

DOES ENTREPRENEURIAL EDUCATION MATTER IN THE CULTIVATION OF BUSINESS ENTREPRENEURIAL INTENTIONS AND SOCIAL ENTREPRENEURIAL INTENTIONS?

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ABSTRACT

This study examines whether or not entrepreneurial education can predict business entrepreneurial intentions and social entrepreneurial intentions. This research draws primarily from the analysis of survey data of collegiate students as well as relevant literature in the field. In addition to entrepreneurial education, the effect of gender on entrepreneurial intentions was also examined. Results of this analysis can be used to foster increased entrepreneurial activities within the collegiate community.

KEYWORDS

Entrepreneurial intentions, social entrepreneurship, education, gender.

INTRODUCTION

Entrepreneurial education has long been a factor considered to influence entrepreneurial intention (Fastre and Gils, 2007). There is high receptivity of entrepreneurial education among students who believe it to be beneficial to learn about entrepreneurship, be trained in the processes to build interest, and aid in the discovery of new opportunity (Wilson et al, 2007; Quan, 2012). It has been shown one's area of study and years of education greatly influence entrepreneurial intention (Davidsson, 1995; Mayhew et al, 2012; Yaghmaei, 2015). The influence of education on entrepreneurial intention greatly depends on the course information, the relationship with faculty, and the ability to innovatively problem solve, communicate value and importance of innovative ideas, and defend an argument (Fastre and Gils, 2007). Education was found to be especially important in building social entrepreneurial intention by increasing perceived know-how and in the identification of opportunities for societal contribution (Davidsson, 1995). Nonetheless, there

is no study that looks that compares the level of impact of education in the formation of business and social entrepreneurial intentions.

Business entrepreneurship is “the control and deployment of resources to create an innovative economic organization (or network of organizations) for the purpose of gain or growth under conditions of risk and uncertainty” (Dollinger, 2008). Social entrepreneurship, on the other hand, is defined as entrepreneurship with a wider view on social vision and sustainability in addition to innovativeness and financial success while striving to create a solution to a social problem that goes beyond philanthropic efforts (Nga & Shamuganathan, 2010). The orientation of a person which might lead to that person becoming an entrepreneur is entrepreneurial intention. Davidsson (1995) addresses the factors that make up an individual’s decision on whether or not to become an entrepreneur. He highlights attitudes and personal background as the integral part to this decision. For instance, “attitudes or values favoring competitiveness and (individual) achievement positively affect entrepreneurial intentions” (Davidsson, 1995).

Since intentions precede behavior, it is advisable to investigate the cultivation of entrepreneurial intention, which in turn influences entrepreneurship. Understanding the roles of education in the development of entrepreneurial intentions can help scholars and practitioners create the best environment for entrepreneurship to flourish. Therefore, answering the questions, “How do we cultivate entrepreneurial intention?” and “Does education affect entrepreneurial intention?” are essential. Some believe education decreases entrepreneurial intention because it raises the awareness of the difficulty and the complexity of entrepreneurship and that the formality of education decreasing creativity (Fastre and Gils, 2007; Mayhew et al, 2012). Thus, it also appears that the question whether education increases or decreases entrepreneurial intention remains unanswered. For example, pushing students out of their comfort zones as a means of education has been found to decrease intention (Mayhew et al, 2012).

On the other hand, students of entrepreneurial programs who learn the necessary skills for entrepreneurial success, desire opportunities for entrepreneurial experience and entrepreneurial role models to fuel their desire to pursue entrepreneurship (Davidsson, 1995; Fastre and Gils, 2007). There are also claims that education has no effect on intention and that entrepreneurship and entrepreneurial intention cannot be taught (Hessels et al, 2008).

Fairlie and Robb (2009) discussed how gender differences affect the performance of a business. Mason and Harrison (2007) discussed gender and how that affects access to finance. Factoring gender into this equation, raises the concern of how a females’ upbringing may impede their path to becoming an entrepreneur. Studies have shown that there is a conflict between expectations versus standards in society. Women “realize that they are expected to possess certain traditional female characteristics such as passiveness, adjustment, sensitivity to others’ expectations, and altruism. They are not expected to show competitiveness” (Maatta and Uusiautti, 2020), which has been identified a necessary trait for entrepreneurial success. Surely, gender inequality may be traced to informal settings such as the home and in formal environments such as the educational system and workplaces.

LITERATURE REVIEW

Cognitive Learning Theory

The role of formal entrepreneurship education and training in influencing entrepreneurial intentions can be explained by the cognitive learning theory. Cognitive learning theory emphasizes problem solving, information processing, and concept formation as a means of focusing not on “what learners do, but what they know” (Ertmer & Newby, 2008). This theory urges interaction with instructional design, similar to what is created in courses within academic environments (Ertmer & Newby, 2008).

According to the cognitive learning theory, an action or response can be influenced by the acquisition of knowledge and rationality (Ertmer & Newby, 2008). This theory is contingent on effective teaching which encourages students and provides a learning environment as well as knowledge retention (Ertmer & Newby, 2008). The cognitive learning theory, thus stresses the effects of education on problem-solving strategies and how to apply them to new situations (Ertmer & Newby, 2008).

It is noted that the effects of entrepreneurial education differ by type of education, gender and culture. In a study conducted by Fastre and Gils (2007), students indicated that the university education they received prepared them for the organizational competencies that are necessary for entrepreneurship and led to high intention levels when compared to strictly learning about entrepreneurship which saw significantly lower intention levels. That type of education was reported to influence the dedication or desire to join the entrepreneurial field (Fastre and Gils, 2007). Interestingly, Wilson et al. (2007) reported that females are more significantly influenced by education compared to males. Further, different approaches to education appeal to different cultures. For instance, France was found to have great value placed on the academic teaching of skills whereas students in the United States are more likely to be influenced by the teachings of current entrepreneurs and entrepreneurial role models (Boissin, Branchet, Emin and Herbert, 2009).

Hypotheses

Much of the perspective on the effect of education focuses on the aspects of learning the skills and processes of entrepreneurship as well as building self-efficacy (Boissin et al, 2009; Mayhew et al, 2012; Quan, 2012). Davidsson (1995) argues that often, the influence of education on entrepreneurial intention is indirect. Entrepreneurial education has been found to increase self-efficacy and attractiveness of entrepreneurship, which then results in entrepreneurial intention (Boissin et al, 2009; Wilson et al, 2007).

The opportunity to challenge students to think innovatively and use innovative approaches to solving problems in the classroom was specifically noted to have a strong positive relationship with entrepreneurial intention (Mayhew et al, 2012). It is also mentioned that through education, students can experience the benefits of factors such as exposure through the opportunities to network and surround themselves with entrepreneurial minded students and role models (Karimi, Biemans, Lans, Chizari, Mulder, and Mahdei, 2013).

Despite the many disagreements over the effectiveness of education in influencing entrepreneurial intention, there is significant evidence proving a positive relationship. Mayhew et al (2012) found that entrepreneurship courses explained 2.3% of the variance of entrepreneurial intention as those who have received education were more likely to have intention and those with entrepreneurial intention were most influenced by education, even more so than through exposure.

Entrepreneurial courses may be critical for encouraging women into entrepreneurship and in undoing the strong influence social norms have on their intention (Karimi et al, 2013). The formal and informal education that is received especially at a young age may be critical in shaping a woman's perception on what they think they can and cannot do. Ideas and thoughts of what a person intends to become as an adult is built over a lifetimes starting from early years. Thus, if girls are socialized to be passive, then the likelihood of them exhibiting a passive behavior in adulthood is very high.

Based on the aforementioned and literature regarding education and entrepreneurial intention, we hypothesize that:

***H1:** There is a significant difference in business entrepreneurial intentions based on entrepreneurial education, with those having entrepreneurial education reporting higher business entrepreneurial intentions.*

***H2:** There is a significant difference in social entrepreneurial intentions based on entrepreneurial education, with those having entrepreneurial education reporting higher social entrepreneurial intentions.*

Gender Differences on Entrepreneurial Intentions

There have been conflicting studies on the role of gender in entrepreneurial intentions. According to the 2002 U.S. Census Bureau, female-owned businesses are outnumbered two to one by male-owned businesses. Some have reported female-owned to account for only 25% of all businesses (Wilson et al, 2007; Quan, 2012). Men are two times more likely to start a new business and 75% more likely to be an "active entrepreneur" (Wilson et al, 2007). Men are often over-represented in the entrepreneurial community and have significantly higher entrepreneurial intention compared to women (Davidsson, 1995).

Personality is often an explanatory variable for gender differences in entrepreneurship and entrepreneurial intention. Men are typically more optimistic in risk taking and are more likely to acknowledge entrepreneurial intention, which significantly improve the entrepreneurial intention rates of men (Boissin et al, 2009; Mayhew et al, 2012; Quan, 2012). The potential to generate profit and the propensity to compete are often attributed as masculine values such as assertiveness, pursuit of material success, and low uncertainty avoidance (Davidsson, 1995; Gokton & Gunay, 2011; Wilson et al, 2007).

The presence of an entrepreneurial father has been shown to be a significant contributor in the development of entrepreneurial intention (Davidsson, 1995). This is a dynamic which may be especially detrimental to the development of entrepreneurial intention amongst women since

women tend to be more influenced by communal values compared to men (Karimi et al, 2013). Education is important for women because, compared to men, women are more inclined to rate themselves lower in self–efficacy, which can be increased through education (Wilson et al, 2007). While men and women were found to have the same technical abilities and education; therefore, variations in their self–efficacy may explain why their entrepreneurial intentions differ (Sánchez, 2012). Interestingly, men are more likely to be motivated to be entrepreneurs based on societal expectations. Women, on the other hand, are more influenced by know–how (Davidsson, 1995). Given the interest on the role of gender on intentions (Yaghmaei, 2015), we hypothesize that:

H3: There will be a significant difference in business entrepreneurial intentions and social entrepreneurial intentions based on gender.

RESEARCH METHOD

The population for this study consisted of full–time, degree–seeking, undergraduate students attending a university in the North West United States. We used a convenience sample which resulted in 210 received responses. Although a convenience sample was used, students sampled represented all four years of study. Data was collected via an online survey using the snowball technique. The survey was given to students in courses led by investigators in this study with responses encouraged by offerings of extra credit to students who solicited a response to the survey.

Students were then encouraged to forward the survey on to friends. The data set was analyzed using the Statistical Packages for Social Sciences (SPSS) software program. Descriptors of demographic characteristics (e.g., gender, age and race) and the dependent variables (business entrepreneurial intentions and social entrepreneurial intentions) included frequencies, percentages, means, and standard deviations. Among other external factors, data was collected on students' entrepreneurial education (have taken a class or seminar). The analysis was limited to entrepreneurial education and did not include the other external factors, such as exposure and experience, which are beyond the scope of the study.

Independent t–tests and ANOVA were used to compare differences in entrepreneurial intentions and social entrepreneurial intentions of respondents based on entrepreneurial education. OLS Regression was used to determine the influence of entrepreneurial education on entrepreneurial intentions and social entrepreneurial intentions. The scales used were as follows: *Prior entrepreneurial education* was measured by asking respondents if they had “taken an entrepreneurship class or seminar/workshop.”

RESEARCH RESULTS AND DISCUSSION

Research on the influence of education on entrepreneurial intention found that education in the broad sense had significant influence on entrepreneurial intention (Mayhew et al, 2012), especially when it led to self–efficacy (Wilson et al, 2007). Exposure and experience are separate paths to learning entrepreneurship. For example, the acceptance into social networks and resource environments are key benefits of having entrepreneurial exposure, which are believed

to be highly effective in facilitating entrepreneurial intention (Quan, 2012). Exposure to entrepreneurs has been found to be more potent than formal education and experience; however, its ubiquitous nature presents significant measurement and comparative issues (Boissin et al, 2009). Exposure through education, nonetheless, can blur the lines between the two factors, making it challenging to disentangle whether the effects is from one or the other (Davidsson, 1995).

Table 1 shows the descriptive statistics of the data based on the responses obtained from the study, and Table 2 shows the differences in the mean score of business entrepreneurial intentions by education. Table 3 shows the differences in social entrepreneurial intention mean score by entrepreneurial education and selected demographics, and Table 4 shows the regression analysis for the relationships between entrepreneurial education and BEI versus SEI.

Table 1. Descriptive Statistics of Responses

<i>Demographic and Variable Descriptive Statistics</i>					
Variable	N	%	Variable	n	%
Employment Status			Gender		
Unemployed	44	21.0	Female	123	58.6
Employed Part-Time	86	41.0	Male	87	41.4
Employed Full-Time	80	38.1			
			Taken Seminar in Entrepreneurship		
			Yes	47	22.4
			No	163	77.6
Race			Taken Class in Entrepreneurship		
Non-European	51	46.4	Yes	70	33.3
European Descent	39	35.5	No	140	66.7
Variable	N	Mean	SD	Min	Max
Age	209	24.59	6.59	18	51
BEI	210	2.77	1.09	1	5
SEI	210	3.29	0.95	1	5

n = number of respondents; SD = standard deviation; Min = minimum; Max = maximum; BEI = Business entrepreneurial intention; SEI = Social entrepreneurial intention

Table 2. Differences in Entrepreneurial Intentions Mean Score by Entrepreneurial Education and Selected Demographics

Differences in Entrepreneurial Intentions Mean Score by Entrepreneurial Education and Selected Demographics	Entrepreneurship Education		t	df
	Yes	No		
Entrepreneurship Class	3.12 (1.06; n=70)	2.60 (1.07; n=140)	-3.35**	208
Entrepreneurship Workshop	3.05 (1.16; n=47)	2.69 (1.06; n=163)	-1.99*	208
Demographics				

Gender	Male	2.99 (0.97; n=87)	Female	2.62 (1.15; n=123)	2.49*	201.3
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*.r is significant at $p < .05$; ** $p < .01$. SD in parentheses

Table 3. Differences in Social Entrepreneurial Intentions Mean Score by Entrepreneurial Education and Selected Demographics

Differences in Social Entrepreneurial Intentions Mean Score by Entrepreneurial Education and Selected Demographics						
		Exposure to Entrepreneurship Education				
		Yes	No	t	df	
Entrepreneurship Class		3.27 (0.86; n=70)	3.29 (1.00; n=140)	0.14	208	
Entrepreneurship Workshop		3.58 (0.88; n=47)	3.20 (0.95; n=163)	-2.43*	208	
		Demographics				
Gender	Male	3.24 (1.03; n=87)	Female	3.32 (0.89; n=123)	-0.53	208

*.r is significant at $p < .05$; ** $p < .01$. SD in parentheses

Table 4. Regression Analysis for the Relationships between Education and BEI versus SEI

Variables	Business Entrepreneurial Intentions	Social Entrepreneurial Intentions
Intercept	1.916 (0.366)	3.304 (0.342)
Non-European	0.058 (0.065)	0.020 (0.060)
Gender (Female)	-.284 (0.144) *	0.209 (0.134)
Age	0.011 (0.011)	-0.016 (0.010)
Taken an entrepreneurship class	0.354 (0.161)*	-0.136 (0.150)
Attended a seminar or workshop	-0.076 (0.182)	0.316 (0.170)
Number of observations	210	210
F	6.247**	2.516**
R-square	0.22	0.102

Robust standard errors are in parentheses. Statistical levels of significance are: * indicates $p < 0.05$, ** indicates $p < 0.01$. Reference categories: Gender (male) and European Descent.

Differences in BEI and SEI Scores by Entrepreneurial Education

Independent t-tests were conducted to investigate whether there were differences in business entrepreneurial intentions and social entrepreneurial intentions based on whether they reported taking an entrepreneurship class, or seminar/workshop. There was no significant difference in social entrepreneurial intention scores based on taking an entrepreneurship class. However, those who reported taking a class in entrepreneurship reported significantly higher business entrepreneurial intentions ($M=3.12$, $SD=1.06$) than those who had not taken an entrepreneurship class ($M=2.6$, $SD=1.07$), $t_{(208)} = -3.35$, $p=0.001$. The mean difference was 0.523 (Table 2).

Those who reported having attended a seminar or workshop in entrepreneurship reported significantly higher business entrepreneurial intentions ($M=3.05$, $SD=1.16$) than those who had not attended a seminar or workshop ($M=2.69$, $SD=1.06$), $t_{(208)} = -1.988$, $p=0.048$. The mean difference was 0.357 (Table 2). Additionally, those who reported having attended a seminar or workshop in entrepreneurship reported significantly higher social entrepreneurial intentions

($M=3.58$, $SD=0.88$) than those who had not attended a seminar or workshop ($M=3.20$, $SD=0.955$), $t_{(208)} = -2.438$, $p=0.016$. The mean difference was 0.38 (Table 3).

Table 4 presents the results of the two separate regression analyses to test the influence of entrepreneurial education as a predictor of entrepreneurial intentions and social entrepreneurial intentions. The regression model predicting social entrepreneurial intentions was significant ($F = 2.516$, $P= 0.009$) and explained about 10.2 % of the variance in social entrepreneurial intentions. In the model, unlike some variables not shown, entrepreneurial education was not a significant predictor of social entrepreneurial intentions. The regression model predicting business entrepreneurial intentions was significant ($F = 6.427$, $P= 0.000$) explaining about 22% of the variance in entrepreneurial intentions. In this model, gender and taking a class in entrepreneurship (along other variables not shown) were significant predictors of entrepreneurial intentions. Those who reported taking a class in entrepreneurship reported higher entrepreneurial intentions than those who had not taken a class. Males reported significantly higher entrepreneurial intentions compared to females.

There was no significant difference in social entrepreneurial intention scores based on gender. However, males had significantly higher business entrepreneurial intentions ($M=2.99$, $SD=0.97$) compared to females ($M=2.62$, $SD=1.15$), $t_{(208)} = 2.49$, $p=0.014$. The mean difference was 0.366 (See Table 2 & 3). Thus, Hypothesis 3 (H3), which states that there is a significant difference in BEI and SEI based on gender was partially supported.

Indeed, we found that men reported higher business entrepreneurial intentions than females consistent with other studies (Cardella, Hernandez-Sanchez & Sanchez-Garcia, 2020; Dheer et al., 2019; Mayhew et al, 2012; Quan, 2012; Minniti, 2010; Rae & Carswell, 2000; Wilson et al, 2007). However, no significant difference in SEI scores was found based on gender. This suggests that men and women have the same propensity to start a social venture. While men are more likely to start a business, venture compared the women.

CONCLUSION

The aim of this study was to provide greater insight into the relationship between entrepreneurial education and entrepreneurial intentions. Data analysis from a sample of 210 students shows that taking an entrepreneurship class did not result in a significant difference in social entrepreneurial intention scores but in significantly higher business entrepreneurial intentions. Attending a seminar or workshop in entrepreneurship corresponded to significantly higher business entrepreneurial intentions and social entrepreneurial intentions. Our predictive model showed that gender and taking an entrepreneurship class were significant predictors of entrepreneurial intentions. Males reported significantly higher business entrepreneurial intentions compared to females, but there was no significant difference in social entrepreneurial intention scores based on gender.

Limitations of Study

This study has various limitations. The survey was conducted at only one university in the North West of the United States which did not provide a diversity of culture, geographical location, and

social structure. This is relevant especially considering that entrepreneurial intention among women is heavily influenced by cultural expectations and education (Wilson et al, 2007). Moreover, the location may have influenced on the availability of opportunities to acquire entrepreneurial education through the classroom and workshops or seminars, entrepreneurial experience as well as exposure to entrepreneurial role models.

Another limitation is that the students represented in the responses could have been from mostly business venture backgrounds and less of social ventures experiences, which may have skewed the results in favor of BEI over SEI.

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