Toward an Experiential Approach to Entrepreneurship Education

John A. Dobson
Clark University

Elizabeth Jacobs
Seton Hill University

Lisa Dobson
Saint Francis Xavier University

There has been dramatic decline in entrepreneurial activity in the US, which has renewed public and private interest in entrepreneurial education as a means to increase new venture creation. To date, these programs have proven ineffective in increasing entrepreneurial activity within the millennial generation. We argue that changes to pedagogy are required to address this problem. Using the theory of planned behavior as an organizing framework, we investigated the effectiveness of an experiential approach to entrepreneurship education using both within-group and between-group research designs. Results converge to support our hypothesis, revealing a dramatic increase in perceived behavioral control in the experiential class. Implications for the design of entrepreneurship curricula are highlighted and discussed.

INTRODUCTION

There has been a dramatic decline in business dynamism in the United States. Hathaway and Litan (2014) note that entrepreneurial activity, as measured by churn, has fallen nearly 50% since 1978. Historically, people in their twenties have been most likely to start businesses. However, those in the millennial generation are, as of this writing, much less entrepreneurial than the Baby Boomers or Generation X. If this decline in entrepreneurial activity continues, the long-term economic impact will be dire in terms of economic growth and employment prospects for young people. Thus, interest in entrepreneurial education is based on the need for the development of new entrepreneurs who will then contribute to economic growth (Thurik, Stam, & Audretsch 2011). There is broad belief in the public and private sector that entrepreneurship education is an effective tool in the development of new entrepreneurs (Solomon & Matthews, 2014). As a consequence, academic communities have begun to focus on entrepreneurship education as a means to re-ignite the entrepreneurial dynamism.

Colleges and universities are creating curricula and establishing centers devoted to entrepreneurship in order to help support new venture creation. Within the U.S., entrepreneurial education can be traced back to Harvard University, which offered the first entrepreneurship

course in 1947 (Kauffman, 2013). Additional entrepreneurship education programs were developed in the 1970's as solutions to the economic crisis of the time, leading to a total of 250 programs offered by the early 1980's. Growth has accelerated; currently, there are now over 2,000 universities that include specialization in entrepreneurship education, with over 5,000 courses that service upwards of 400,000 students (Kauffman, 2013). Despite these efforts, new venture creation continues to stagnate. Indeed, a recent meta-analytic investigation reviewed 73 studies covering 37,285 students, and found no statistically significant impact of entrepreneurship education on entrepreneurship activity (Bae, Qian, Miao, & Fiet, 2014).

We argue that part of the reason that efforts in entrepreneurship education have failed can be attributed to a reliance on pedagogical techniques that are not suited to today's students. The millennial generation's students are different than those of previous generations in specific ways that impact higher education (Twenge, 2009). The well-documented phenomenon of grade inflation is testament to the power of the millennial world-view in influencing educational standards. Provocative research into the "Me Generation" indicates that the typical millennial has an inflated sense of efficacy, cannot cope with uncertainty or failure, and feels entitled to success without struggle (Twenge, 2009; Marston, 2010). We believe this is significant because the personality sketch of the millennial suggested by these researchers is, in our opinion, incompatible with the sprit of entrepreneurship. Thus, we argue that entrepreneurship education should reflect awareness of the existential realities of today's students: They have an inflated sense of their abilities, are risk averse, are unable to cope with and have no appreciation for the value of struggle on the road to success. Critically, we believe that knowledge, skills, and abilities in the domains just listed are the essential competencies of successful entrepreneurship. Thus, the ability of entrepreneurship education to produce successful entrepreneurs may rest upon curricula that develop the knowledge, skills, and abilities that are necessary to navigate the inherent ambiguity and uncertainty of the entrepreneurial marketplace.

At a curricular level, entrepreneurship education is often approached in a similar manner to that of other disciplines. That is, approaches are based upon theoretical frameworks of entrepreneurship. At least part of this problem can be attributed to the need of scholars to both achieve as well as maintain legitimacy within academia. Typical entrepreneurship programs consist of carefully designed courses (e.g., business plan development, new venture creation, and entrepreneurial finance) that appear to make sense. Such classes have students spend time working on hypothetical business plans, reviewing case studies, creating spreadsheets, and operating within simulation systems.

The value of a theoretically grounded approach to entrepreneurship education appears, at first blush, to be axiomatic. However, entrepreneurial opportunity is a phenomenon that is ecologically situated within a complex real-world marketplace characterized by constant change along a variety of economic, political, social, and cultural dimensions. None of the learning activities mentioned above are able to specify, in advance, these variations in a way that maps onto the marketplace in real time. Thus, educators who rely on theory-laden approaches to entrepreneurship education are likely to be ineffective in creating entrepreneurs because entrepreneurship is a discipline of action in a real-world ecology of complex changes (Rae & Carswell, 2000; Corbett & Katz, 2012; Pittaway & Thorpe, 2012; Neck, Greene & Brush, 2014; White & D'Souza, 2014).

Based on the work of Kolb and Kolb (2005), we are arguing for an experiential approach to entrepreneurship education that relies on concrete real-world experiences rather than abstract theoretical constructs. Thus, our approach eschews analyses of hypothetical businesses, simulations, and case studies. Rather than focusing on learning about entrepreneurship, the experiential methodology requires that students practice entrepreneurship as part of class assignments. Students are required to come up with their own ideas, and then attempt to transform them into entrepreneurial opportunities. Instead of learning about abstract concepts of

new venture creation, students develop their own micro-business in class. In experiential methodologies, students learn about entrepreneurship by practicing it.

LITERATURE REVIEW

Entrepreneurship is a term that is widely used; as a point of clarity, we will start by defining entrepreneurship as the pursuit of opportunity beyond resources controlled (Stevenson, 1983). This definition is useful in that it is able to differentiate the practice of entrepreneurship from that of small business management. In contrast to the latter, entrepreneurship involves the development of knowledge, skills, and abilities in recognizing opportunity. We hasten to add that some small businesses do pursue novel opportunities, and so we agree that there is some overlap. However, most small businesses are not formed as the result of brand new opportunity; instead, most small businesses are carbon copies of others. Additionally, within this definition, the term "pursuit" describes the actions that the entrepreneur takes to successfully develop opportunity.

The term "pursuit: allows us to differentiate entrepreneurship from many types of new venture creation activities. For example, the person that opens a franchise is not an entrepreneur since that person is pursuing someone else's opportunity. Stevenson's (1983) definition of entrepreneurship suggests that entrepreneurship doesn't require the opening of a new business at all. Indeed, many successful entrepreneurs never open their own business, and instead pursue entrepreneurship from within existing companies. Finally, Stevenson's (1983) definition of an entrepreneur as an individual that pursues a novel opportunity without sufficient resources is important. If resources are already available, the subsequent tasks are managerial and not entrepreneurial. In summary, entrepreneurship is not reflected in small business management, in the purchasing of a franchise, or in the opening of a new business. Rather, the entrepreneur develops something novel that creates as well as captures value.

The term "opportunity" refers to opportunity recognition, and involves a process of preparation, incubation, insight, and evaluation (Wallas, 1926; Hills, Shrader, & Lumpkin, 1999). We believe that the preparation phase, in particular, is important to our reasoning here. The preparation stage of the opportunity recognition process can be understood as the entrepreneur's experiences prior to the entrepreneurial journey (Kao, 1989). This includes all previous entrepreneurial ventures, as well as all other combined life experiences. The preparation can be intentional, as is the case when the entrepreneur sets out to learn about a topic in order to launch a venture. Alternatively, the preparation may be incidental, the result of experiences with different members in society that have divergent beliefs and differential access to resources (Shane & Venkataraman, 2000).

We believe that an understanding of incidental preparation is critical to understanding entrepreneurial success because it reflects an awareness of multiple points of view, which then creates the problem-solving architecture that is necessary to realize that there are multiple potential paths to a desired outcome. Incidental learning captures knowledge of the effects of socioeconomic status, gender, race, education level, nationality, family structure, and multiple other aspects of real life that are important to navigate in the pursuit of entrepreneurial opportunity in the real world. Lumpkin and Lichtenstein (2005) argue that opportunity recognition is critically important since it outlines the process of how an entrepreneur first identifies a good idea, and then transforms it into a concept that adds value. Other researchers agree, and identify opportunity recognition as central to successful entrepreneurship (Ardichvili & Ray 2003).

Researchers have long explored opportunity recognition, focusing on the identification of qualities that make a good opportunity (Timmons & Spinelli 2007). However, Singh, (2001) questions the value of focusing on the identifications of qualities, since this only permits post hoc validation, thus providing limited insights into how and under which conditions opportunities are developed by entrepreneurs. Overcoming this limitation, Lumpkin and Lichtenstein (2005)

identify the need for the entrepreneur to effectively pursue the opportunity. To successfully pursue opportunities, entrepreneurs must rely on their personal and professional experience, and therefore rely heavily on their incidental preparation (Wallas, 1926; Hills, et al., 1999). Thus, entrepreneurial opportunities are not identified (or pursued) in an experiential vacuum. Rather, the knowledge, skills, and abilities necessary for entrepreneurship are developed over time from a variety of life experiences. Without these personal experiences to pull from, there is no inherent flexibility in the entrepreneurial process. We argue that experiential education provides life experiences, akin to those discussed in incidental preparation (Wallas, 1926; Hills, et al., 1999), that provide for the development of knowledge, skills, and abilities in entrepreneurial domains. As such, we argue that an experiential approach to entrepreneurship education is a mechanism through which students of entrepreneurship can become entrepreneurs.

We believe the above discussion dovetails nicely with current debate in higher education about the relationship of theory and practice in entrepreneurial pedagogy (Birch 2004; Hindle 2007; Pittaway & Thorpe, 2012; Politis 2011; Morris, 2014; Neck, Greene & Brush, 2014). In particular, Morris (2014) argues that today's rapidly expanding entrepreneurship education courses do not enjoy consensus among faculty regarding what should be taught. He and others argue that research has neglected to focus on how entrepreneurs learn through experiences and attain the knowledge, skills, and abilities that enable opportunity recognition (Cope 2005, 2010; Politis, 2011; Morris, 2014). In a particularly well-stated critique, Hindle (2007) noted that in higher education, entrepreneurial education includes two different approaches; those that "teach it," and those that "teach about it" (p. 107). We agree, and add that in order to teach entrepreneurship, entrepreneurial experiences in the real-world marketplace are foundational.

Experiential learning theory (Kolb & Kolb, 2008) draws upon the research of prominent twentieth century scholars who emphasized the role of experiences in learning (Lewin, 1942; Piaget, 1973; Dewey, 1986; Rogers & Freiberg, 1994). Experiential learning theory elaborates on the complex and dynamic nature of learning styles, and conceptualizes student development as occurring through (a) concrete experiences, (b) abstract conceptualizations, (c) active experimentations and (d) reflective observations. Learning occurs through both altering and adapting to the environment, through which new knowledge, skills, and abilities are created (Kolb & Kolb, 2008).

Experiential entrepreneurship learning is viewed not as a linear progression of knowledge acquisition, but a complex and dynamic learning process in which the entrepreneur actively engages with the world (Fenwick & Hutton, 2000; Cope, 2003; Pittaway & Thorpe, 2012). Learning comes from finding practical solutions to problems based on what does and does not work (Cope, 2005). Within this trial and error approach, learning is a personal journey over time (McMullen and Dimov, 2013). For this approach to be successful, the student requires a large degree of autonomy and assumes personal responsibility for learning (Garrison, 1997: Merriam & Bierema, 2014). Thus, experiential entrepreneurial learning requires a change in thinking from that of a passive student in a classroom to that of an active learner in control of the process. This change enables deep and meaningful learning to occur in a reflective process. Critically, for our arguments about the value of incidental preparation in entrepreneurial success made earlier, experiential learning theory intentionally incorporates knowledge of the situational context, as well as an individual's previous experiences into assets that form the starting points of the entrepreneurial journey (Fenwick, 2003; Kolb & Kolb 2008). Importantly, viewing entrepreneurship as a personal journey does not imply that learning is a strictly personal process. Students learn through real-life experiences in the world (Merriam & Bierema, 2014), and they attempt to solve problems collaboratively (Cope, 2003; Moon, 2004).

The role of the entrepreneurship professor in experiential learning is to structure curriculum and co-curricular activities that ensure entrepreneurial concrete experiences for learners. The active nature of the learning process provides an experience from which the learner can reflect and learn (Agryis & Schon, 1996). The reflective process is facilitated by the professor, whose

goal is to help students interpret and understand their experiences so that learning can occur (Moon, 2004; Finger & Asun, 2001). Curricula are designed to create real entrepreneurial experiences for the learners; in this way, experiential professors are facilitators rather than teachers. The experiential professor switches from focusing on "what to learn" and instead teaches students "how to learn" (Hase & Kenyon, 2000).

Our conception of the experiential entrepreneurship classroom aligns with Kolb's (1984) concept of concrete experience in that students are required to execute a business venture. In our classrooms, we describe this process to our students as a process in which they attempt to develop their ideas into entrepreneurial opportunities. The proposed ventures must be legal and adhere to all of the relevant universities' rules and regulations. Students are allowed to work independently or as members of a group, with the group size typically limited to three individuals. The size restriction ensures that all of the group members are activity engaged in all parts of the venture. Students perform a series of activities that are designed to help them develop their product or service (i.e., the proof of concept). Next, students must take their product or service and try to sell it, which involves assessment about who the customers are, how best to reach them, and how best to make the sale (i.e., the proof of market). Thus, throughout the semester, students practice all of the functional parts of entrepreneurship on their own ventures. We believe that there are four key elements to running a successful experiential classroom: Pursue a real opportunity, the exposing students to the possibility of subjective (i.e., grade-safe) failure, intrinsic motivation resulting from student ownership of the business idea, and engagement in the entrepreneurial cycle.

Because of our interest in developing pedagogy that will stimulate the production of entrepreneurs, or broadest theoretical interest is in predicting entrepreneurial behavior. The most well known theory of how to predict behavior is the theory of planned behavior (Ajzen & Fishbein, 1980, 2005; Fishbein, Ajzen & Albarracin, 2007). The theory of planned behavior is a general theory that can be applied across a wide variety of domains; for our current purposes, we focus on the ability of this theory to explain entrepreneurial behavior. According to the theory, when individuals are deciding on whether to engage in entrepreneurial behavior, they consider three interrelated sets of issues: their current attitudes toward entrepreneurship behaviors, perceived social norms about entrepreneurial behavior, and perceived behavioral control over the extent to which they can act entrepreneurial. These three elements then combine to form an individual's entrepreneurial intention, which then, in turn, predicts entrepreneurial behavior.

We believe it's important to investigate how attitudes, perceived behavioral control, and subjective norms are related before experiential education occurs, as well as what happens to those relationships following exposure to our approach. Because the target of this approach were first-year college students, their intentions to pursue entrepreneurship were probably the result of their personal attitudes regarding entrepreneurship, as well as their perceptions of the extent to which those that were important to them valued entrepreneurship (i.e., subjective norms). Because the vast majority of these students are unlikely to have knowledge about their actual abilities in entrepreneurial domains, we did not expect to find a correlation between perceived behavioral control and entrepreneurial intentions. Thus, we have two specific hypotheses: First, prior to the experiential class, only attitudes and subjective norms will be positively correlated with entrepreneurial intentions. Second, after experiential learning opportunities, perceived behavioral control will be positively correlated with entrepreneurial intentions.

When we began our discussion of impediments to the success of entrepreneurship education, we discussed research that suggests that the millennial generation is risk averse, uncertainty avoidant, and unable to cope with failure (Twenge, 2009). Because of the various sources of uncertainty in the practice of entrepreneurship, we have particular interest in the ability of experiential education to fortify perceived behavioral control. While we agree that attitudes and subjective norms regarding entrepreneurship are important in predicting intentions in long-term sense, we don't see any theoretical reason why experiential learning should change attitudes or subjective norms toward entrepreneurship. Whereas attitudes and subjective norms are malleable

in response to social factors like persuasion, changes in perceived behavioral control are likely to come about only from direct experiences. Exposure to the inherent risks, uncertainties, and especially to failures, however, should dramatically impact perceived behavioral control. Removing the objective threat (i.e., potential to fail the class) from experience of failure (i.e., class venture fails) should fortify perceptions of control, give students practice with overcoming failure and, ultimately build their resilience. Thus, we have the somewhat counterintuitive prediction that increasing perceived behavioral control may depend upon failure in entrepreneurial ventures.

With regard to entrepreneurial intentions, we have exploratory predictions. There is no reason to assume that the first experiences in practicing entrepreneurship will result in increased intentions to pursue an entrepreneurial career. In fact, we speculate that the reverse may actually be the case. Exposure to the risk, uncertainty, and realities of failure may increase perceptions of control, but may actually decrease entrepreneurial intentions. Alternatively, it could just as easily be the case that entrepreneurial intentions will not be affected by our approach. Intentions take time to build, especially within new domains. If the experiential approach does indeed have the capacity to increase entrepreneurial intentions, these effects might take longer to solidify than the current research was designed to assess. Thus, we predict that the experiential approach will not affect either attitudes or subjective norms (hypothesis 3), but that perceived behavioral control will increase (hypothesis 4). Finally, we are exploring the effects of the experiential approach on entrepreneurial intentions (hypothesis 5).

We approached our questions about the impact of experiential education with a mixed-methods approach. First, to address hypotheses one and two, we used a correlational design, allowing us to assess the degree of linear relationships between attitudes, perceived behavioral control, subjective norms, and entrepreneurial intentions within a single entrepreneurship class at the beginning, middle, and end of the Fall 2016 academic semester. Secondly, to address hypotheses three, four, and five, we used a within-groups design to compare average ratings of attitudes, perceived behavioral control, subjective norms, and entrepreneurial intentions across our three time points. As a secondary analysis, we used a between—groups design to compare time three responses between our class and a separate, theory-based class at the same institution during the same semester.

METHODOLOGY

Participants and Design

The sample consisted of 27 students taking an introductory to entrepreneurship course at a small liberal arts university in New England. The course was part of a minor in entrepreneurship, which was open to students across the university. Historically, 50% of the students that take this class are in a management discipline; the rest come from various non-management disciplines. Students take the course for a variety of reasons; a few want to become entrepreneurs, but most are simply exploring entrepreneurship.

We collected data with paper-and-pencil surveys that were later entered into statistical software for the purposes of analysis. After participants provided information about their age (M = 19.40, SD = 1.15) and sex (13 male), they responded to a series of questions assessing the variables of interest for the study. All 27 participants completed the first wave of data collection, 19 completed wave two, and 23 participants completed wave 3.

Measures

Attitudes toward entrepreneurship

Students responded to two questions that measured their personal attitudes toward entrepreneurship; specifically, participants were asked whether a career as an entrepreneur was

attractive and if such a career would be satisfying on 7-point scales (1 = *completely disagree* and 7 = *completely agree*). For the within-group design, responses were averaged into indices of attitudes at time one (α = .60), time two (α = .89), and time three (α = .84). Because our between group analysis included individuals from a different class, we recomputed the reliability coefficient for time three (α = .88).

Perceived behavioral control

Students responded to five questions that measured perceived behavioral control. Participants were asked to indicate on 7-point scales (1 = *completely disagree* and 7 = *completely agree*) that they could control the creation process of a new business, knew the necessary practical details to start a new business, and three separate items asked them to indicate their beliefs regarding their knowledge, skills, and abilities to be a successful entrepreneur. For the within-group comparisons, responses were averaged into indices of perceived behavioral control at time one (α = .93), time two (α = .83), and at time three (α = .82). For the between-group comparison, we recomputed the reliability coefficient for time three (α = .90).

Subjective norms

Students indicated on 7-point scales (1 = *completely disagree* and 7 = *completely agree*) the extent to which their family and friends would be happy and proud if he or she were to start his or her own business. For the within-group comparison, responses were averaged into indices of subjective norms at time one (α = .69), time two (α = .89), and time three (α = .74). For the between-group comparison, we recomputed the reliability coefficient for time three (α = .76).

Entrepreneurial intention

Students responded to three items that assessed their entrepreneurial intentions. They indicated on 7-point scales (1 = *completely disagree* and 7 = *completely agree*) the extent to which they were ready to do anything to be an entrepreneur, that their professional goal was to become an entrepreneur, and the extent to which they intended to start a business. For the within-group comparison, responses were averaged into indices of entrepreneurial intention at time one (α = .87), time two (α = .92), and at time three (α = .92). For the between-group comparison, we recomputed the reliability coefficient for time three (α = .91).

Procedure

Students in the class experienced three aspects of the entrepreneurial process. First, students were given an initial amount of money and told, either as individuals or in groups, to develop an idea to make money (e.g., making cookies). Once they had the idea, they developed their proof of concept by assessing what they had at their disposal, as well as what they needed from other people in order to transition from idea to concrete venture (e.g., they needed ingredients, an oven, etc.). Finally, students developed proof of market by taking their product (e.g., cookies) and actively selling it in the marketplace. Students practiced all of these skills throughout the semester. Between our first wave of data and our second, students had engaged in anywhere from two-to-five complete cycles. The number of cycles varied because students that are not initially successful (in selling cookies) had to pivot and come up with a different idea. Between the second and third wave, the students had finalized their business ventures and continued to engage in the cycle. They make small iterations to their idea based on customer feedback and their own ideas of how to make the venture more profitable.

RESULTS

To establish a baseline for how attitudes, perceived behavioral control, subjective norms, and entrepreneurial intentions were related, we computed bivariate Pearson correlation coefficients for time one, time two, and time three. These correlation matrices, along with statistical tests of significance, are detailed below in Tables 1 – 3, respectively, below.

TABLE 1
PEARSON'S CORRELATIONS (R) AMONG VARIABLES AT TIME ONE (N = 27)

	Attitudes	PBC	Subjective Norms	Intentions
Attitudes	1.0	.37*	.25	.76**
PBC		1.0	.02	.26
Subjective Norms			1.0	.17
Intentions				1.0

*$p < .05$
**$p < .01$

As can be seen in Table 1, there were very few significant relationships at time one. Providing partial support for Hypothesis 1, attitudes toward entrepreneurship were significantly (and positively) related to perceived behavioral control and to entrepreneurial intentions. Contrary to predictions, subjective norms were not related to entrepreneurial intentions. To assess our second hypothesis that experiences with entrepreneurship would affect the relationships among theory of planned behavior variables, we ran two more sets of correlational analyses. Tables 2 and 3 provide the information for time two and time three, respectively.

TABLE 2
PEARSON'S CORRELATIONS (R) AMONG VARIABLES AT TIME TWO (N = 19)

	Attitudes	PBC	Subjective Norms	Intentions
Attitudes	1.0	.54**	.76**	.88**
PBC		1.0	.06	.61**
Subjective Norms			1.0	.66**
Intentions				1.0

*$p < .05$
**$p < .01$

TABLE 3
PEARSON'S CORRELATIONS (R) AMONG VARIABLES AT TIME THREE (N = 23)

	Attitudes	PBC	Subjective Norms	Intentions
Attitudes	1.0	.71**	.66**	.94**
PBC		1.0	.60**	.65**
Subjective Norms			1.0	.60**
Intentions				1.0

*$p < .05$
**$p < .01$

Inspection of Tables 2 and 3 provides support for hypothesis that experiential education changes the relationships among theory of planned behavior variables: attitudes, perceived behavioral control, subjective norms, and entrepreneurial intentions. Specifically, whereas at

baseline (i.e., Table 1) only attitudes were related to entrepreneurial intentions, by time two, all three variables in the model (attitudes, perceived behavioral control, and subjective norms) all were strongly (and positively) related to the extent to which students intended to pursue entrepreneurial careers. As can be seen in Table 3, the effect of our experiential approach continued at time three, with all variables in the model indicating statistically significant (and strongly positive) relationships.

Because the analyses just reported are correlational in nature, they are unable to provide information about causation. To assess hypotheses three, four, and five, four separate paired-samples t-tests were conducted to assess changes in average ratings of attitudes, perceived behavioral control, subjective norms, and entrepreneurial intentions from time one to time two. These data are summarized below in Table 4.

TABLE 4
DESCRIPTIVES AND T-TEST RESULTS FOR ATTITUDES, PBC, SUBJECTIVE NORMS, AND INTENTIONS (TIME 1 – TIME 2)

	Time 1		Time 2				
Outcome	M	SD	M	SD	N	t	df
Attitudes	5.47	1.30	5.00	1.84	16	1.89	15
PBC	4.00	1.41	4.88	0.98	16	-2.97**	15
Subjective Norms	5.81	0.89	5.50	1.24	16	1.21	15
Entrepreneurial Intentions	4.52	1.68	4.54	1.75	16	-0.08	15

$^{**}p < .01$

In support of hypothesis three, there was no statistically significant effect of an experiential approach on either attitudes or subjective norms. However, in support of hypothesis four, there was a dramatic increase in perceived behavioral control. In assessing the effect of an experiential approach on entrepreneurial intentions, Table 4 indicates that these ratings were unaffected, a finding to which we return, below. Treating time two as the new baseline, we then assessed additional changes by time three (see Table 5).

TABLE 5
DESCRIPTIVES AND T-TEST RESULTS FOR ATTITUDES, PBC, SUBJECTIVE NORMS, AND INTENTIONS (TIME 2 – TIME 3)

	Time 2		Time 3				
Outcome	M	SD	M	SD	N	t	df
Attitudes	4.86	1.87	5.01	1.83	18	-1.02	17
PBC	4.81	0.93	5.23	0.88	18	-1.71	17
Subjective Norms	5.25	1.24	5.64	1.15	18	-0.67	17
Entrepreneurial Intentions	4.44	1.77	4.57	1.76	18	-1.57	17

Although inspection of Table 5 indicates no statistically significant increases between time two and time three, we believe that the direction of the observed effects is worth mentioning; specifically, all variables indicate positive trends between times two and three. To complement the above findings, we used a between-groups design to tighten up our claim that it is our experiential approach to entrepreneurship, and not experiences in an entrepreneurship class, per se, that increase perceived behavioral control. At the end of the Spring 2016 semester, students in the experiential entrepreneurship class (N = 23) were compared with students in a non-

experiential entrepreneurship class (N = 15) at the same institution. This data can be seen in Table 6.

TABLE 6
RESULTS OF T-TEST AND DESCRIPTIVES FOR STUDY VARIABLES BY TYPE OF INSTRUCTION

	Experiential Class			Theory Laden Class				
Outcome	M	SD	N	M	SD	N	t	df
Attitudes	5.00	1.66	23	4.91	1.71	16	0.17	37
PBC	5.12	0.84	23	4.11	1.56	15	2.32*	19.32
Subjective Norms	5.59	1.08	23	6.11	0.90	14	0.52	35
Entrepreneurial Intentions	4.52	1.69	23	4.20	2.07	15	-1.50	36

Note: Sattherwiate approximation employed for PBC due to unequal group variances
*$p < .05$.

Although we must be cautions in making too much of the effects of the between-group comparison, we believe that this data provides a meaningful piece to our arguments about experiential approaches to teaching entrepreneurship. Whereas the previous analyses investigate the ability of our experiential approach to increase perceived behavioral control over time, the between-group comparison indicates that our experiential approach resulted in significant increases in perceived behavioral control compared to a traditional, theory-laden approach. Taken together, results indicate robust support for our third hypothesis—our experiential approach increases perceived behavioral control.

Discussion

We approached this research motivated by a concern that is reflected in the vast majority of the entrepreneurship literature—there is no real impact of entrepreneurial education on entrepreneurial activity (Bae, et al., 2014). Considering the financial and intellectual investment that colleges and universities are funneling into these curricula, we believe that it is critical to investigate why these programs are not working. We began with a hunch, shared by a few others that a significant part of the problem was that these programs rely on traditional pedagogical paradigms that are ill-suited for both today's students (Twenge, 2009), and the nature of entrepreneurial practice (Rae & Carswell, 2000; Corbett & Katz, 2012; Pittaway & Thorpe, 2012; Neck, Greene & Brush, 2014; White & D'Souza, 2014). Thus, we reviewed the literature on experiential learning theory, developed it into a concrete approach, and applied it to an introductory entrepreneurship class.

Because the theory of planned behavior is a theory of behavior change that focuses on the importance of behavioral intention (Azjen & Fishbein, 1980), we first sought out to assess the degree of relationships among attitudes, perceived behavioral control, subjective norms, and entrepreneurial intentions. Our first two hypotheses addressed this question directly by assessing the degree of these interrelationships before any exposure to entrepreneurship, midway through the semester, and at the conclusion of the semester. In line with the general idea that behavioral intentions change in response to experiences over time (Azjen & Fishbein, 1980, 2005; Fishbein, et al., 2007), our data indicate that whereas only attitudes were related to intentions at the start of the semester, by mid-semester, both subjective norms and perceived behavioral control were also strongly correlated with entrepreneurial intentions. Moreover, these relationships endured until the end of the semester.

Turning to hypotheses three and four, we note that although not statistically significant, attitudes and subjective norms both decreased in response to experiential education. At first blush, that attitudes toward entrepreneurship and subjective norms about entrepreneurship would decrease between time one and time two may appear to be counterintuitive. However, we believe that these results are evidence of the utility of our approach. Until the experience of entrepreneurship, its value and application are abstract. After the struggle involved with initial entrepreneurial experiences, one may feel more equipped to approach entrepreneurial behavior (as evidenced by increases in perceived behavioral control), but may see such endeavors as less desirable along a variety of other dimensions (i.e., attitudes and subjective norms). Indeed, entrepreneurship is certainly not for everyone, and we believe that an experiential approach in early levels of entrepreneurship curricula may be critical in helping students realize that they do not, in fact, want to pursue entrepreneurship as a career.

Because of the introductory nature of the class, pedagogical approaches that fortify perceived behavioral control is a logical first step. We should not be discouraged that no other effects emerged significant, especially given the direction these effects were heading by time three – all were trending in the direction of increase. The students in this class had barely dipped their toes into the practice of entrepreneurship, and we believe that additional experiences at higher levels of the entrepreneurship curricula have the potential to increase entrepreneurial intentions significantly and, by extension, result in increases in entrepreneurial behavior. Future research, therefore, should model changes in entrepreneurial intention over longer time periods than the current research is able to address. Cohort studies, which would follow entrepreneurship students across four-year curricula, would provide ideal tests of these hypotheses.

We conducted a mixed-methods research to test the effectiveness of experiential methods in increasing entrepreneurship amongst university students. We noted that the biggest change in behavioral control occurred between phase one and phase two. There may be value in designing 1-credit entrepreneurship courses that are of shorter duration, designed to provide students with short bursts of entrepreneurship. Despite the proliferation of curricula, the research shows the EE has not been an effective in developing entrepreneurs. Our research provides support for the notion that experiential and not theory-laden courses are necessary in developing entrepreneurs.

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