

TEACHERS AS ENTREPRENEURIAL ROLE MODELS: THE IMPACT OF A TEACHER'S ENTREPRENEURIAL EXPERIENCE AND STUDENT LEARNING STYLES IN ENTREPRENEURIAL INTENTIONS

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ABSTRACT

This article uses Social Learning Theory and the Role Model Theory to address the issue of the impact teachers have as role models regarding the development of the entrepreneurial intentions of their students. We also tested whether this impact varies based on the students' learning styles. We conducted a survey of 50 teachers and 560 undergraduate students from 26 campuses of a private university in Mexico. Data collection occurred before and after a mandatory entrepreneurship course. Students with converging learning styles have a significantly higher increase in entrepreneurial intentions when teachers with entrepreneurial experience taught the course. For the other students, the teachers' entrepreneurial experience does not influence the formation of entrepreneurial intentions. To the best of the knowledge of the authors, this is the first time that empirical research considers the effect of both a teacher's entrepreneurial experience and the students' learning style when evaluating the impact of entrepreneurship education programs.

Keywords: Entrepreneurship Education, Entrepreneurial Intention, Teacher, Role Model, Learning Style.

INTRODUCTION

Entrepreneurship Education Programs (EEP) have seen an exponential increase in popularity over past number of years (Katz, 2003; Kuratko, 2005; Solomon, 2007), and the discussion surrounding their impact is of great interest (Duval-Couetil, 2013; Rideout & Gray, 2013; Martin et al., 2013; Bae et al., 2014). These programs usually use an experiential approach to the teaching-learning process (Sherman et al., 2008) and may focus on helping participants to develop their own enterprise or entrepreneurial skills (Kirby, 2007). In this sense, EEP are expected to increase students' entrepreneurial intentions (Bae et al., 2014), although their effectiveness is still questioned (Rideout & Gray, 2013).

An educational program is fundamentally driven by the teachers' orientation and perspective (Fiet, 2001); nevertheless, entrepreneurship teachers remain an under-researched group (Bae et al., 2014). For example, there is an open debate as to whether teachers need to have experienced the entrepreneurial process themselves in order to be able to teach it (Hindle, 2007). Professors with entrepreneurial experience are valued in EEP, despite the absence of

theoretical or empirical evidence. They bring “real-life” examples to the classroom. We will argue that these teachers became role models and that it could play an important role in the learning process (Lashley & Barron, 2006).

However, the impact of EEP should not be examined without taking students into account. Moreover, students cannot be considered a homogenous group (Westhead & Solesvik, 2016) and the impact of EEP may be different based on their motivation and team behavior (Hytti et al., 2010) or their gender (Packham et al., 2010), among other variables. Specifically, to our knowledge, no previous research has been undertaken in entrepreneurship education regarding how teachers with entrepreneurial experience have an impact on students with different learning styles. Although learning styles have been widely researched in educational contexts (Kolb & Kolb, 2005), only relatively few studies take this variable into account when addressing entrepreneurial students (Corbett, 2005). We believe that Social Learning Theory and Role Models Theory provide the arguments to propose and test hypotheses that contribute to this discussion. As such, the objective of this paper is to study the impact of teachers’ entrepreneurial experience in increasing the entrepreneurial intentions of undergraduate students.

To examine this issue, this paper is organized as follows. Firstly, we introduce the literature on role models and learning styles to define the research hypotheses. Next, we present the methodology of the empirical research and the results. Finally, we discuss our findings and provide implications for practitioners, as well as future lines of research.

ROLE MODELS

Intention is considered the superlative predictor of a planned behavior (Fishbein & Ajzen, 1975), such as the creation of a new venture. It captures motivational factors that indicate personal disposition toward a behavior or the degree of effort expended toward it (Ajzen, 1991). Entrepreneurial intention can be defined as a mental state that directs action toward self-employment rather than corporative employment (Souitaris et al., 2007) or as a cognitive state that precedes and incites the decision to develop a business (Krueger, 2009). Intentions are a valid form of evaluating the effect of EEP (Souitaris et al., 2007; Sherman et al., 2008; Lanero et al. 2011; Sánchez, 2011; Iglesias-Sánchez et al., 2016; Joensuu-Salo et al., 2015), given that the stimulus may occur several months or years before the behavior itself.

Social Learning Theory proposes that one may learn through vicarious experience, which means the observation of the behavior of other people, such as role models (Bandura & Walters, 1977), especially when mistakes are costly. Role models are “person(s) an individual perceives to be similar to some extent, and because of that similarity, the individual desires to emulate (or specifically avoid) aspects of that person’s attributes or behaviors” (Gibson & Barron, 2003, p. 199). Parental role models are a common field of research in entrepreneurship (Scherer et al., 1989; Mungai & Velamuri, 2011; Chlosta et al., 2012), and it is widely accepted that role models influence entrepreneurial activity (Scherer et al., 1989; Radu & Luoé, 2008; Chlosta et al., 2012; Laviolette et al., 2012; Lafuente & Vaillant, 2013). Although the more noticeable effects of role models occur between the ages of 18 and 21 (Mungai & Velamuri, 2011), research on university teachers as role models is rather limited.

It would be reasonable to believe that students may develop greater entrepreneurial intentions when hearing about the difficulties, lifestyle and challenges faced by an entrepreneur, since it is known that guest entrepreneurs enhance self-efficacy which leads to greater

entrepreneurial intention (Radu & Loué, 2008). Teachers with entrepreneurial experience are those who could tell these anecdotes, leading students to perceive them as role models.

Whether teachers should have entrepreneurial experience or not has traditionally been a discussion based on personal opinions (Weinrauch, 1984; McMullan & Long, 1987; Vesper & McMullan, 1997) that have merit but lack theoretical and empirical support. The teacher previous experience as an entrepreneur may affect how he defines entrepreneurship itself (Bennett, 2006), which teaching approach he chooses (Abaho et al., 2015) or the use of external stakeholders (Ruskovaara et al., 2015). It is reasonable to expect that the previous decisions affected by the teacher's previous experience will affect the impact of the EEP in the students.

We understand that Role Model Theory provides the necessary theoretical support to examine the effect of teachers' entrepreneurial experience on the outcomes of an EEP, given that there is a gap in the literature regarding a teacher's effectiveness as an entrepreneurship educator (Ruskovaara & Pihkala, 2014). Therefore, in keeping with the aforementioned theoretical arguments, the first hypothesis of this paper establishes that:

- H1 *Students who have teachers with entrepreneurial experience in their courses will experience a significantly greater increase in their entrepreneurial intentions than those students who have teachers with no entrepreneurial experience.*

LEARNING STYLES

To fully understand this hypothesis, we argue that the influence of teachers as role models varies depending on the different learning styles of their students (Shein & Chiou, 2011; Chiou, 2008; Chiou & Yang, 2006). According to Kolb (1984), learning styles reflect a trend regarding how people prefer to learn. Based on this approach, learning is defined as the process in which knowledge is generated through the transformation of experience in a process of concrete experience, reflexive observation, abstract observation, and active experimentation (Kolb, 1984). There are two main elements of this learning process: acquiring experience and then transforming it. Acquiring experience may come through Concrete Experience (CE), i.e. immediate and tangible actions, versus Abstract Conceptualization (AC), i.e. conceptual interpretations and symbolic representations. In the transformation of experience there are two processes: Reflexive Observation (RO), i.e. the 'internal processes', and Active Experimentation (AE), which is based on the outside world. Kolb's Learning Cycle considers that true experiential learning must touch these four moments to generate learning. Based on how comfortable students feel during each part of the cycle, they will have a preferred learning style: Diverging (CE-RO), Converging (AC-AE), Assimilating (AC-RO) and Accommodating (CE-AE).

Entrepreneurs tend to focus more on action, relating to the Accommodating and Converging learning styles (Ulrich & Cole 1987; Garavan & O'Cinneide 1994); however, despite the wide-ranging use of practitioners as teachers and experiential learning approaches within EEP (Mandel & Noyes, 2016; Sherman et al., 2008), no previous studies have taken into consideration how teachers' entrepreneurial experience influences the development of entrepreneurial intentions in students with different learning styles.

Firstly, we could argue that, in terms of students with a Diverging learning style, an emotional connection with a teacher who speaks from the personal knowledge of his/her entrepreneurial experience would increase the outcome of the learning process as they give special importance to Concrete Experience and Reflexive Observation, in addition to the fact that they tend to be imaginative and emotional (Kolb & Kolb, 2005). On the contrary, as these students are less inclined to active experience, it could be the case that the same ‘war stories’ from the teacher’s entrepreneurial experience may be of less interest than the ideas and dreams of teachers with no entrepreneurial experience. Secondly, the Assimilating learning style is located between Abstract Conceptualization and Reflective Observation. This style leads students to value theoretical models and inductive reasoning (Kolb, 1984). In this case, teachers with a greater knowledge of the theory of entrepreneurship and practice in entrepreneurial research would probably be more appreciated than practitioners.

Thirdly, students with an Accommodating learning style, which is located between Active Experimentation and Concrete Experience, rely heavily on other people for information and would probably value, to a much greater extent, a teacher’s entrepreneurial experience, as they tend to solve problems through trial-and-error strategies. Shein & Chiou (2011) found that these students identified more with technical teachers as role models. We argue that their sample of hospitality undergraduate students presents significantly different characteristics from entrepreneurship students, given that business owners vary in terms of industry, breadth, intensity or motivation. Therefore, since this learning style lacks reflection, they may take the information shared by the teacher too literally and lose interest when the information does not exactly meet their needs. Finally, the Converging learning style emphasizes Active Experimentation and Abstract Conceptualization. The strength of this style lies in the practical application of ideas (Kolb, 1984), just like the Accommodating learning style, but it is combined with a preference for acquiring information through secondary sources (Kolb & Kolb, 2005), which is why it would benefit from the practical experience of the teacher combined with the content presented in the course.

There are strengths and weaknesses in every learning style with regard to how they are benefited by the teacher’s entrepreneurial experience; however, based on the aforementioned arguments, it would appear that the Converging learning style offers the greatest benefits. Therefore, we propose our second hypothesis:

H2 The influence of the teacher’s entrepreneurial experience on the increase in the students’ entrepreneurial intentions will be significantly greater among students with a Converging learning style.

METHODOLOGY

We used three different questionnaires to compile information: two of them were addressed to students (at the beginning and at the end of the course) and one questionnaire was for the teacher responsible for the group. Entrepreneurial intentions were measured based on four statements from Liñán & Chen (2009): “My professional goal is to become an entrepreneur”; “I

am determined to create a company"; "I have very seriously thought about starting a company"; and "I have the firm intention of starting a company". Learning style was measured using Kolb's Learning Style Inventory (LSI), which is widely adopted and shows internal validity and reliability (Kayes, 2005). The test consists of several sentences and four different endings for each one, with respondents ranking them based on their preferences. The scores are used to classify the students into the learning styles. Teachers were asked if they have ever owned a business (Yes/No).

To achieve the objectives and test the research hypotheses of this paper, we designed a quantitative empirical research process divided into two phases of data collection: one at the beginning of the EEP and the other upon its completion. Pretest-posttest designs are widely used with the porpoise of comparing groups with expecting change caused by an experimental treatment (Dimitrov & Rumrill, 2003). We distributed the questionnaires among 26 campuses of a major private university in Mexico. This university is ranked among the twenty best universities in undergraduate entrepreneurship programs according to the Princeton Ranking. More than 30 years ago, it has incorporated a mandatory 16-week entrepreneurship course in the curricula of every undergraduate degree program. Given the compulsory nature of this program, we prevented self-selection bias in our research. Also, students did not have previous information of teachers' entrepreneurial experience, since this information is not easily accessible when they register for the course. The sample was selected using a non-probabilistic sampling procedure (the Convenience Method), given that we handed the questionnaires out to all the students contained in the database of the aforementioned course. We applied the questionnaires in person and via e-mail.

With regards to the sample ($n= 560$): the students are aged between 18 and 29 years old, with an average of 21.31 years old. Most of them are male (53 percent) and study a major in Engineering and Architecture (39 percent), Business (23 percent), IT (20 percent), or Social Sciences (17 percent). These students were distributed in groups with 49 different teachers, 36 of whom have entrepreneurial experience and 14 of whom have no entrepreneurial experience.

RESULTS

Firstly, we analyzed the reliability of the scale used to measure the students' entrepreneurial intentions. The initial mean was 5.52, with a Cronbach's Alpha of 0.97. The final mean was 5.60, with a Cronbach's Alpha of 0.98. In both cases, the value is above the recommended levels for a valid scale (Robinson *et al.*, 1991). We then used *t*-test to review whether the students' entrepreneurial intentions at the end of the program were significantly higher than at the beginning of the program. We obtained a result that is non-significant when considering the group as a whole.

To test the first hypothesis, we used ANOVA (Dimitrov & Rumrill, 2003) to evaluate whether teachers' entrepreneurial experience could explain the increase in the entrepreneurial

intentions of the students, and the results were non-significant. Therefore, we rejected Hypothesis 1 (see Table 1).

Table 1 DESCRIPTIVE ANALYSIS AND ANOVA OF TEACHER EXPERIENCE							
ANOVA		SAMPLE	INITIAL	FINAL	DIFFERENCE	F	SIGNIF.
Teacher experience (H1)	Without experience	161	5.55	5.61	0.06	0.04	0.952
	With experience	399	5.5	5.57	0.07		

To test the second hypothesis, we verified whether teachers' entrepreneurial experience plays any role in their students' performance, depending on their learning style. Following the data analysis, a new variable was created to generate eight new groups compiling all the possible combinations of teacher entrepreneurial experience and student learning styles. This variable was then used as a factor in a One-way ANOVA. The results show that the combination of student and teacher profile generates a significant difference in the increase of entrepreneurial intentions after the EEP ($2.75; p<0.01$). Using Tukey's Post-Hoc Test, it is possible to observe that there are two significant differences ($p<0.05$) between: (1) students with Converging and Diverging learning styles who had teachers with no entrepreneurial experience; and, (2) students with a Converging learning style who had teachers with or without entrepreneurial experience (see Table 2).

Table 2 DESCRIPTIVE ANALYSIS AND ANOVA OF TEACHER EXPERIENCE AND LEARNING STYLE							
ANOVA		SAMPLE	INITIAL	FINAL	DIFFERENCE	F	SIGNIF.
Teacher experience and learning style (H2)	Without experience/Accommodating	101	5.57	5.53	-0.04	2.74	0.008
	Without experience/Diverging	239	5.41	5.54	0.13		
	Without experience/Assimilating	29	6.04	5.64	-0.4		
	Without experience/Converging	30	5.51	5.93	0.42		
	With experience/Accommodating	51	5.73	5.7	-0.03		
	With experience/Diverging	79	5.26	5.57	0.31		
	With experience/Assimilating	16	5.47	5.5	0.03		
	With experience/Converging	15	6.55	5.68	-0.87		

The first result was not expected, but it is understandable since Converging and Diverging learning styles are in opposition to Kolb's Learning Cycle. Students with a Diverging learning style experienced an increase of 0.31 in their entrepreneurial intentions, while students with a Converging learning style experienced a decrease of 0.87 when both groups had a teacher with no entrepreneurial experience. While this lack of experience negatively affects the hands-on approach of Converging students, it creates empathy with Diverging students who rely on emotional connections.

Students with a Converging learning style who had a teacher with entrepreneurial experience saw an increase of 0.42, while students with this learning style who had a teacher with no entrepreneurial experience saw a decrease in their entrepreneurial intentions of -0.87. Therefore, Hypothesis 2 is accepted.

DISCUSSION

Entrepreneurship Education Programs represent an answer to a growing demand from institutions focusing on the promotion of regional economic development and from students looking for an alternative career path in entrepreneurship. Although the evaluation of any education program is a complex undertaking, this is especially true for this research given that the outcome (new enterprises) may appear years after the formative stimulus. This problem highlights the need to consider measures, such as entrepreneurial intentions, when evaluating the impact of the program. Nevertheless, testing for only one metric does not provide any in-depth insights into the course. For this case, although there was an increase in entrepreneurial intentions after the Entrepreneurship Education Program, it was not significant.

However, when we take students into consideration, more interesting results emerged. When testing for the first hypothesis, we realized that there was no individual effect of the teacher's entrepreneurial experience among students in general. This is still an interesting result as there is a recurring discussion concerning the profile of entrepreneurship teachers. Hindle (2007, p. 115) makes an ironic case in describing the 'ideal' person to teach entrepreneurship as a "*multi-lingual serial entrepreneur of international prominence whose several business failures led only to renewed determination and ultimate success as the leader of several highly ethical high-growth ventures of international prominence.*" There is a reasonable explanation for this expectation: teachers with entrepreneurial experience could have more empathy with students, especially the more entrepreneurial ones. Furthermore, as a new academic field, there are very few teachers who have formal training in entrepreneurship, which explains why several institutions rely on practitioners.

This research has shown that, at least for our sample, this belief does not hold true. In general, there was no significant increase in the entrepreneurial intentions of the students despite teachers' entrepreneurial experience. It may be that teachers who have no entrepreneurial experience hold an unbiased point of view, which is beneficial especially if the other teacher has had a negative entrepreneurial experience. Moreover, entrepreneurship as a discipline now has a wide range of publications, books and tools that enrich the entrepreneurship class, so the teacher is not dependent on his/her personal experiences and anecdotes. There is also the difference between knowing about a subject and knowing how to teach it. A possible explanation for the results obtained is that teachers with no entrepreneurial experience do not rely on personal experiences and, therefore, prepare their classes with more attention to detail. One possible suggestion is to bring the best of both worlds, i.e. co-teaching or guest speakers. Finally, we do not advocate having or not having a teacher with entrepreneurial experience. Our point is that a teacher's prior experience is just one of the many factors that we should evaluate before

choosing someone to teach a course. Using one element (e.g. entrepreneurial experience) to determine whether someone may be a good entrepreneurship teacher is as unreasonable as proposing that age, gender, nationality or any other single aspect of his curriculum vitae determines teaching success. Nevertheless, it is not uncommon to hear such a proposal in entrepreneurship departments. From a practical point of view, this empirical research shows that there is no evidence for this claim, and that this matter should be treated more seriously.

Our results indicate that a teacher's entrepreneurial experience plays a significant role in increasing the entrepreneurial intentions of a given group of students, i.e. those with a Converging learning style. This finding reinforces the need to address students in a more personalized way, meeting their individual requirements. When learners face stimuli that complement their unique learning styles, they achieve a higher outcome (Nulty & Barret, 1996). Examining students' learning styles contributes to the discussion about how students learn, in addition to making teachers more sensitive to the differences among them.

LIMITATIONS AND FUTURE RESEARCH

When attempting to answer the questions posed in this paper, other questions have arisen for researchers interested in entrepreneurial education. The role of teachers is an under-researched topic in EEP. As it is not possible to confirm any significant influence of a teacher's entrepreneurial experience on the development of students' entrepreneurial skills, it is necessary to study other characteristics. One example is a teacher's self-efficacy (Ashton, 1984), which refers to the self-believe that a teacher has that he is responsible for students' performance (Ashton, 1984). It would also be interesting to take into consideration the extent to which students perceive the teacher as a role model (Chiou & Yang, 2006).

As this empirical research represents the first of its kind to test the effect of teachers' entrepreneurial experience and the students' learning styles on training outcomes, these results have contributed to the potential research described above, but they must be assessed in light of their limitations. Firstly, our findings should be carefully considered in other contexts given that the sample being researched was limited to undergraduate students at just one institution in Mexico. Furthermore, due to the nature of this quantitative research, the results obtained are based on students' perceptions of their entrepreneurial intentions and not on observable behaviors, so there may be bias, due to, for example, social desirability (Bagozzi *et al.*, 1991). Finally, we did not consider the breadth and positivity of teachers' entrepreneurial experience and students' prior exposure. Past research has shown that these two areas could affect entrepreneurial intentions (Krueger, 1993), so this should be considered for future research.

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