

Entrepreneurship as a Career Choice: An Analysis of Entrepreneurial Self-Efficacy and Intention of University Students

Zaidatul Akmaliah Lope Pihie

Faculty of educational studies, University Putra Malaysia

E-mail: zalp@educ.upm.edu.my

Abstract

A study was conducted to determine university students' perceptions on entrepreneurial self-efficacy and entrepreneurial intention. Data were collected via questionnaire. The study utilized a descriptive research design and 1,554 university students participated in it. Each set of research constructs has a reliability value range between .74 and .96. Findings indicate that the students had moderate score on all constructs related to entrepreneurial intention and entrepreneurial self-efficacy in the aspects of management, financial and marketing. Moreover, students with positive entrepreneurial aspiration scored higher in entrepreneurship intention and self-efficacy which is significantly different from those who do not have positive aspiration. The students also scored moderately on attitudes towards entrepreneurial career and perceived behavioral control. The findings also indicate that those who perceived entrepreneurship need to be learnt at university have significantly higher mean score on attitudes towards entrepreneurial career as well as perceived behavioral control. Based on the findings of this study, it is suggested that to improve university students' entrepreneurial intention and self-efficacy, certain teaching strategies needed to be conducted and university policy makers should add more value to their graduates by incorporating the elements that enhance the development of entrepreneurial intention and self-efficacy in the aspects of management, financial and marketing competencies as a basis to choose entrepreneurship as a career choice.

Keywords: Entrepreneurial intention, entrepreneurial self-efficacy, entrepreneurship education, institutions of higher learning.

Introduction

Self-efficacy is the strong personal belief in skills and abilities to initiate a task and lead it to success (Bandura, 1997). According to Markham, et. al. (2002), it is the perceptions of self-efficacy, rather than objective ability that motivates individuals to demonstrate entrepreneurial behavior. Unlike other personality traits of entrepreneurship which are relatively static, self-efficacy is affected by contextual factors such as education and past experiences (Hollenbeck & Hall, 2004). Some researchers believe that self-efficacy is similar to other personal traits such as locus of control, although they are different in some aspects. 'Locus of control' is the overall belief in ones' power over the outcomes of actions, whereas self-efficacy is profound self-confidence in accomplishing specific tasks (Boyd & Vozikis, 1994). Moreover, self-efficacy is domain specific and varies across tasks and situations (Wilson, Kickul, & Marlino, 2007) it can also be generalized to other related tasks or performances (Chen, Greene, & Crick, 1998). More interestingly, self-efficacy is one of the core components of entrepreneurial intention models and mostly operationalized as feasibility, although there are some subtle technical differences between them (Ajzen, 2002; Segal, Borgia & Schoenfeld, 2005).

Purposeful education enhances students' entrepreneurial efficacy through providing them attitudes, knowledge and skills to cope with the complexities embedded in entrepreneurial tasks such as opportunity seeking, resource assembling, and leading the business to success (Wilson, Kickul & Marlino, 2007). In fact, education enhances entrepreneurial efficacy of students through providing experience of mastery, role models, social persuasion and support by involving them in hands-on learning activities, business plan development, and running simulated or real small business (Fiet, 2000; Segal, Borgia & Schoenfeld, 2005). Furthermore, education plays a crucial role in developing students' entrepreneurial efficacy through involving them in various entrepreneurial activities and increasing their desirability to step into venture creation by highlighting the merits, values and advantages of entrepreneurship (Segal, Borgia & Schoenfeld, 2005); as well as encouraging and supporting them to start-up their own business.

Hence, improving student's entrepreneurial efficacy enables them to put more efforts over a longer time, persist the challenges and develop plans and strategies to achieve higher entrepreneurial goals (Shane, Locke & Collins, 2003). In addition, higher entrepreneurial efficacy is associated with higher intention to become an entrepreneur (Segal, Borgia & Schoenfeld, 2005). Although, there is few empirical evidence on the influence of entrepreneurship education and training on entrepreneurial efficacy (Chen, Greene, & Crick, 1998). Chen, Greene and Crick (1998) introduced entrepreneurial self-efficacy (ESE) as the criteria to distinguish entrepreneurs from those who do not intend to create their own business. Choosing entrepreneurship, management, and organizational psychology students as the participants of the study, they conclude that entrepreneurship education was effective in developing entrepreneurial self-efficacy and consequently intention of students to set up their own business.

On the impacts of education in entrepreneurial capability development of students, Rae and Carswell (2000) proposed a model at the heart of which is self-efficacy. They looked at the process of learning entrepreneurial behaviour through a lens of life-story process and argued that entrepreneurs' self-confidence and self-belief is highly affected by active learning, relations, known capabilities, and personal theory. They act as motivational engine of entrepreneurial capabilities. Importantly, self-efficacy increases over time and through involving in experiential learning activities.

Zhao, Seibert, and Hills (2005) also stressed the mediating role of entrepreneurial self-efficacy on the relationship between entrepreneurship courses and university students' entrepreneurial intention. They argued that entrepreneurship education should not only focus on technical aspects of entrepreneurship, but it also should strengthen students' self-confidence to become entrepreneurs through offering them variety of learning opportunities.

The Emergence of Entrepreneurship Intention Models

The attempt to identify who wants to become an entrepreneur, how a successful entrepreneur behave, and which factors affect the decision to create a venture, has lead to the emergence of two main streams of entrepreneurship research. First, the researchers focused on linking certain personality traits or characteristics such as 'self-efficacy' (Ajzen, 2002; Wilson, Kickul, & Marlino, 2007), 'need for achievement' (McClelland, 1961; Hansemark, 1998) and 'tolerance for ambiguity' (Teoh & Foo, 1997) to entrepreneurial behaviour based on the assumption that entrepreneurs are endowed with unique traits which make them distinguishable from others (Gurol & Atsan, 2006) and motivate their entrepreneurial behaviours (Mueller & Thomas, 2000). Through the next stream, scholars investigated the contributions of demographic and contextual factors such as age, gender, work experience, and job dissatisfaction in mobilizing entrepreneurship behaviour (Liñán et al., 2005; Wilson, Kickul & Marlino, 2007).

According to Bird (1998), intention is the state of mind directing a person's attentions and action towards self-employment as opposed to organizational employment. Intention has been also defined as the efforts of a person to carry out entrepreneurial behaviour (Liñán & Rodríguez, 2004). It is the result of perceived *control over behaviour* (perceived ability to perform entrepreneurial

behaviour); *attitude toward behaviour* (the degree to which a person has a positive or negative evaluation or appraisal of entrepreneurial behaviour); and *subjective and social norms* (the perceptions of how significant others think about being an entrepreneur, the strength of the motivation to comply with them, and social support to carry out the entrepreneurial behaviour). All these factors act as the motivation and emotional tendency which influence and direct entrepreneurial behaviour. Importantly, these factors can be affected by ‘exogenous influences’ such as personality traits and education (Borgia & Schoenfeld, 2005; Liñán, et. al., 2005; Souitaris, Zerbini & Al-Laham, 2007).

Attitudes towards self-employment are the difference between perceptions of personal desirability to become self-employed or employed by an organization. Therefore ‘high’ attitude towards self-employment actually indicates that the respondent is more in favor of self-employment than organizational employment (Kolvereid, 1996).

Kolvereid and Isaken (2006) defined self-employment as the situation in which individuals are faced with two alternatives when selecting a career – either as self-employed or employed in an organization. An attitude towards self-employment is an individual perception on working as the owner of a business. Jackson and Rodkey (1994) argued that an attitude towards entrepreneurship is an important aspect which predicts potential entrepreneur in future. Previous studies showed that attitudes towards self-employment associated with self-employment intentions (Kolvereid & Isaken, 2006). For instance, Kolvereid and Isaken reported that attitude towards self-employment predicts self-employment intentions ($\beta = .33$, $p < .001$). Currently, little is known about the actual impacts of entrepreneurship education programs on developing entrepreneurial intention of students particularly in universities (Collins, Hannon, & Smith, 2006). Through a longitudinal study over a period of 18 months, Audet (2002) questioned the temporal stability of entrepreneurial intention of undergraduate university students from business administration programs. The study has some significant findings. First, it confirms the validity of the Theory of Planned Behaviour to explain students’ intention to go into a business at some point in their life. Second, entrepreneurial intention varies over time; therefore, it is difficult to establish the association between entrepreneurial intention and actual venture creation. Finally, entrepreneurial intention changes due to the impacts of some positive factors (e.g. being more mature, being your own boss, money, freedom, and opportunity recognition) and negative factors (reality shock and corporate orientation). Liñán, et. al., (2005) applied Theory of planned Behaviour to investigate entrepreneurial intention of 354 undergraduate students of Business Science and Economics in two public universities. The findings indicate that intention is a function of perceived self-efficacy (control over behaviour); personal attitudes; and perceived subjective and social norms. Interestingly, entrepreneurial knowledge affects entrepreneurial intention but through interaction with antecedents of intention particularly perceived self-efficacy.

From Luthje and Franke’s (2003) point of view, successful research universities seem to promote entrepreneurial activities among students. They claimed that it is widely unknown whether contextual founding conditions or rather personality traits that drive the students’ career decision towards self-employment. Scott and Twomey (1988) argued that in order to design effective programs, policy makers have to know which of the factors mentioned above should be heavily emphasized. The findings of the study conducted by Autio *et. al* (1997) revealed that the career preferences and entrepreneurial conviction are influenced by the image of entrepreneurship as a career alternative and the support received from the university environment. Whitlock and Masters (1996) found that after four years of following business courses the business students’ interest in pursuing self-employment seemed to dissipate. This argument had resulted in a desire to conduct a research with the aim of investigating the entrepreneurial self efficacy and entrepreneurial intention of university students.

Based on the above literature review the following research questions were developed:

1. What is the perception of university students on their entrepreneurial intentions?
2. What is the perception of university students regarding specific entrepreneurial efficacy such as general management, finance, and marketing?

3. Is there any significant difference between perceptions of university students regarding entrepreneurial intention and self-efficacy based on their entrepreneurial aspiration?
4. What are the perception of students regarding their attitudes towards entrepreneurial career and perceived behavioral control?
5. What are the perceptions of students regarding attitudes toward entrepreneurial career and perceived behavior control based on the needs to learn entrepreneurship at university?

Methodology

The study utilized a descriptive research design. The sample comprised of 1,554 university students from three research universities in Malaysia. Data were gathered in March 2008 using a set of questionnaire measuring students' background information, entrepreneurial intention, attitudes toward entrepreneurial career, perceived behavioral control, and entrepreneurial self-efficacy in the aspect of management, financial and marketing. Permissions to conduct the research were obtained from Vice Chancellor of each university and also the Dean of the selected faculties. Data were collected by the researcher and two research assistants who had been trained to properly conduct a good quality research.

The instrument was developed based on the modification of previous instruments developed by several authors such as Ajzen and Fishbein (1980), Kolvereid (1996), Krueger (2000), Chen, Green and Crick (1998), Zaidatol (1993), and Hassan (2007). The reliability of each set of constructs has a Cronbach α value ranged between .74 and .96. The measurement of items in the survey questionnaire was based on 5 point Likert scales with 1 demonstrating "strongly disagree" to 5 demonstrating "strongly agree". Negatively worded items were rescored so that higher scores reflected its mean. Mean score above 3.80 is considered high, 3.40-3.79 considered moderate and below 3.39 considered as low perceptions. Data were analyzed using descriptive and inferential statistics. (Table 1)

Table 1: Mean score measurement.

Mean Score	Description
< 3.39	Low
3.40-3.79	Moderate
> 3.80	High

Findings

Table 2 illustrates that in general students perceived moderately on all items measuring entrepreneurial intention with the exception of item 9, that is "*I want to be my own boss*" (mean=4.01, s.d= 0.96). The least mean score is for these items as "*I have thought seriously to start my own business after completing my study*" (mean=3.22, s.d=1.03) and "*I prefer to be an entrepreneur rather than be an employee in a company*" (mean 3.42, s.d.=1.05).

Table 2: Entrepreneurial intention of university students

Items	Mean	S.D
I will choose a career as an entrepreneur.	3.47	1.02
I prefer to be an entrepreneur rather than be an employee in a company.	3.42	1.05
I am prepared to do anything to be an entrepreneur.	3.35	1.01
I'll make every effort to start and run my own business.	3.22	1.03
I have thought seriously to start my own business after completing my study.	3.49	1.01
I have a strong intention to start a business someday.	3.77	1.01
I'm determined to create a firm in the future.	3.84	0.98
I put effort to make more money.	3.82	1.07
I want to be my own boss.	4.01	0.96
I will start my business in the next 5 years.	3.44	0.81
I will start my business in the next 10 years.	3.56	1.03

Table 3 illustrates that university students in general have moderate perception on their specific entrepreneurial efficacy especially on financial and marketing aspects as well as on general management aspect.

Table 3: University students' mean score on specific entrepreneurial self-efficacy: general management, financial, and marketing

Entrepreneurial self-efficacy	Mean	s.d
General management	3.87	.73
Financial	3.60	.88
Marketing	3.76	.84

Table 4a and 4b show that there exists a significant difference between the two groups of students in all constructs such as entrepreneurial intention, attitude towards entrepreneurial career, and perceived behavioral control. Findings also indicate that there is a significant difference regarding entrepreneurial efficacy in marketing competencies, managerial and financial competencies. This shows that entrepreneurship related courses and training are needed to increase the university students' entrepreneurial intention and entrepreneurial efficacy. It was found that student with positive entrepreneurship aspiration score higher in entrepreneurship intention and self-efficacy and it is significantly different from those who do not have positive aspiration.

Table 4a: Entrepreneurial intention of university students based on entrepreneurial aspiration

	entrepreneurial aspiration	N	Mean	s.d.	t-value	sig.
Intention	Yes	992	3.76	.66	13.16	.00
	No	524	3.23	.78		
Attitude towards entrepreneurship	Yes	974	3.97	.50	8.25	.00
	No	520	3.75	.48		
Perceived behavioral control	Yes	1001	3.66	.50	5.53	.00
	No	531	3.51	.59		

Table 4b: Entrepreneurial efficacy of university students based on entrepreneurial aspiration

	Entrepreneurial aspiration	N	Mean	s.d.	t-value	sig.
Managerial competencies	Yes	996	3.92	.52	5.4	.00
	No	531	3.76	.55		
Financial competencies	Yes	995	3.66	.72	3.75	.00
	No	531	3.51	.80		
Marketing competencies	Yes	998	3.86	.65	7.06	.00
	No	532	3.60	.73		

Findings in table 5 show that the university students scored in general moderately on attitudes towards entrepreneurial career and perceived behavioral control.

Table 5: Students' perceptions of the factors associated with entrepreneurial intention.

Variables	Mean	s.d
Attitude towards entrepreneurial career	3.79	.87
Perceived behavioral control	3.44	.96

To answer the questions on what are the perceptions of students on attitude towards entrepreneurial career and perceived behavioral control based on the need to learn entrepreneurship at university, findings indicate that 1,035 students (66%) perceived that university students should learn entrepreneurship and 488 of them (31%) did not perceive learning entrepreneurship as to be important at university. *t-test* analysis indicate that those who think that university students should learn entrepreneurship, scored higher entrepreneurial intention compared to those who do not, as illustrated in table 6.

Table 6: entrepreneurial intention between students based on their perception of the needs to learn entrepreneurship

Students' entrepreneurial intention	Need Entrepreneurship Exposure	N	Mean	s.d	t-value	Sig.
	Yes	1035	3.61	.71	2.58	.01
	No	488	3.51	.83		

Table 7a and 7b also indicate that those who need to learn entrepreneurship at university have significantly higher mean score on attitudes toward entrepreneurial career as well as perceived behavior control.

Table 7a: Students' perception on attitude towards entrepreneurial career based on the needs to learn entrepreneurship

Attitude towards entrepreneurial career	Perceived need for entrepreneurship exposure	N	Mean	s.d	t. value	Sig
	Yes	1021	3.91	.47	3.78	.00
	No	480	3.84	.56		

Table 7b: students' perception on perceived behavioral control based on the needs to learn entrepreneurship

Perceived behavior control	Perceived need for entrepreneurship exposure	N	mean	s.d	t. value	Sig
	Yes	1049	3.64	.49	3.53	.00
	No	491	3.53	.64		

Discussion

Binks, et. al (2006) claimed that understanding and developing entrepreneurship requires an integrated research and teaching effort. This is consistent with the claim made by [Shook et. al \(2003\)](#) that entrepreneurship is about entrepreneurial individuals interacting with their environment to discover, evaluate and exploit opportunities. This research focused on the perceptions of students in universities, thus it would be better to relate entrepreneurship to students' career perception, because entrepreneurship involves developing knowledge, skills, attitudes, and personal qualities appropriate to the age and development of students in educational settings or environment. The study found that entrepreneurial intention score is higher if students perceived there is a need to learn entrepreneurship at the university. This finding is important in that if students understand the necessity and need of having entrepreneurship education, their intention to become an entrepreneur increases. This necessitates developing effective entrepreneurship education to explain them the necessities and benefits of self-employment. This finding is inconsistent with the current role of universities in development of entrepreneurship. Entrepreneurship education is fundamental and also demanded by large organizations in order to acquire the flexibility and responsive dexterity of small business and individual entrepreneurs. It is also needed to enable creative solutions in the public sectors such as health and education (Binks, et. al. 2006).

The findings showed that the need to learn business and entrepreneurship through education are essential to ensure university students have the ability to possess all the pertinent ingredients to equip themselves with entrepreneurial efficacy. This finding concurs with Lussiers and Pfeifer's (2001) findings, where entrepreneur with higher education level, industrial and managerial experience, and business exposure have greater chance of succeeding in their business. The basic skill necessary to meet this challenge is the ability to recognize a market needs and the ability to develop a product or service appropriate to satisfy these needs. In this sense, entrepreneurial self-efficacy is the strong personal belief in skills and abilities to start-up a business and leading it to success. Accordingly, those who are higher on entrepreneurial efficacy are more interested to be engaged in entrepreneurial activities and feel confident in facing the challenges and removing the obstacles in the process of venture creation (Chen, Greene, & Crick, 1998) and lead the venture to success and growth.

This study also found that university students who need business and entrepreneurship education exposure scored a higher mean in entrepreneurial intention as compared to the other group of students and the difference is highly significant. The findings are in accord with Chen Greene, and Crick's (1998) findings, who reported that the number of management courses MBA students had taken, were positively related to entrepreneurial intention. The findings of the researchers suggest that university students who are given opportunities to learn more business management and entrepreneurship related courses motivate them to become self-employed. Students' attitudes towards entrepreneurial career, perceived behavioral control as well as entrepreneurial efficacy seem to be the best predictors of students' entrepreneurial intention. The current study coincides with Ajzen's (1987) study which is also consistent with Kolvereid's (1997) study where attitude and perceived behavior control contribute significantly to the explanation of intention.

Based on the findings of this study, it is suggested that to improve university students' entrepreneurial intention and self- efficacy, certain teaching strategies need to be conducted in addition to the traditional ones. This is related to the previous argument made in the literature that entrepreneurial experience is associated with entrepreneurial abilities and entrepreneurial intention. [Kuratko \(2005\)](#) claimed that participation in entrepreneurial training programs has been associated with changes in attitudes and intentions towards entrepreneurship and they need proper teaching strategies compatible with the student-centered approach. This is because Rasmussen and Sorheim (2006) as well as [Frank et. al. \(2005\)](#) reported that students' development of their entrepreneurial intention was affected by the entrepreneurial instructions they received such as team oriented method and learning-by-doing hands-on activities. In entrepreneurial training programs, it is important to provide students training in the essential competencies such as management, financial and marketing

competencies because as suggested by [Terpstra and Olson \(1993\)](#), many business failures were due to lack of management skills or competencies and the three major reasons why businesses fail were because of financial difficulties, product or market problems and managerial problems (Bruno *et al*, 1987). The current study also found that students with positive entrepreneurship aspiration score higher mean in all competencies (financial, marketing, and management). Audet (2000) reported that students' perception of the desirability and feasibility of stepping into business were measured before and after they had taken a course in entrepreneurship and some significant differences were found. Thus, the tendency of the current study to be in agreement with Audet's report is highly probable. Since, the results of this study showed that students with entrepreneurship exposure scored significantly different in entrepreneurial intention.

This study also found that university students' who need entrepreneurial exposure scored higher mean in attitude towards entrepreneurship career, and perceived behavioral control. This had supported Shapero's (1982) findings where it was argued that attitudes toward entrepreneurship should partly derive from prior exposure to entrepreneurial activity and affect intentions through changing attitudes. In addition, Ajzen (1987) pointed that the concept of perceived behavioral control is closely related to the concept of self-efficacy because both concepts refer to perceived factors that are specific to the attainments of a given behavior. Thus, both concepts are similar because the acquisition of skills through past achievement reinforces individuals to develop entrepreneurial intentions. Since, self-efficacy is proposed as an important explanatory variable in determining the strength of intention, it is suggested that in order to develop university students self-efficacy or perceived behavioral control, university teaching and learning should focus on providing mastery experience or repeated performance accomplishment as suggested by Wood and Bandura (1989). They emphasized that when people experience success the easy way, they become quickly discouraged by failure when it occurs. So, in order to gain a more stable and resilient source of self-efficacy, it is necessary to have alternative solutions or strategies in overcoming obstacles through effort and perseverance. The current study illustrated that proper entrepreneurship education exposure will enable students to have positive image in choosing entrepreneurship as a career.

This study found that students' attitude towards entrepreneurial career is in the category of moderate. These students may not be concerned with the feasibility of becoming an entrepreneur rather they may focus on the direction that their studies should prepare them for an organizational career. As explain by Douglas and Shepherd (2000), who argued that the decision to be an entrepreneur may be modeled as a utility-maximizing career choice made by an individual. That is, people choose to be self-employed if the total utility they expect to derive (via income, independence, risk bearing, work effort, and perquisites associated with self-employment) is greater than the expected utility from their best employment option.

In relation to this, the mean score on entrepreneurial self-efficacy is only moderate and mean score on perceived behavioral control is also moderate. Thus, it is important to support offering entrepreneurship courses to all university students so as to improve their entrepreneurial intention as suggested by Peterman and Kennedy (2003) and Souitaris, Zerbinati, and Al-Laham (2007) who found that exposure to entrepreneurship education increases entrepreneurial intention.

In addition, Douglas and Shepherd (2002) found that there is a relationship between entrepreneurial attitudes and the intention to be self-employed. They reported that the intention to be self-employed is stronger for those with more positive attitudes to risk and to independence. That is, the higher is the individual's tolerance for risk, and the stronger is their preference for decision-making autonomy, the stronger is their intention to be self-employed. To be able to possess the positive attitudes such as tolerance for risk and ability to make decision, university students need to learn and have enough knowledge in different aspects of management, financial and marketing.

Conclusions and Implications

This work substantially expands the understanding of what drives the intention of university students to become an entrepreneur. It helps to understand the importance of entrepreneurial exposure in term of management, finance and marketing competencies as a basis to choose entrepreneurship as a career choice. The study also focuses on the “why” of entrepreneurship rather than the “when” because the focus is on the internal motivations of individuals rather than the extend inducements of the economic environment.

University students participated in this study have moderate entrepreneurial intention. Since, the intention to start one’s own business appears to be driven by “more entrepreneurial” attitudes towards entrepreneurial career. University policy makers and educators might encourage self-employment by facilitating the development of more entrepreneurial intention, attitudes and entrepreneurial self-efficacy in the aspects of management, financial and marketing. University should add more value to their graduates if they incorporate into their curriculum elements that enhance the development of entrepreneurial attitudes and self-efficacy, since these are beneficial to both a self-employment and employment career path.

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