

# **Understanding The Teaching Goals of Entrepreneurship Instructors: An Exploratory Approach in Search of Effectiveness**

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## **Abstract**

This paper aims to explore what entrepreneurship instructors expect students to learn from their teaching. Findings suggest that the instructors studied pursued three types of teaching goals. Some tried to teach how to start a successful new venture. Others sought to teach how to succeed in the corporate world using entrepreneurial skills, while a third group aimed to develop awareness about business as a legitimate career path. Whilst they overlap, these three types of teaching goals have important implications in terms of the pre-selection of students and types of teaching methods employed. Therefore, before measuring their effectiveness, it is important to understand the specific learning goals that entrepreneurship instructors have in mind.

## **Introduction**

Interest in management education certainly pre-dates the founding of the journal *The Academy of Management Learning and Education* over twelve years ago, as demonstrated by Currie and Pandher (2013) in their analysis of over 90 management education journals. However, interest in how to teach entrepreneurship has only recently become the focus of

research studies. The only journal in the Currie and Pandher (2013) analysis dedicated to entrepreneurship is the *International Journal of Entrepreneurship Education*, which was ranked towards the middle of their sample in terms of both quality and impact. While other disciplines have numerous journals devoted to education (accounting, finance, case teaching, international business, marketing, and economics), entrepreneurship is a relative newcomer to this line of research in terms of having its own dedicated journal, although *The Academy of Management Learning and Education*, *Journal of Small Business Management* and *Entrepreneurship: Theory and Practice* have all published articles and special issues on entrepreneurship education.

This general lack of interest in research into teaching entrepreneurship has occurred despite the fact that entrepreneurship courses within higher education have experienced a remarkable expansion in the last 20 years (Green and Rice, 2007). Babson College, Stanford University and University of Florida host programs for training university professors to teach entrepreneurship, but the vast majority of those teaching entrepreneurship have not been formally trained to do so. Research into the impact of entrepreneurship education on outcomes like new venture creation has revealed disappointing results. One such study showed no clear relationship between entrepreneurship education (EE), learning outcomes, and business creation (von Graevenitz, Harhoff, and Weber, 2010).

The purpose of this study was to use empirical data to describe the learning objectives of eight entrepreneurship instructors. Asking instructors about what they want to teach implies reflection about teaching practice. Reflection is different to thought, belief and imagination (Dewey, 1933). Reflection involves becoming aware of the assumptions that guide the practice. Assumptions are the taken-for-granted beliefs about how the world works (Brookfield, 1995). In entrepreneurship education, the creation of a business is commonly assumed to be the learning

goal of a course. However, we cannot make that assumption about until we have tested them empirically.

Before making any appraisal about the effectiveness of an entrepreneurship education program, it is important to understand the teaching goals of educators and the rationale behind these goals. The following extract from a 2008 AMLE article provides a good example of the typical underlying assumption of what entrepreneurial training is about: “*Entrepreneurship course material is intended to encourage and stimulate the creation of new ventures (Vesper & Gartner, 1997; Leitch & Harrison, 1999; Peterman & Kennedy, 2003). However, there is little evidence to indicate whether we are actually teaching the skills most important to future entrepreneurs. In other words, are we teaching our students the necessary activities that enhance the probability of start-up?*” (Edelman, Manolova, and Brush, 2008, p.2). In the paper from which this example was extracted, Edelman, Manolova, and Brush analyze textbooks taking for granted that entrepreneurship instructors teach how to create businesses. The purpose of this paper is to explore at what extent the creation of a business is the goal of entrepreneurship education.

### **Teaching Goals in Entrepreneurship Education**

Early on Garavan and O’Cinneide, (1994) posited that the teaching goals for entrepreneurship education should be to undo the risk-adverse bias of analytical techniques, develop empathy for the unique aspects of entrepreneurship, encourage a positive attitude toward change, and stimulate entrepreneurial intention. Garavan and O’Cinneide (1994) differentiated between education for business creation and education for existing businesses.

In regards to education for existing small businesses, three subtypes of business education are distinguishable: (a) *small business awareness*, which aims to increase the number

of people who are sufficiently knowledgeable about small business to consider it an option at some point in life; (b) *small business education*, which aims to provide practical help to those seeking to make the transition toward self-employment; and (c) *continuing small business education*, which is designed to enable people to enhance and update their skills to run a business (Garavan and O’Cinneide, 1994). These are not unlike the earlier categories of Jamieson (1984).

Béchar and Toulouse (1998) identified four types of general teaching goals for entrepreneurship education: (a) entrepreneurship awareness, (b) business creation, (c) small business development and (d) training of trainers. Entrepreneurship awareness provides general information about business creation and asks the audience to reflect on entrepreneurship as a career. Business creation programs train students in technical, human, and managerial skills to create a business. Small business development programs usually are created to match specific learning needs of existing small business owners. Train the trainers’ type of programs teaches education skills. Some programs are more geared to those teaching the new venture creation process and managing growth. These are something that Babson College and Oklahoma State University have been doing for new teaching faculty in entrepreneurship for a number of years and are heavily dependent on the case method as a teaching tool. The REE program at Stanford University clearly took a different approach to teaching faculty because of the nature of the faculty participants from engineering schools. Stanford focused more on creativity, technology, and product development than do the more business school oriented programs.

With this diversity in training programs one might expect to see some discussion in the research literature on what a core curriculum should contain in entrepreneurship. Interestingly, there is little consistency about what teaching goals should be accomplished in the literature. Most instructors reporting their teaching activities do not state what they are trying to accomplish

through their classes. Even though previous work on entrepreneurship education has pointed out the existence of several possible teaching goals in entrepreneurship courses (i.e. Béchar and Toulouse, 1998; Garavan and O’Cinneide, 1994; Hills, 1988), most articles simply describe what they did without further consideration of the goals behind the teaching activities described (e.g. Shepherd, 2004, Mustar, 2009).

In the past decade, some studies (i.e., Finkle, Kuratko, and Goldsby, 2006; Weaver, Dickson, and Solomon, 2005) have attempted to depict what is the state of the art in entrepreneurship education. In 2006, Finkle surveyed 94 entrepreneurship programs in United States to know what courses were included in those entrepreneurship programs. While the Business Plan class was taught in most entrepreneurship programs (Finkle, 2006), there is still a question about whether the content under that course’s name were similar across instructors. A Business Plan Development course is designed to help students to develop an effective written implementation plan for a new business venture. The course deals, in general, with the critical decisions and actions that entrepreneurs must make in both planning and executing a new venture (Finkle, 2006). However, it should be noted that the sample of programs came primarily from those in university business schools. Recently there has been a move away from business plan classes to feasibility studies and from business plan competitions to elevator pitch events.

Different learning needs are common among entrepreneurship students. Gorman, Hanlon, and King, (1997) realized that each course targeted different learning needs of students. Indeed, the “underlying assumption for using audience segmentation was that educational objectives, subject matter and pedagogical approach might be expected to vary depending on the nature of the target audience” (Gorman et al., 1997, p. 56). Henry, Hill, and Leitch (2005) also proposed to categorize entrepreneurship education according to the learning needs of students.

## **Interdisciplinary: Good or Bad?**

Typically an introductory course in entrepreneurship lacks the uniform structure that one would find in a capstone business strategy class, much less to introductory courses in the physical or social sciences. Certainly having one or two textbooks that dominate course offerings contribute to the uniformity as does AACSB standards. However, some in the field believe this is because entrepreneurship professors come from diverse backgrounds, have diverse teaching goals and radically different teaching methods which are an obstacle to development of foundational and consistent curricula across the field (Cone, 2008).

Fiet (2000) thinks that an important reason underlying the different learning goals in entrepreneurship courses is varied training and experience instructors have and the eclectic and interdisciplinary nature of entrepreneurship as a discipline. Most topics included in entrepreneurship education come from the established literature of other disciplines (Dickson, Solomon, and Weaver, 2008; Fiet, 2000; van der Sluis, van Praag, and Vijverberg, 2008) and rapidly entrepreneurship is being found in universities outside business schools (Boni, Weingart, and Evenson, 2009; Mustar, 2009). Leadership is clearly one of those topics as are team development, financing, and marketing. The problem with pulling from existing disciplines is that most of what they teach is based on work with large firms or non-entrepreneurial based research. Almost every entrepreneurship professor will attest, a new venture is not a miniature large firm, beyond that agreement on what should be taught is generally lacking.

An illustration of the interdisciplinary nature of entrepreneurship may be useful. In 2000 Professor Fiet gathered 18 instructors at the Rensselaer Polytechnic Institute to discuss the learning aspects of entrepreneurship education. Six topical areas were identified as the content usually included in entrepreneurship classes: strategy/competitive analysis, managing growth,

discovery/idea generation, risk and rationality, financing, and creativity. Three possible elements influence instructors' selection of content: academic autobiography or background, lack of theoretical rigor in the field, and existing entrepreneurship textbooks (Fiet, 2000).

Entrepreneurship educators and business school deans have been the subject of several studies over the years. Hills (1988) surveyed 15 entrepreneurship educators in the U.S. to identify which objectives in entrepreneurship education they pursue. He found that entrepreneurship educators propose two major objectives: increase awareness of entrepreneurship as a career option and increase understanding of the process of creating a new business. Later on, Vesper and Gartner (1997) found that the standard entrepreneurship teaching methods in 1994 were cases, guest speakers, lecturing, texts, and the writing of business plans.

These approaches tend to still be the dominant approaches some 20 years later if one looks at how professors are taught in both the Babson College and Oklahoma State University programs for new professors. Even the highly acclaimed Roundtable for Entrepreneurship Education for Engineers (REE) run by Stanford's engineering school for over a decade focusing on engineering professors still relied on some of the same general approaches used in university business schools. It did, however, have a greater focus on creativity and product development exercises as a part of the training provided STEM subject professors interested in entrepreneurship education.

### ***A General Model for Teaching***

The conceptual framework for this study was derived from concepts and theories from education literature related to how teachers reflect on their practice. The General Model for Teaching is an organizing framework for decisions made when teaching adults (Pratt, 1998). As educators show greater or lesser commitment to specific elements and relationships present in

the teaching process, instructors adopt different perspectives to teach. A teacher perspective is “an inter-related set of beliefs and intentions related to knowledge, learning and the role of a teacher. It is a lens through which we view our work as educators” (Pratt, 2005, p.3). Instructors’ commitment to specific elements combined in the classroom affect instruction planning and implementation (Pratt, 1998). For instance, an instructor more committed to the learners will be more focused on helping students to gain confidence and will prepare them for life’s challenges. An instructor committed to the context would consider that significant learning only happens when learning is applied to the real world (Pratt, 2005). An instructor committed to the discipline will seek students to manage the basic jargon of that specific discipline. Pratt (2005) labels as *intentions* what the instructor is trying to accomplish and *beliefs* the statements of why those *intentions* are reasonable, important, or justifiable. Understanding instructors’ intentions and beliefs contributes to understanding what frames the teaching process and is a prerequisite before designing assessments of the teaching practice (Pratt, 1998).

Because peers influence beliefs, the discipline in which an instructor is trained has been found to influence the way how an instructor teaches. Teachers of a given discipline share a value system with respect to instructional goals that is significantly different from that of colleges in other disciplines (Angelo & Cross, 1993). Barnes (1998) and Pratt (2004) have found that, depending on the discipline instructors are trained, there are differences in the teaching goals that instructors considered most important.

On the other hand, whether instructors are starting, ending or are in the middle of their careers have also shown to influence instructors’ belief about their role as teachers. Prospective elementary teachers beginning their introductory education were found to believe that teaching consists of reproducing what the teacher tells you (Feiman-Nemser, 1988). Instructors entering

secondary teacher preparation were convinced that good instructors should treat their students like family, emphasizing affective and interpersonal aspects over content knowledge (Rathbone & Pierce, 1989). Leverenz and Lewis (1981) found that faculties whose educational background and professional activities are in a different field from their teaching assignment are primarily concerned with preparing students for life situations. Disciplinary background and seniority as teacher seems to influence teaching practice at some extent.

### **Research Method**

As this is an exploratory study, a multiple case study design was deemed most appropriate to facilitate an in-depth understanding of instructors' perspectives and actions related to their selection of goals. The population for this study consisted of North American college and university instructors who teach entrepreneurship. In order to obtain a wide range of instructors with varied experience, one of the most cited authors in entrepreneurship (according to Reader and Watkins, 2006), acted as key informant to locate potential participants. This individual has served as a center director, academic coordinator, program developer, and research professor at a number of major public universities in business and engineering schools.

### ***Sample***

Criterion sampling was used to select the sample. Criterion sampling involves selecting cases that meet predetermined criteria of importance (Patton, 2001). The criteria for inclusion in this study were (a) teaching at least one entrepreneurship course in one academic year, (b) teaching either at an engineering school or at a business school, and (c) holding a terminal degree. A criterion for exclusion was teaching only at the doctoral level. Instructors teaching at doctoral level were excluded because most doctoral programs are designed to develop research skills and not entrepreneurial skills. Instructors in the sample were active as teachers and not

solely as administrators.

Eight cases were included: four instructors who taught entrepreneurship at a business school and four instructors who taught entrepreneurship at an engineering school. Despite the fact that all instructors in the sample taught entrepreneurship at institutions of higher education, all had a unique combination of characteristics in terms of teaching experience, entrepreneurial experience, and home departments. All instructors teach entrepreneurship in American universities and hold doctoral degrees. Cases are identified using pseudonyms: Daniel, Donna, Mary, Ken, Selma, Bob, Hector, and Kathy. Table 1 presents the case number, pseudonyms, teaching appointment, years of experience and whether the instructor has entrepreneurial experience. For instance, Daniel is an entrepreneurship instructor teaching at a business school who has more than ten years of teaching experience.

Table 1: Sample

Pseudonym	Engineering school	Business school	+ 10 years of teaching exp.	E-ship. Experience
Daniel	No	Yes	Yes	Yes
Donna	No	Yes	No	Yes
Mary	No	Yes	Yes	No
Ken	No	Yes	No	No
Selma	Yes	No	Yes	Yes
Bob	Yes	No	No	Yes
Hector	Yes	No	Yes	No
Kathy	Yes	No	No	No

### ***Source of Data***

Three types of data were collected: syllabi, interviews and an inventory about teaching goal. The syllabi were collected to compare the goals reported on the interview. Interviews were recorded, transcribed and coded to explore teaching goals pursued by instructors. A survey, The Teaching Goal Inventory (TGI) was collected and scored. The TGI helps to identify and

categorize instructors into six goal clusters: (a) higher order thinking skills, (b) basic academic success skills, (c) discipline specific knowledge and skills, (d) liberal arts and academic values, (e) work and career preparation, and (f) personal development. Angelo and Cross, (1993) developed the TGI to help instructors to clarify their goals. The inventory consists of 51 goal statements assessed using a Likert scale with a range of 1 (not applicable: a goal you never try to achieve) to 5 (essential: a goal you always/nearly always try to achieve). The statements are broadly expressed to be applied across disciplines. Instructors using the TGI evaluate goals according to the importance these goals have in a specific class.

### ***Data analysis***

During interviews, participants were asked about their definitions of entrepreneurship, educational programs, their professional backgrounds, work experiences, beliefs about entrepreneurial learning, and how they select teaching goals for an entrepreneurship course. To prepare interviews for data analysis, a frame of codes was created from the interviews. To develop a coding system and prepare the material for case analysis, several steps were followed. First, before each interview, instructor's CV and syllabi were coded and the TGI scored. The objective of coding the CVs and syllabi before the interviews was to know something about the instructors and refine the interview if needed to explore instructor perceptions more efficiently.

After documents were coded and the TGI scored, documents and TGI were analyzed to explore how TGI scores, syllabi's goals, professors' backgrounds (CVs), and answers related each to other. Preliminary codes emerged before the interviews, which constituted the first step. Second, interviews were transcribed and analyzed. New codes emerged from this second step. Third, each case was constructed of all data collected. Fourth, the codes from steps one and two were used to analyze the cases. In the fifth step codes were clarified and some redefined, and

others collapsed into other codes for each case separately. Cross case analysis was done in groups. The groups were business faculty, engineering faculty, entrepreneurship experience, no entrepreneurship experience, and length of teaching experience (more and less than 10 years).

***Validation***

In order to establish and improve both construct and internal validity, the study used different data (interviews, surveys, and syllabi) (Merriam, 2002; Yin, 2003). In addition, rich descriptions of the participants and their experiences were provided to achieve external validity (Berg, 2001). These rich descriptions allowed the transfer of findings to other contexts. Finally, findings were compared with previous literature about how instructors selected teaching goals in other educational settings. Because this is a qualitative study, the intention was to be descriptive about the eight cases rather than to generalize to all entrepreneurship instructors in the United States. The validation approach used is one adopted by most studies using case studies.

**Results**

The TGI showed that higher order thinking skills (36 points average on TPI across cases), work and career preparation (31.9 points average on TPI across cases), and personal development (30 points average on TPI across cases), received the highest scores from the instructors in the sample. Table two provides a summary of teaching goals based on the TGI.

Higher order thinking skills (HOTS) and Work and career preparation (WCP) not only received the highest scores but also the lowest standard deviation. There was consistency among instructors related to the relevance of HOTS and WCP goals.

Table 2: TGI Scores by clusters

Instructors	Higher order thinking skills	Basic academic success skills	Discipline specific knowledge and skills	Liberal arts and academic values	Work and career preparation	Personal development
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Selma	39	31	27	30	32	36
Kathy	40	45	40	48	40	45
Ken	33	9	29	28	33	31
Donna	36	20	30	25	31	25
Mary	34	30	23	22	34	32
Daniel	29	20	21	27	32	26
Bob	39	18	25	26	22	25
Hector	38	22	25	26	29	27
Instructors' score average per item	36,0	24,4	27,5	29,0	31,9	30,0
Standard Deviation	3,8	10,8	5,9	9,7	5,1	6,8

### Summary of Teaching Goals Based on Interviews and Syllabi

The interviews suggested that Hector and Bob expected to teach students how to start a business. Daniel, Selma and Kathy reported to have as a major goal to motivate and inspire students, showing them that entrepreneurship is a legitimate career path. Donna, Mary, and Ken emphasized the development of entrepreneurial skills to outperform others in the corporate world.

Instructors	
Selma	<i>It is about giving [the students] the confidence that they can come up with a creative solution to a problem and giving them all the levers so they have to increase creativity in themselves, in their teams and in their organizations (Selma, 118-124).</i>
Kathy	<i>I want them to first of all get to know themselves because some of them do not even know what type of personality they do have or if someone in their team is introvert, does not mean that person is not a good teammate. I want them to learn how to work with anybody, everybody. That is the reason I most of the times I support random assignment of the teams. I do not want them to choose their teammates if there is not a very special project. As I said, learn how to make use of the technology to make the communication possible, how to trust in people (Kathy, 283-290)</i>
Ken	<i>Give [students] skills that they can use because they are seniors and they are going out into the world. So in a way, we are trying to apply all the different things they have learned up until this point which I think is appropriate for these capstone experiences. But on the other hand, it cannot purely be kind of</i>

	<i>how to start a business type of thing that you might get at a community college or something like that because we do have to have an academic sort of basis for what we're saying (Ken, 291-309).</i>
Donna	<i>They are getting the competence, they are getting confidence, and they are trying it out. And they are getting exposed to how it plays out in the world. And I could talk to you more about the assignments and how I do that. But if I can accomplish those four things—you know, learning about it, seeing the breath of how it plays out in the world, seeing role models, and then trying on those behaviors and those skill sets themselves, I think that that's a really good learning experience for them (Donna, 185-202).</i>
Mary	<i>Increasing their awareness of issues and also giving them a new understanding of what we are talking about. Help them to decide whether this is the path that they really want to go down or not and if they do go down this path they will hopefully make better decisions as a result of having gone through this (Mary, 644-649).</i>
Daniel	<i>I expect them to learn a core set of strategies. And that core set of strategies is how we look for opportunities. And once we have identified opportunities in the marketplace, then how do we develop strategies that would allow us to create a business entity, and then those strategies that would allow us to position that business entity in the marketplace (Daniel, 326-332).</i>
Bob	<i>I expect them to learn the value of networking and develop some connections within the class but also outside the class. And to learn to identify and isolate problems that could be solved by business and put together the simplest of financial productions to evaluate whether or not the problems can be solved by business (Bob, 185-189).</i>
Hector	<i>My goal is to try to get them to think about consumer markets, application and the technology and I tend to spend a lot of time on the market, to get market segmentation, how you segment markets and so forth. The things like accounting, finance I mean these guys they usually have strong quantitative skills so it's not going to be a problem for them to understand a spreadsheet. But to think about markets, for some of them it is a totally new sphere of something to think about and I actually believe that even if you don't go out and do entrepreneurship practice having taken the technology entrepreneurship class will make you a better engineer because you are thinking about the capability of whatever R and D you are working on (Hector, 231-245).</i>

Except for Kathy, who was just beginning as an entrepreneurship instructor, all instructors in the sample have taught entrepreneurship along their careers to students with

different levels of awareness, skills, and backgrounds. Instructors explained they teach differently depending on who their students are. Considering the current history and also the past experiences of instructors, a major theme was identified: *Instructors Flexibility*. *Instructors' flexibility* refers to the idea that teaching goals are not static but adapted to the learning needs of the audience. Below, Daniel explains why he teaches differently at the undergraduate than he does at other levels.

*At the undergraduate level, it is much more inception. It is I think first and foremost to help them see entrepreneurship as a legitimate career path. Because when they are taking their accounting classes and they are taking their financial classes, primarily all that they get with this corporate life, corporate work and that is the only legitimate career. That you go to work for a bank. You go to work for a Fortune five hundred company. In the entrepreneurship classes, I want them to come out of the class understanding that entrepreneurship is a legitimate career path. And that while they may go work in the corporate world for four, five, or six years, that it is very legitimate for them to have a long-term life plan that at some point they will focus on starting their own businesses (Daniel, 599-610).*

If professors consider that the students' skills and beliefs do not have the potential to constitute a viable business opportunity, they invest more time developing skills than teaching how to launch a business. If professors identify potential in the student's business ideas, creating a business plan and its implementation will be an important part of the course. As Ken posited “[My current students] are less focused on technology than other students I have had at other places just because of their background and the things they're interested in. I have not been able to get them real excited about technology ventures.” (Ken, 261-264).

Students' backgrounds are usually known by experienced instructors. The main teaching goals of the course are therefore adjusted before the course starts. Inexperienced instructors seem to adjust their teaching goals after assessing the potential for being an entrepreneur within their students.

*My primary goal I would say for science and engineering students is to really think about markets or consumers because we tend to be enamored with technologies, the latest greatest technology and it does not matter how good the technology is if nobody needs it, they are not going to pay for it. The stake that I see a lot of science and engineering people trying to start a business is they focus too much on the technology and they ignore the market (Hector, 228-233).*

Daniel, Hector, Bob, and Ken reported that they set different teaching goals depending on the type of students they had in their classes. When working with undergraduate students whose future will most likely be to work for a large corporation, the teaching goal became increasing students' self-confidence to create value and legitimize entrepreneurship as a possible career path. Ken and Daniel were equally concerned for the future performance of their students as employees as well as entrepreneurs, contrary to Hector who prepares his class by thinking about high potential entrepreneurs. "So what they are looking for in those courses is building a business around new technological developments and not looking at somebody who wants to start a sandwich shop". Hector said: "if you think you might want to be an entrepreneur, this is the course that you would take." Hector was clear about his goals being related to business creation while Ken and Daniel felt more committed to developing skills to succeed in the job market. Ken and Daniel's students have no background in technology.

### **Contribution to the Literature**

The learning goals of entrepreneurship instructors at engineering schools were quite dissimilar, which provides evidence to reject the view that the academic institution or teaching appointment (engineering vs. business) relates to the type of teaching goals pursued by instructors. In fact, the goals of entrepreneurship teachers were diverse even within the same schools.

Academic background was found to relate to teaching goals. Five instructors in the

sample had PhDs in strategic management, two in engineering, and one in neurosciences. An analysis of the TGI scores and the teaching goals described in interviews revealed that the instructors with PhDs in strategic management had very similar teaching goals, but differed from those with other academic backgrounds. Academic training and subsequent terminal degrees are seen to influence teaching goals. This may happen because experienced colleagues from the same department usually mentor entrepreneurship instructors. Instructors mentored by the same person use similar examples, cases, and books. Those examples, cases, and books are then used wherever those instructors subsequently teach. During the interviews, the instructors mentioned that dissertation advisors and other experienced colleagues had influenced them as instructors. Dissertation advisors usually have PhDs in the same discipline as their advisees.

In spite of their academic background relating to their teaching goals, instructors said that they set goals according to the type of students enrolled on the course. The learning needs of the audience were identified as the most important influencer of teaching goals in entrepreneurship education. This is not new. Johnson-Hunter, (2004) discovered that a major problem of entrepreneurship education is the pertinence of the training to the learning needs of the entrepreneur. Entrepreneurs usually complain that formal education is not related to what entrepreneurs need to succeed (Johnson-Hunter, 2004). This is similar to a finding noted in an earlier study conducted by the Kauffman Foundation, which asked entrepreneurs what they wished they had been taught.

The purpose of this paper is to contribute to the discussion about learning goals in the current literature on entrepreneurship education. The efforts to clarify what is meant by entrepreneurship education in order to achieve better assessments are not new. In 1984, Jamieson suggested a three-category framework for organizing entrepreneurship education. He

distinguishes between education about enterprise, education for enterprise, and education in enterprise, and in so doing recognizes the roles different types of EE have to play. Researchers still use the idea of distinguishing between teaching about, through, and for entrepreneurship. Liñan, (2007) proposed distinguishing between *Awareness* and *Start up* education as the major teaching goals for EE. Awareness education acts on an individual's personal attitude toward entrepreneurship, as it aims to sensitize students to self-employment as a viable occupational option (Fretschner and Weber, 2013). Start up education is about teaching students how to build a business around an opportunity despite the fact that they control few resources. In contrast to awareness, start up courses seek to change students' concrete knowledge and skills in order for them to create new ventures.

More recent efforts to gain consistency in terms of the outcomes of curricula was conducted by Neck and Greene (2011), who proposed that teaching entrepreneurship requires teaching a method. Neck and Greene (2011) said that entrepreneurship is usually taught as a process which assumes that the entrepreneur knows the final destination. Neck and Green suggested that entrepreneurship should not be taught as if the outcomes could be predicted. Any knowledge transferred to students will be used to cope with an uncertain environment and resources. Neck and Green therefore suggested teaching students to approach the reality of an uncertain environment and resources rather than a specific set of goals and content. Entrepreneurship educators should help students to build a toolkit of skills, Neck and Green suggest, rather than to gather specific content knowledge. Neck and Greene's approach makes sense in terms of what can help individuals succeed in starting new businesses. However, their approach also assumes that the main teaching goal of entrepreneurship education is learn how to create a new, lasting and sustainable organization. Neck and Greene do not question whether

instructors could have different teaching goals when providing entrepreneurship education.

Our preliminary findings suggest challenging the assumption that entrepreneurship education is mainly about creating new ventures. Business creation is usually the teaching goal of entrepreneurship education but it could also be the means for developing the skills that successful entrepreneurs have and the corporate world wants. Teaching goals seem to be highly related to the academic background of the instructors and the learning audience the instructors are dealing with.

### **Implications for Practice**

Learning entrepreneurial skills is the process of using and analyzing knowledge through reflection, re-conceptualization and action (Pittaway and Cope, 2007) in order to act and think like an entrepreneur, but not necessarily expecting to become one. Therefore, beside *awareness* and *business creation*, we suggest adding a third type of outcome for entrepreneurship education: entrepreneurial skills. We define entrepreneurial skills as those that successful entrepreneurs master, such as opportunity recognition, persuasion, networking, accountability, achievement, teamwork and listening, among others. Those skills are needed by managers and engineers in the 21<sup>st</sup> century. Successful CEOs and other professionals share many of the skills that successful entrepreneurs possess. Half of the sample of entrepreneurship instructors seems to be teaching those entrepreneurial skills irrespective of their students' intentions toward business creation. The teaching goal is to develop entrepreneurial skills to gain employability rather than awareness or business creation. Even though the *Start up* type of entrepreneurship education may include entrepreneurial skills, we believe some instructors use entrepreneurship to build skills for the corporate world rather than for self-employment. Inviting instructors to reflect on whether the course prioritizes awareness, skills or business creation should help them to clarify goals,

content, and methods. Grouping goals into (a) *awareness*, (b) *entrepreneurial skills*, and (c) *start up* may help to clarify outcomes.

Our study also suggests that instructors adapt their teaching goals to the audience. Instructors may want to teach how to start a business but they would adapt the goal if students business ideas are naïve. Instructors usually gather information about the learning needs, capabilities and interests of their students and then decide what the emphasis of the course should be. The emphasis of the course seems to be organized around awareness, entrepreneurial skills, or start-ups.

The students of some entrepreneurship classes will enter the corporate world soon after graduation. In that case, their instructors prefer to emphasize an entrepreneurial mindset and skill set to help them succeed in the corporate world. Other groups of students have the interest and ability to found businesses. The instructors of this group seek to help them start their own businesses. Other groups of students are finding out about entrepreneurship for the first time and awareness is the type of education that fits this group. What is clear from this study is that a “one size fits all approach” does not seem appropriate either for the students or the faculty. This study suggests that there is not one type of entrepreneurship education. If learners are moving targets, then instructors need to be able to adapt. Perhaps that is part of the reason why it is so difficult to define the teaching outcomes of entrepreneurship instructors.

This work seeks to contribute to the discussion about what to expect from entrepreneurship courses. In doing so, we found a new type of goal (developing entrepreneurial skills to give students an employability advantage), that may help to categorize a specific type of course and assess students’ learning considering that the teaching goal is not strictly related to business creation. On the other hand, we found that instructors define their expected outcomes

through dynamic interaction with their students. Considering *entrepreneurial skills development* as a new type of teaching goal within entrepreneurship education and assuming that the goals of entrepreneurship education are audience-dependent may help to refine what to measure when assessing the impact of entrepreneurship programs.

## References

- Baum, J., Locke, E., and Smith, K. (2001). A Multidimensional Model of Venture Growth. *Academy of Management Journal*, 44(2), 292–303. doi:10.2307/3069456
- Boni, A, Weingart, L. and Evenson, S. (2009). Innovation in an Academic Setting: Designing and Leading a Business Through Market-Focused, Interdisciplinary Teams. *The Academy of Management Learning and Education*.8 (3), 407-417.
- Currie, R. and Pandher, G. (2013). Management Education Journals’ Rank and Tier by Active Scholars. *The Academy of Management Learning and Education*, 12 (2),194-218.
- Ács, Z., and Armington, C. (2006). *Entrepreneurship, geography, and American economic growth* (p. 250). Cambridge University Press. Retrieved from <http://books.google.com/books?id=SttRR-jVw9ICandpgis=1>
- Ács, Z. J., and Stough, R. (2007). *Public policy in an entrepreneurial economy: creating the conditions for business growth (Google eBook)* (p. 299). Springer. Retrieved from <http://books.google.com/books?id=jOHCvZZ3U0YCandpgis=1>
- Al-Laham, A., Souitaris, V., and Zerbinati, S. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), 566–591.
- Angelo, T. A., and Cross, . K. P. (1993). *Classroom assessment techniques: A handbook for Teachers* (2nd ed.). San Francisco: Jossey-Bass.
- Béchar, J., and Grégoire, D. (2005). Entrepreneurship Education Research Revisited: The Case of Higher Education. ... *of Management Learning and Education*, 4(1), 22–43. Retrieved from <http://amle.aom.org/content/4/1/22.short>
- Berg, B. (2001). *Qualitative Research Methods for Social Sciences* (4th ed.). Massachusetts: Pearson.
- Brannback, M., and Carsrud, A. (2009). *Understanding the entrepreneurial mind: opening the black box*. Retrieved from <http://books.google.com/books?hl=esandlr=andid=4j-9SNJwLSsCandpgis=1>

- Carayannis, E., Evans, D., and Hanson, M. (2003). A cross-cultural learning strategy for entrepreneurship education: outline of key concepts and lessons learned from a comparative study of entrepreneurship students in France and the US 10.1016/S0166-4972(02)00030-5 : Technovation | ScienceDirect.com. *Technovation*. Retrieved January 19, 2012, from <http://www.sciencedirect.com/science/article/pii/S0166497202000305>
- Cone, J. (2008). Teaching entrepreneurship in colleges and universities: How (and why) a new academic field is being built. Retrieved October 27, 2011, from <http://www.kauffman.org/items.cfm?itemID=716>
- Cooper, S., Bottomley, C., and Gordon, J. (2004). Steeping out of the classroom and up the leader of learning: an experiential learning approach to entrepreneurship education. *Industry and Higher Education*, 18(1), 11–22.
- Dickson, P., Solomon, G. T., and Weaver, K. M. (2008). Entrepreneurial selection and success: does education matter? *Journal of Small Business and Enterprise Development*, 15(2), 239–258. doi:10.1108/14626000810871655
- Duderstadt, J. J. (2008). *Engineering for a Changing World: A Roadmap to the Future of Engineering Practice, Research, and Education*. Engineering. The Millennium Project, University of Michigan. Retrieved from <http://scholar.google.com/scholar?hl=en&btnG=Search&dq=intitle:Engineering+for+a+C+hanging+World:+A+Roadmap+to+the+Future#0>
- Duval-Couetil, N. (2013). Assessing the Impact of Entrepreneurship Education Programs: Challenges and Approaches. *Journal of Small Business Management*, 51(3), 394–409. doi:10.1111/jsbm.12024
- Edelman, L., Manolova, T. and Brush, C. (2008). Entrepreneurship Education: Correspondence Between Practices of Nascent Entrepreneurs and Textbook Prescriptions for Success. *Academy of Management Learning and Education*, 7(1), 56-70.
- Fiet, J. O. (2000). THE PEDAGOGICAL SIDE OF ENTREPRENEURSHIP THEORY. *Journal of Business Venturing*, 16(99), 101–117.
- Finkle, T., Kuratko, D., and Goldsby, M. (2006). An Examination of Entrepreneurship Centers in the United States: A National Survey. *Journal of Small Business Management*, 44(2), 184–206.
- Foundation, K. (n.d.). Kauffman Campuses: Florida International University. Retrieved from <http://www.kauffman.org/entrepreneurship/florida-international-university.aspx>
- Fretschner, M., and Weber, S. (2013). Measuring and Understanding the Effects of Entrepreneurial Awareness Education. *Journal of Small Business Management*, 51(3), 410–428. doi:10.1111/jsbm.12019

- Garavan, T. N., and O’Cinneide, B. (1994). Entrepreneurship Education and Training Programmes:: A Review and Evaluation – Part 2. *Journal of European Industrial Training*, 18(11), 13–21. doi:10.1108/03090599410073505
- Gorman, G., Hanlon, D., and King, W. (1997). Some Research Perspectives on Entrepreneurial Education, Enterprise Education and Education for Small Business Management: A Ten Year Review. *International Small Business Journal*, 15(3), 56–77.
- Green, P., and Rice, M. (2007). *Entrepreneurship Education* (p. 543). Boston, MA: Edward Elgar Pub. Retrieved from <http://www.amazon.com/Entrepreneurship-Education-International-Library/dp/1845424220>
- Henry, C., Hill, F., and Leitch, C. (2005). Entrepreneurship education and training: can entrepreneurship be taught? Part I. *Education + Training*, 47(2), 98–111. doi:10.1108/00400910510586524
- Hills, G. E. (1988). Variations in university entrepreneurship education: an empirical study of an evolving field. *Journal of Business Venturing*, 3(1), 109–22.
- Jamieson, I. (1984). Education for enterprise. In A. G. Watts and P. Moran (Eds.), (Ballinger., pp. 19–27). Cambridge.
- Johnson-Hunter, P. (2004). *Educational Experiences of Habitual Entrepreneurs*. University of Incarnate Word.
- Jones, C. (2007). Developing the enterprise curriculum Building on rock, not sand. *Industry and Higher Education*, 21(6), 405–413. Retrieved from <http://www.ingentaconnect.com/content/ip/ihe/2007/00000021/00000006/art00004>
- Kuratko, D. F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship Theory and Practice*, 29(5), 577–598. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6520.2005.00099.x/full>
- Liñan, F. (2007). The Role of Entrepreneurship Education in the Entrepreneurial Process. In A. Fayolle (Ed.), *Handbook of Research in Entrepreneurship Education* (pp. 230–247). Cheltenham, UK: Edward Elgar Publishing.
- Merriam, S. B. (2002). *Qualitative research in practice: Examples for discussion and analysis*. San Francisco: Jossey-Bass.
- Mustar, P. (2009). Technology Management Education: Innovation and Entrepreneurship at MINES ParisTech, a Leading French Engineering School. *Academy of Management Learning & Education*, 8 (3), 418–425.

- Neck, H. M., and Greene, P. G. (2011). Entrepreneurship Education: Known Worlds and New Frontiers. *Journal of Small Business Management*, 49(1), 55–70. doi:10.1111/j.1540-627X.2010.00314.x
- Patton, M. (2001). *Qualitative Research and Evaluation Methods* (3rd ed.). Thousand Oaks, California: Sage Publications.
- Reader, D., and Watkins, D. (2006). The Social and Collaborative Nature of Entrepreneurship Scholarship: A Co-Citation and Perceptual Analysis. *Entrepreneurship theory and practice*, 30(3), 417–441. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6520.2006.00127.x/full>
- Reynolds, P. (2007). *Entrepreneurship in the United States: The future is now*. (Springer.). New York.
- Rubin, H., and Rubin, I. (2005). *Qualitative Interviewing: The art of hearing data* (2nd ed.). Thousand Oaks, California: Sage Publications.
- Sexton, D., Upton, N., Wacholtz, L., and McDougall, P. (1997). Learning Needs of Growth Oriented Entrepreneurs. *Journal of Business Venturing*, 12(1), 1–8.
- Shepherd, D. A. (2004). Educating Entrepreneurship Students About Emotion and Learning From Failure. *Academy of Management Learning and Education*, 3(3), 274–287.
- Solomon, G. T., Weaver, K. M., and Fernald, L. W. (1994). A Historical Examination of Small Business Management and Entrepreneurship Pedagogy. *Simulation and Gaming*, 25(3), 338–352. doi:10.1177/1046878194253003
- Van der Sluis, J., van Praag, M., and Vijverberg, W. (2008). Education and entrepreneurship selection and performance: A review of the empirical literature. *Journal of Economic Surveys*, 22(5), 795–841.
- Vesper, K. H., and Gartner, W. B. (1997). Measuring progress in entrepreneurship education. *Journal of Business Venturing*, 12, 403–421.
- Von Graevenitz, G., Harhoff, D., and Weber, R. (2010). The effects of entrepreneurship education. *Journal of Economic Behavior and Organization*, 76(1), 90–112. doi:10.1016/j.jebo.2010.02.015
- Weaver, M., Dickson, P., and Solomon, G. (2005). What is Known and Not Known about the Links Between Education and Entrepreneurial Activity. In *The Small Business Economy for Data Year 2005: A Report to the President* (pp. 113–156). Washington, DC.
- Yin, R. K. (2003). *Case study research design and methods*. Thousand Oaks, California: Sage Publications.

