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IMPROVING UNIVERSITY STUDENTS' ENTREPRENEURIAL ATTITUDE THROUGH LEARNING BY DOING METHOD

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Abstract

Employing effective pedagogy methods has been considered as influential in developing students' attitudes toward entrepreneurship. However, there is limited empirical research on the impact of entrepreneurship pedagogical methods on students' attitudes toward entrepreneurship. The core purpose of this study was to determine the influence of "learning by doing", as one of the most suggested entrepreneurship pedagogy methods, in enhancing different aspects of students' entrepreneurial attitude. A total of 193 students from one university in Malaysia were selected as respondents. The findings indicate that university students who had undertaken entrepreneurship course through "learning by doing" pedagogy scored significantly higher in achievement behaviour, achievement cognition, self-esteem cognition, and innovation cognition compared to their counterparts. However, t-test analysis was conducted to identify differences on entrepreneurial attitude based on students' entrepreneurial aspiration. Findings revealed that students with positive aspiration toward entrepreneurship scored higher mean and significantly different compared to the others for most of the entrepreneurship attitude aspects.

Key Words: Learning by Doing; Entrepreneurship Pedagogy Methods; Entrepreneurial Attitude, University Students.

Introduction

Learning is considered central in the whole process of entrepreneurial development, particularly alertness about resource acquisition, new venture management, and opportunity recognition (Corbett, 2005; Harrison and Leitch, 2005). It is the basis for entrepreneurial competencies and self-efficacy development to step into new venture creation (Erikson, 2003) as well as intrapreneurship which is entrepreneurship in established organizations (Heinonen and Poikkijoki, 2006). It is one of the entrepreneurial 'task' and entrepreneur's routine activities (Cope, 2005), a compulsion rather than an extra one (Harrison and Leitch, 2005). However, our understanding about various aspects of entrepreneurial learning is limited (Cope, 2005; Corbett, 2005; Harrison and Leitch, 2005; Politis, 2005; Rae, 2005; Rae and Carswell, 2000). More importantly, there is little understanding of entrepreneurship education particularly, on pedagogy methods (Anderson and Jack, 2008) and their contributions to improve students' learning styles and consequently, entrepreneurship learning outcomes which is entrepreneurial behaviour.

In particular, we do not know that much about how students who participate in entrepreneurship programs prefer to learn and how the programs facilitate their entrepreneurial learning (Henry, Hill and Leitch, 2005a). As a result, designing effective learning opportunities for entrepreneurship students has turned to be a serious challenge for entrepreneurship educators (Kuratko, 2005). This is partially due to the lack of robust theoretical foundations and empirical studies on entrepreneurial learning (Cope, 2005; Politis, 2005; Rae and Carswell, 2000).

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This study aims to determine different aspects of university students' entrepreneurial attitude. Moreover, it investigates the differences between students with different learning background and their entrepreneurial attitudes. The remaining of this article is allocated to entrepreneurial learning, entrepreneurial pedagogy methods, and entrepreneurial attitude. Afterwards, the research methodology is detailed and findings are presented. Finally, the findings are discussed and implications of the findings are suggested.

Entrepreneurial Learning

Research on the importance and effects of entrepreneurial learning is in the early stages of emergence, however increasingly growing (Smith, Collins and Hannon, 2006; Corbett, 2005; Henry, Hill and Leitch, 2005a; Politis, 2005). The emergence was partially due to employing disappointing and dissatisfying methods of business and entrepreneurship education in instilling entrepreneurial behaviour on university students (Smith, Collins and Hannon, 2006). This is not a problem just in some countries but all the entrepreneurship education programs across the world, from the U.S to Europe and Asia, have been facing it in various ways (Matlay, 2005). Therefore, many scholars questioned the current entrepreneurship teaching and learning methods.

Unfortunately, there is no consensus among scholars on entrepreneurial learning definition. Focusing on the entrepreneur as the core component of entrepreneurial learning process, some scholars defined entrepreneurial learning as a dynamic and constant process of acquiring, assimilating, and organizing the new information and knowledge with pre-existing structures (Cope, 2005; Harrison and Leitch, 2005a; Minniti and Bygrave, 2001). In Rae and Carswell's (2000) point of view, entrepreneurial learning is the cognitive processes of gaining and structuring knowledge as well as giving meaning to the experiences.

While, other scholars concentrated on how entrepreneurs learn through experiencing different events such as recognizing the opportunities and coping with problems in the first stages of venture creation process or overcoming the challenges of performing different roles in established organizations (Pittaway and Cope, 2007; Cope, 2005; Politis, 2005; Corbett, 2005; Erikson, 2003; Minniti and Bygrave, 2001). Cope (2005) defined entrepreneurial learning as a dynamic process of awareness, reflection, association, and application of past experiences. Focusing on the whole process of entrepreneurial learning, Politis (2005) develops a conceptual framework for the entrepreneurial learning process. The framework identifies three main components of the entrepreneurial learning process including: entrepreneur's career experience, the transformation process, and entrepreneurial knowledge in terms of effectiveness in recognizing and acting on entrepreneurial opportunities and coping with the challenges of newness.

All above mentioned definitions consider entrepreneurial learning as the result of the entrepreneur's efforts in the process of acquiring and using the information. While, entrepreneurial learning does not occur in a vacuum but, it takes place through social interactions and involvement in group activities (Heinonen and Poikkijoki, 2006; Cope, 2005). Therefore, social characteristics of entrepreneurial learning have turned to become the focus of many studies (Cope, 2005; Rae, 2002). Consequently, the new entrepreneurial learning conceptualizations include all the social, emotional, and experiential aspects of entrepreneurial learning (Pittaway and Cope, 2007).

Entrepreneurship education has encountered many challenges in providing effective entrepreneurial learning opportunities for students, the most important of which is lack of understanding in how entrepreneurial learning takes place (Pittaway and Cope, 2007). Moreover, it is difficult to provide opportunities for students to experience the uncertainties, ambiguities, and the risks embedded in real new venture creation (Pittaway and Cope, 2007; Louw, et al. 2003). In addition, developing innovative and creative aspects of entrepreneurship through the traditional teaching methods is another challenge that educators have to face unless; they employ more creative methods of entrepreneurship education (Heinonen, 2007; Henry, Hill and Leitch, 2005b). Thus, Pittaway and Cope (2007) asserted that only some aspects of entrepreneurial learning can be developed through entrepreneurship education. Finally, individuals differ in terms of entrepreneurial learning process (Cope, 2005). While, the traditional methods of entrepreneurship education do not accommodate the diversity of learning process for each student (Heinonen, 2007). There is a strong belief in that if the entrepreneurship education program does not satisfy students' expectation, students may stop continuing the program and even drop out the

program (Smith, Collins and Hannon, 2006). Thus, to reduce the difficulties in entrepreneurial learning and to improve entrepreneurial competencies development, comprehensive instructions should be designed to meet the needs of students whose learning styles are neglected by traditional entrepreneurship pedagogy (Graf, et. al. 2007; Felder and Brent, 2005).

More importantly, the organizational structure of the existing higher education institutions is “highly bureaucratic where there is little time for reflection; where there is a role oriented culture; and where the skills necessary to engage successfully with these methods are outside the traditional and practiced skill set of some academics” thus, they lack the flexibility and innovativeness needed for entrepreneurship education (Smith, Collins and Hannon, 2006, P. 564). In addition, current university settings typically do not include many entrepreneurial elements needed for facilitating entrepreneurial learning process (Heinonen and Poikkijoki, 2006).

Entrepreneurship Pedagogy Methods

Unfortunately, entrepreneurship pedagogy has been facing various challenges in developing effective teaching strategies, designing appropriate combination of entrepreneurship theory and practice (Anderson and Jack, 2008), teaching methods (Kuratko, 2005; Hytti, O’Gorman, 2004; Collins and Robertson, 2003; Solomon, Weaver and Fernald, 1994) as well as adapting effective teaching strategies to the processes of students’ learning (Fuchs, Werner and Wallau, 2008) specially, when teaching strategies are looked through the students’ perspectives (Fiet, 2000). These challenges are even more serious at university level where students need to be supported in learning the theoretical concepts, provided with practical experiences and opportunities to reflect on their experiences to improve their own performance (Heinonen, 2007). Dhliwayo (2008) proposes the critical questions that “why is it that a nursing school can produce nurses and entrepreneurship school cannot produce entrepreneurs?” and “it has been proved that entrepreneurship can be taught, so is it the current teaching method which is wrong?” (p. 332). This is partially due to the complexities of entrepreneurship education and pedagogy (Anderson and Jack, 2008). It can also be attributed to the scarcity of research on entrepreneurship teaching techniques (Holmgren, et. al. 2005) and entrepreneurial learning process as well (Harrison and Leitch, 2005). Generally, entrepreneurship education suffers from lack of theoretical foundation and conceptual definition (Fayolle and Gailly, 2008; Heinonen, 2007; Henry, Hill and Leitch, 2005b; Hytti, O’Gorman, 2004).

As a result, entrepreneurship pedagogy is still underdeveloped, since, methods of entrepreneurship pedagogy are grounded in entrepreneurship education objectives (Pittaway and Cope, 2007; Heinonen and Poikkijoki, 2006) and entrepreneurial learning processes (Fayolle and Gailly, 2008). Anderson and Jack (2008) highlighted that educators need to relate entrepreneurship education content, approach, and teaching techniques to different roles associated with entrepreneurship to develop various knowledge, skills, and capabilities needed to successfully practicing different entrepreneurial roles. Through a comprehensive survey on entrepreneurship courses offered by the U.S colleges and universities from 1979 to 1992, Solomon, Weaver and Fernald (1994) concluded that the majority of the pedagogy methods in colleges and universities were for credit courses followed by increasing number of seminars and workshops. They also classified the approaches to entrepreneurship pedagogy into two groups of traditional and emerging approaches which are discussed hereafter.

Traditional Entrepreneurship Pedagogical Approaches

Prevailing in the early stages of entrepreneurship education and driven from the pedagogical methods applied in business management, traditional approaches of entrepreneurship pedagogy include: lecture, assigned reading, case study, presentation, group discussion, and role play which mostly focused on transferring the knowledge through a theoretical and didactic approach (Heinonen and Poikkijoki, 2006; Henry, Hill and Leitch, 2005a). In these methods, it is the teacher who is highly engaged in transferring the knowledge to students and students just passively absorb the information (Heinonen, 2007; Collins, and Robertson, 2003; Fiet, 2000). Many scholars questioned the effectiveness of such methods in enhancing students’ entrepreneurship knowledge and skills (Dhliwayo, 2008; Henry, Hill and Leitch, 2005a). They argued that entrepreneurship is a subject mainly related to activities, experience and practical skills which are not acquired by traditional methods of pedagogy (Plumly, et. al. 2008; Tan and Ng, 2006; Henry, Hill and Leitch, 2005a; Solomon, Weaver and Fernald 1994). Furthermore, traditional methods mostly ignore “the essence of the phenomenon which is entrepreneurial process” (Heinonen and

Poikkijoki, 2006, p. 84). More importantly, the knowledge and skills obtained through the traditional methods are less likely to be transferred to the actual environment where they might be used (Honig, 2004). Therefore, there exists an urgent need of designing more effective methods of entrepreneurship pedagogy (Plumly, et. al. 2008; Henry, Hill and Leitch, 2005a, b; Honig, 2004).

Emerging Entrepreneurship Pedagogical Approaches

Being frustrated with the traditional methods of business and entrepreneurship pedagogy, educators attempted to develop more effective teaching methods based on research findings on entrepreneurship and better understanding of entrepreneurship students' psychological needs (Solomon, Weaver and Fernald, 1994). Emphasizing on experiential nature of entrepreneurial learning, Anderson and Jack (2008) pointed out that entrepreneurship education traditionally focuses on theoretical and conceptual understanding of entrepreneurship however, "we must also question the relevance and value of an overtly theoretical approach to a subject which appears to deal almost exclusively with doing" (p. 266). Plumly et al. (2008) not only identified the huge gap between traditional business education programs and entrepreneurship education but they also emphasised on the need for "entrepreneurship educators must expand their pedagogies to include new and innovative approaches" (p. 19). According to the authors, business simulation, business plan, interview with entrepreneurs, field trips, and starting-up a small-scale business are some of the examples of emerging methods of entrepreneurship pedagogy.

Based on the assumption that entrepreneurs mainly learn from experience and practice, the recently proposed methods of teaching entrepreneurship have been mostly developed based on experiential learning theory (Kolb, 1984). The models are typically student-centred, action-oriented and experiential through which students are given the opportunity to engage in the learning process and fully accept the responsibility for their own learning and develop students' problem solving skills and creativity. Unlike the traditional methods, the teacher acts as a facilitator, supporter, and guide in new methods to develop students' entrepreneurial capabilities (Dhliwayo, 2008).

Entrepreneurial-directed approach (Heinonen and Poikkijoki, 2006) was designed with the same objectives. Focusing on three aspects of active, experiential, and reflective learning, the approach provides various opportunities for university students to develop their entrepreneurial capabilities through being engaged in a process of co-learning and co-participating among entrepreneurial individuals. It is a project-based method of teaching entrepreneurship which integrates theory and experience through involving students in variety of learning opportunities such as doing a project, case study, interviewing entrepreneurs, and presentations (Heinonen, 2007). Smith, Collins, and Hannon (2006) created an environment for students, academics, and entrepreneurs in which they all benefit from the learning process. This entrepreneurship teaching approach is based on 4Cs: Cooperation; Co-learning; Consultation; and Collective action. Cooperation means that students work with entrepreneurs and academics to determine priorities, wherein entrepreneurs and academics are responsible for directing the learning process. Co-learning is the process of knowledge sharing between students, entrepreneurs, and academics and creating a new collective understanding. Consultation is where entrepreneurs and academics seek and analyse students' opinions and decide the course of action to take. Through Collective action, students set their own agenda and then act to carry out the action without the help of entrepreneurs and academics.

Tan and Ng (2006) approached entrepreneurship pedagogy as a process of real-life problem solving and engaged students in various activities inside and outside the classroom such as computer-based simulation, internship, running small ventures on campus, and working on small consulting jobs. Nonetheless, they suggest that to prevent students to get bored, there should be variety of problems and different methods of students' team presentations. Although, applying new teaching methods in current university settings where many key elements and infrastructures are not provided is a big challenge that the educators are being to face (Heinonen, 2007; Heinonen and Poikkijoki, 2006; Hytti, O'Gorman, 2004).

Through a holistic view to entrepreneurship education and based on experiential learning Dhliwayo (2008) develops an entrepreneurship education model based on experiential and interactive learning which look at developing university students as entrepreneurs through a holistic lens which encompasses entrepreneurs (to impart social skills on students, the entrepreneurs are role models, the entrepreneur provides the student the opportunity to learn his emotional, time, physical and intellectual

inputs into the business on a day-to-day basis, the entrepreneur takes the student by hand while the student takes the first steps towards understanding and learning first hand, what the real business is and how the business operates. The entrepreneur provides training (skills and knowledge) and advice to the student), SMEs (from SME, students learn how different resources are combined, how the business relates to its internal and external environment, university (institution of higher education should put together a curriculum which will provide for experiential learning and personal experiences), Public (communities) and private sectors, and government. The role players are all interconnected and interrelated to effectively function as a (whole) unit. At the core of the model is 'student entrepreneur' who receive the entrepreneurship education. This integrative and holistic approach to entrepreneurship education which engage students, entrepreneurs, business professionals, and learning facilitators has also been emphasized by other researchers (Anderson and Jack, 2008).

In sum, all the above mentioned entrepreneurship pedagogies attempt to combine the traditional and new approaches to enhance students' learning, retaining the knowledge longer, and apply the improved knowledge and skills to enhance their personal performance. However, there is no "universal pedagogical recipe regarding how to teach entrepreneurship" and one method is "well suited to some pedagogical situation, while it may be particularly inappropriate in others" (Fayolle and Gailly, 2008, p. 579). This clarifies the educators' need to know their students' preference of teaching strategies to learn entrepreneurship (Fiet, 2000).

Entrepreneurial Attitude

One of the main area of entrepreneurship research is an attitudinal perspective. It is argued that entrepreneurial attitude is a more consistent measure of entrepreneurial behaviour (Robinson et al. 1991; Ajzen, 1991, 2002). In effect, there are two approaches to entrepreneurial attitude. The first approach considers entrepreneurial attitude as ones' feeling, thought, and conation towards entrepreneurship. In this sense, entrepreneurial behaviour is a function of attitude toward the value, benefit, and favourability of entrepreneurship and mostly is a uni-dimensional construct (Ajzen and Fishbein, 1977). While, from Robinson's et al. (1991) point of view entrepreneurial attitude is a multi-dimensional construct. It contains four personality factors which are:

- Need for achievement: which refers to the perceived results and outcomes of new venture creation which drives one to take the burden and responsibilities of launching a new business.
- Personal control over entrepreneurial behaviour: which reflects perceptions of control and influence on venture creation outcomes.
- Innovation: which is thinking of new ideas, products, or methods; and
- Self-esteem: that indicates self-confidence and perceived entrepreneurial competencies.

Moreover, entrepreneurial attitude encompasses three aspects including: affection (feeling and emotion), cognition (thoughts and belief), and conation (action and behaviour). Worthy to mention that it is the combination of all these three dimensions of entrepreneurial attitude in terms of affection, cognition, and behaviour that motivates one to become an entrepreneur.

Methodology

The main purpose of this study is to compare entrepreneurial attitudes of university students based on "learning by doing" approach. Basic Entrepreneurship course has been a core course in public universities in Malaysia since 2008. The course required students to complete business plan, report a real business experience, write business proposal, group assignment as well as attending an entrepreneurship seminar. Another group of students who participated in this study also attended an entrepreneurship course but without experience in conducting a real business. A total of 193 students from one public university were selected as respondents of this study. Data were collected in April 2010. A modified questionnaire of Entrepreneurial Attitude Orientation (EAO) developed by Robinson et al (1991) was used to assess the students' entrepreneurial attitude orientation. The questionnaire consisted of three parts. The first part included items about respondents' background information such as age and gender. The

second part was on EAO which contained the main components of attitude including achievement, self-esteem, personal control, and innovation. A reliability test was conducted and Cronbach Alpha of .87 was obtained indicating that this instrument was highly reliable. The measurement of items was based on 5 point Likert scale with 1 demonstrating “strongly disagree” and 5 demonstrating “strongly agree”. Mean scores above 3.80 was considered high, 3.40-3.79 was considered moderate and below 3.39 was considered as low perception toward entrepreneurship.

Findings

Examining the students’ demographic information indicates that majority of the respondents are female, age below 23 years old, have conducted real business in class and have positive entrepreneurial aspiration in Table I.

Table I: The demographic variables of the respondents

Gender	Male	24	12%
	Female	166	86%
Age	19-22 years		67%
	>23years		33%
Conducting a real business experience in entrepreneurship class	Yes		65%
	No		35%
Entrepreneurial Aspiration	Yes		67%
	No		14%

Table II illustrates students’ entrepreneurial attitude based on real business experience conducted in class. Based on the table, obviously university students who undergo “learning by doing” pedagogy scored higher in self-esteem cognition, innovation cognition, achievement cognition, achievement behaviour, and all the differences are significant.

Table II: Perception of students on attitudes based on business experience in entrepreneurship class.

Entrepreneurial attitude orientation	Running a real business	Mean	s.d	t-value	sig
Self-esteem affect	Yes	3.36	.58	-1.60	.11
	No	3.49	.43		
Self-esteem behaviour	Yes	3.38	.51	1.04	.26
	No	3.45	.42		
Self-esteem cognition	Yes	4.28	.41	3.64	.00
	No	4.01	.50		
Innovation affect	Yes	4.15	.39	1.67	.09
	No	4.05	.44		
Innovation behaviour	Yes	3.82	.38	1.46	.14
	No	3.73	.34		
Innovation cognition	Yes	4.14	.41	2.47	.01
	No	3.99	.42		
Achievement affect	Yes	4.15	.56	1.79	.07
	No	4.01	.38		
Achievement behaviour	Yes	4.06	.35	2.96	.00
	No	3.88	.44		
Achievement cognition	Yes	4.24	.39	2.16	.03
	No	4.09	.49		
Personal control affect	Yes	3.64	1.59	.08	.93
	No	3.66	.45		
Personal control behaviour	Yes	3.96	.29	.94	.34
	No	3.90	.44		
Personal control cognition	Yes	3.75	.87	.44	.65
	No	3.66	.61		

Table III shows that students with positive entrepreneurial aspiration scored significantly higher on majority of the entrepreneurial attitude aspects. Students scored higher on self-esteem cognition, innovation affect, innovation behaviour, innovation cognition, achievement affect, achievement cognition, achievement behaviour and personal control behaviour.

Table III: Students' entrepreneurial attitude based on experience in running a business.

Entrepreneurial attitude orientation	Entrepreneurial aspiration	Mean	s.d	t-value	sig
Self-esteem affect	Positive	3.36	.54	1.85	.06
	Negative	3.53	.51		
Self-esteem behaviour	Positive	3.38	.46	1.12	.26
	Negative	3.47	.55		
Self-esteem cognitive	Positive	4.24	.49	2.73	.00
	Negative	4.01	.46		
Innovation affect	Positive	4.17	.41	3.43	.00
	Negative	3.93	.39		
Innovation behaviour	Positive	3.83	.36	2.80	.00
	Negative	3.65	.37		
Innovation cognition	Positive	4.13	.42	2.19	.03
	Negative	3.97	.42		
Achievement affect	Positive	4.13	.54	1.96	.05
	Negative	3.99	.19		
Achievement behaviour	Positive	4.05	.40	3.59	.00
	Negative	3.81	.30		
Achievement cognition	Positive	4.22	.45	2.10	.01
	Negative	4.07	.35		
Personal control affect	Positive	3.67	1.48	.31	.75
	Negative	3.60	.45		
Personal control behaviour	Positive	3.99	.37	2.31	.02
	Negative	3.85	.28		
Personal control cognition	Positive	3.73	.60	.61	.54
	Negative	3.67	.51		

Table IV indicates that out of 125 students who had experience in conducting real business in entrepreneurship class, about 97(78%) have positive entrepreneurial aspiration while, around 50(75%) students who have no business experience in entrepreneurship class have positive aspiration and only 17(25%) have negative aspiration.

Table IV: Cross tabulation of entrepreneurial aspiration and having business experience in entrepreneurship class.

	Entrepreneurial aspiration			
	Yes	No		
Business experience in entrepreneurship class	Yes	97(78%)	28(22%)	125
	No	50(75%)	17(25%)	67
	147	45		192

Conclusion and Discussion

Okudan et al. (2006) found that learning by doing entrepreneurial projects develops students' knowledge and skills in ways that encourage entrepreneurial behaviour. According to Tan and Ng (2006) also educators should involve students in real-life problem solving and activities such as set up a small business in university. European commission (2002) also suggested that a broaden concept of entrepreneurship education should be employed to develop students' entrepreneurial attitudes and skills as well as personal qualities and which should not be directly focused on the creation of new ventures. Educators of entrepreneurship courses also should understand a more specific concept of new venture creation-oriented training. Gibb (1996) differentiated didactic model with entrepreneurial model in understanding teaching and learning entrepreneurship. If we are planning to relate students learning to become an entrepreneur, the core pedagogy based on "learning by doing" such learning as process must taking to account the context and situation in which entrepreneurs really operate. The characteristics of this type of learning must be fully understood and training programs should be adopted and tailored accordingly.

Moreover, the findings of this study indicate that just doing a business may not be enough to enhance students' attitudes toward entrepreneurship. Therefore, entrepreneurial learning may be considered as a complex process which requires various types of learning opportunities such as social interaction and reflection which has been adopted in entrepreneurship pedagogical methods (Pittaway and Cope, 2007). Therefore, educators may need to look at entrepreneurship education through a comprehensive and holistic approach so that it accommodates various aspects of developing students'

attitudes toward entrepreneurship. More importantly, running a small business in a context of compulsory education may reduce students' motivation and aspiration toward entrepreneurship (Oosterbeek et al. 2010) and this may influence their entrepreneurial attitude.

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