to the administration of micro and small businesses. After all, the requirements for creating a business are inextricably linked with business management—a task that many believe would be facilitated by improving education with special attention to micro and small businesses (CFA 2006). Thus, expanding and improving course and activity offerings related to entrepreneurship in higher education needs to include micro and small business administration, as the literature and the students' demand also indicate.

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