OETEL: AN INNOVATIVE TEACHING MODEL FOR ENTREPRENEURSHIP EDUCATION

Krisakorn Sukavejworakit, Mahidol University
Triyuth Promsiri, Stamford International University
Thanaphol Virasa, Mahidol University

ABSTRACT

The recent research in entrepreneurship asserts that entrepreneurial intention is recognized as the best predictor of entrepreneurship activity and its consequences. Entrepreneurship education as a field of research has expanded and contributed to the increase of intentions toward entrepreneurship. This study aims to extend the understanding of entrepreneurial intention (EI) within the context of entrepreneurship education (EE). The effect of opportunity evaluation process on entrepreneurial intention was explored with the application of Experiential Learning Theory. The conceptual framework was developed based on the integrated entrepreneurial intention model. The study then developed teaching model called the application of opportunity evaluation through experiential learning (OETEL). To study the effects of OETEL on EI, we used the experimental research approach. The experiment was designed in the form of pre-test and post-test-controlled group design. Total of 60 students divided for 2 groups joined in the experiment. The results of this experiment revealed that, students who received OETEL produced the higher level of entrepreneurial intention comparing to the students who did not receive the treatment. This study shows how the entrepreneurship education with the application of experiential learning theory affects entrepreneurial intention on would-be entrepreneurs. Educators and practitioners can adapt this learning method in entrepreneurship classrooms and policymakers can strategically encourage the adoption of experiential learning in the entrepreneurship education and training programs.

Keywords: Entrepreneurial Intention, Experiential Learning, OETEL, Opportunity Evaluation.

INTRODUCTION

Entrepreneurs have been recognized as central role of growth for economies, where the opportunities drive the creation, evaluation and exploitation of business ideas. Not only entrepreneurs and innovators have recognized the increasing focus on business opportunities field, but also researchers and educators have taken interest in this phenomenon. Entrepreneurship education (EE) programs and research have expanded significantly in the USA and Europe over the past few decades (Matlay, 2008; Packham et al., 2010). This expansion in trend of entrepreneurship education research has suggested that exposure to entrepreneurship education may benefit students in their acquisition of knowledge and skills as well as in the increasing intentions toward entrepreneurship (Nabi et al., 2017). Therefore, in the field of entrepreneurship, we can imply that entrepreneurship education becomes significantly important to both macro and micro level of entrepreneurship. To evaluate the impact of entrepreneurial knowledge or entrepreneurship education programs, vast majority of papers emphasized that
entrepreneurship education directly or indirectly contributes to increase entrepreneurial intentions (Wu and Wu, 2008; Zainuddin and Ismail, 2011).

In this study, we therefore studied the experiential learning in opportunity evaluation process which measured in entrepreneurial intention. To study effect of opportunity evaluation through experiential learning, we adopted the platform of entrepreneurship education as we conducted this research in the classroom format.

LITERATURE REVIEW

Since Shapero’s seminal works thirty-five years ago (Shapero & Sokol, 1982) symbols the starting point at which the study on entrepreneurial intentions begins its current period of rapid growth. Prior studies show that entrepreneurial intention has been used widely as the best predictor of creating new venture (Ajzen, 1991). Some independent contributions emerge in the field of entrepreneurship, as more authors begin to identify the potential value of the intention approach (Bird, 1988).

Entrepreneurial Intention

Entrepreneurial intentions are usually defined as one’s desire to own one’s own business (Crant, 1996) or to start a business (Krueger, Reilly & Carsrud, 2000). Generally, intentions have been used to describe a self-prediction to engage in a behaviour (Ajzen, 1991; Ajzen & Fishbein, 1977). Therefore, once the formation of entrepreneurial intentions occurs, an actual entrepreneurial behaviour is expected. Social-psychological studies assume that intention is the single best predictor of actual behaviour (Bagotz, Baumgartner & Yi, 1989).

The first model called Entrepreneurial Event Model (EEM) by Shapero & Sokol (1982), found that people answers to that external event will depend on their perceptions about the accessible alternatives. In addition, there are two basic kinds of perceptions, (1) Perceived desirability refers to the degree to which a person feels an attraction to become an entrepreneur and reflects individual’s preferences for entrepreneurial behaviour and (2) Perceived feasibility is defined as the degree to which people consider themselves personally capable of starting a business. It refers to the degree to which individuals are confident that they are personally able to start their own business and consider the feasibility to become an entrepreneur.

The second model called Theory of Planned Behaviour by Ajzen (1991) developed to explain entrepreneur behaviour. This is a theory that may be applied to virtually all voluntary behaviours and it provides quite good results in very diverse turfs, including the choice of professional career (Ajzen, 2001; Kolvereid, 1996). The theory of planned behaviour says that such “intentionality” is driven in part by three factors: perceived behavioural control or the perceived ease to “perform” entrepreneurial behaviour, the general attitude toward entrepreneurship or the extent to which a person has a favorable evaluation of entrepreneurship as a career and subjective norms or the perceived social norms that entrepreneurship is an “acceptable” career choice (Kolvereid, 1996b; Linan & Chen, 2009) (Figure 1).

In the effort to combine the two models of TPB and EEM which two models present a high level of mutual compatibility and overlapping models (Krueger et al., 2000; Linan, 2004). Linan (2004) offered a third model known as integrated Entrepreneurial Intention model (EI), which reflected a combination of antecedent’s entrepreneurial intentions from both TPB and EEM, we therefore rested our research using an integrated model of both earlier works on well recognized entrepreneurial intention model by Linan (2004).
Entrepreneurship Knowledge

Entrepreneurial knowledge has been mostly attempted from the perspective of entrepreneurship education. In this connection, entrepreneurship education consists of “any pedagogical program or process of education for entrepreneurial attitudes and skills” (Fayolle, Gailly & Lassas-Clerc, 2006). It has a relatively long history and has developed into an extensive phenomenon (Katz, 2003; Kuratko, 2005). However, there are different types of entrepreneurship education targeted toward particular stages of development (Bridge, O’Neill & Cromie, 1998; Gorman, Hanlon & King, 1997; McMullan & Long, 1987). Scholars have numbered various types of entrepreneurship education, which are targeted toward specific audiences (Linan, 2004).

The role of entrepreneurship education has been addressed as one of the key instruments to increase the entrepreneurial attitudes of people (Potter, 2008). Educational initiatives have been considered as highly promising to increase the supply of potential entrepreneurs and of nascent entrepreneurs to try starting a new venture.

Experiential Learning Theory

Experiential learning theory defines learning as “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience” (Kolb, 1984). The Kolb’s experiential learning theory built on earlier work of human learning and development done by many well-recognized scholars. The Kolb’s experiential learning theory is a philosophy of education based on “theory of experience” (Kolb, 2005). While the traditional education had little need for theory since the practice was determined by tradition, the new experience approach to education needs a solid theory of experience to guide its conduct (Kolb, 1984). Experiential learning or active learning, interactive learning or “learning by doing” has resulted in positive outcomes. Most experts agree that when students take an active role in the learning process the student’s learning is optimized (Smart & Csapo, 2007). Students or Learners can be entered the cycle at any points; however, the stages should be followed in the cycle sequence of the experiential learning cycle. The learning cycle provides feedback and result of new action and plan which is the consequence of previous experience and reflection. In this study, the experiential learning cycle was designed for
the learner to do at least six cycles which encompassed the six items opportunity evaluation modules.

THEORETICAL DEVELOPMENT

In this study, we built the integrated theory from experiential learning theory and opportunity evaluation theory. While the previous studies have explained the theoretical applications of experiential learning in entrepreneurship (e.g. Pittaway and Cope (2007), Politis and Gabrielsson (2009) and Corbett (2005)), this study build the alternative approach by integrating (1) Experiential Learning Theory and (2) Opportunity Evaluation Theory together, to serve as an alternative theory that increase entrepreneurial intention (Table 1).

<table>
<thead>
<tr>
<th>Table 1</th>
<th>THE THEORETICAL DEVELOPMENT OF THIS STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinctive Explanation</td>
<td>Experiential Learning Theory to Entrepreneurial Intention</td>
</tr>
<tr>
<td></td>
<td>Experiential learning gives entrepreneurs a learning experience that positively affect the entrepreneurial intention (Sherman, Sebora &amp; Digman, 2008)</td>
</tr>
<tr>
<td>Integrated Explanation</td>
<td>The experiential learning experience on opportunity evaluation would positively affect the entrepreneurial intention</td>
</tr>
</tbody>
</table>

According to Foley (1995), the unique feature of experiential learning is that the experience of the learner position at central place in all considerations of teaching and learning. This experience may involve earlier events in the life of the learner, current life events or those arising from the learner’s participation in activities implemented by teachers and facilitators. A key element of experiential learning (henceforth referred to as EL) is that learners analyses their experience by reflecting, evaluating and reconstructing it (sometimes individually, sometimes collectively, sometimes both) in order to draw meaning from it in the light of prior experience.

OETEL: The Opportunity Evaluation through Experimental Learning

Building up on the Kolb’s model (1984), this study links the experiential learning theory to the opportunity evaluation. Previous studies suggest the how opportunity evaluation affects entrepreneurial decision. According to Barretto (2012), entrepreneurs interpret opportunities by understanding by applying knowledge-based opportunity templates to decide on a course of action. With the application of experiential learning theory with Kolb’s model, the framework that allows entrepreneurs to experience through 4 stages will give entrepreneurs a better knowledge about the opportunity they pursue.

According to Allen (2012), this study defines ‘opportunity evaluation’ as the determination process of whether the business model appears feasible or not. Feasibility study is an expression in the economical and accounting sciences to simply define precise reviews and examinations to determine the feasibility of different investment alternatives by calculating costs and benefits to extract measurements for every alternative (Abou-Zeid et al., 2007). There are no specific methods to carry out feasibility studies for all types of projects; however, there are consensus actions to carry out feasibility studies in development phases (Abou-Zeid et al., 2007).
Implementing a detailed feasibility analysis during the project planning process demonstrates how the development will operate under a specific set of assumptions (Matson, 2000) considering all economic and non-economic factors (Graaskamp, 1970). It is conducted at a key stage allowing for an informed go/no go decision on a proposed development before considerable investment is made.

Therefore, this study proposes that the integrated theory between the experiential learning theory and opportunity evaluation, would positively improve entrepreneurial intention. That is, we proposed that the integration between experiential theory and opportunity evaluation allow individuals to test their opportunity through real ‘action’ instead of ‘dream’, which we believe that it is a more valid approach than some study that validate opportunity evaluation through self-assessment questionnaire (e.g. Esfandiar, 2017) (Figure 2).

FIGURE 2
OETEL METHOD

OETEL was mainly developed from the experiential learning theory in entrepreneurship based on opportunity evaluation process. The application of experiential learning has been widely recognized in many entrepreneurship literatures (e.g. Dhliwayo, 2008; Cooper, Bottomley & Gordon, 2004; Corbett, 2005; Daly, 2001). It has been proven that first-hand experience through experiential learning cycle provides a better result in entrepreneurship education. However, there is no notable research has applied the experiential model to the opportunity evaluation.

To operationalize the OETEL application, students need to go beyond the classroom to test the recognized opportunity in the real world. To do so, OETEL provides six opportunity evaluation modules adapted from New Venture Creation (Allen, 2012 p. 85), disciplined entrepreneurship (Aulet, 2013) and the first mile (Anthony, 2014). Thus, students need to test which consist of: (1) Industry analysis, (2) Market & Customer analysis, (3) Product & Service analysis, (4) Competitive analysis, (5) Finance analysis and (6) Operation & Team analysis (Anthony, 2014).

CONCEPTUAL MODEL AND HYPOTHESES

The conceptual model of this study is shown in Figure 3. In the model, entrepreneurial intention refers to one’s desire to start a business (Krueger et al., 2000).
FIGURE 3
THE CONCEPTUAL FRAMEWORK

The OETEL is the simply the way of doing this experimental field work by integrating experiential learning setting for entrepreneurs to get firsthand information by examinee each dimension of opportunity evaluation within the structured framework of feasibility analysis. We propose this opportunity evaluation through experiential learning (OETEL) as a tool for entrepreneurs and investors to measure the worthiness of project in term of possibility the success, the future of project and worthiness rate of return. Therefore, in with the application of OETEL in entrepreneurial education, this study proposed three hypotheses.

\[ H1 \quad \text{Students who received OETEL will have greater Entrepreneurial Intention than the students who did not received OETEL;} \]

\[ H2 \quad \text{The effect of application of OETEL on Entrepreneurial Intention (EI) is mediated by Perceived Desirability (PD);} \]

\[ H3 \quad \text{The effect of application of OETEL on Entrepreneurial Intention (EI) is mediated by Perceived Feasibility (PF).} \]

METHODOLOGY

This research was conducted in the form of experimental design in the classrooms. Students who participated in the business and entrepreneurship related classrooms received OETEL which was delivered in the form of slide presentation and workshop by a lecturer. The experiment was designed in the form of pretest posttest-controlled group design. The objective of this study is to mainly test the effects of treatment (OETEL) on the group that received and did not received treatment. The total sample 60 students were used for proving hypothesis 1, as this first hypothesis acted as the first checking regarding the change in Entrepreneurial Intention. This total sample of 60 students was then separated into two groups: 30 of them received OETEL and others 30 of them did not receive OETEL. This was to test the effect of OETEL between the group received manipulation and the group received none.

This study deployed the measurement in the form of self-assessment which was developed from Shook & Bratianu (2008) and Heinonen (2011). Entrepreneurial Intention (EI), Perceived Desirability (PD) and Perceived Feasibility (PF) were measured by using self-assessment questionnaire developed by Shook & Bratianu (2008). For the Application of OETEL measured by Viability as a proxy of opportunity evaluation developed by Heinonen (2011). In
the questionnaire, it consisted of 12 questions. 4 questions were used for measuring the Application of OETEL, 3 questions were used for measuring Entrepreneurial Intention (EI), 3 questions were used for measuring Perceive Desirability (PD) and 2 questions were used for measuring Perceived Feasibility (PF).

FINDINGS

Before analysing the first hypothesis with the purpose to understand whether having OETEL and not having OETEL effect Entrepreneurial Intention or not. The total participants of 60 business students participated in the hypothesis proving with pre-test–post-test controlled group experimental design. The participants were separated into two groups equally. The first group did not receive OETEL while the second group receive OETEL. Before operating experiment, both first group and second group did the survey questionnaire that aimed to measure their Perceived Desirability (PD), Perceived Feasibility (PF), Entrepreneurial Intention (EI). After the experiment, both of first group and second group also did the same questionnaire to measure whether there was any change with their measure their PD, PF and EI.

For this first hypothesis proving, it specifically focuses on the change of Entrepreneurial Intention (EI) before and after the experiment. To analyse the change of Entrepreneurial Intention (EI), Analysis of variance (ANOVA) was used as statistical method to identify the differences between two groups. The analysis on mean of entrepreneurial Intention was also considered and analysed (Table 2).

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
<th>95% Confidence Interval for Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group with treatment (OETEL)</td>
<td>30</td>
<td>4.0788</td>
<td>0.70945</td>
<td>0.12953</td>
<td>3.8129 - 4.3427</td>
<td>2.67</td>
<td>5.00</td>
</tr>
<tr>
<td>Group with NO treatment (OETEL)</td>
<td>30</td>
<td>4.1556</td>
<td>0.63568</td>
<td>0.11606</td>
<td>3.9182 - 4.3929</td>
<td>2.67</td>
<td>5.00</td>
</tr>
</tbody>
</table>

After completing questionnaire, One Way ANOVA analysis was performed on the scores of entrepreneurial intentions to compare mean differences between two groups. An analysis of variance showed that there is no significant difference between two groups (p= .656). It shows that, when considering the mean of both groups, the mean difference was not significant, as the mean of first group is 4.0778 and the second group is 4.1556. As follows, there is no significant in entrepreneurial intention before starting experiment.

After introduced the experiment and completed all experiment operation, an entrepreneurial intention of both groups was measured. One Way ANOVA was used to indicate whether there is a significant difference between both groups of study regarding the change in an entrepreneurial intention and this acted as post-test of this experiment (Table 3).
Table 3

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group with treatment (OETEL)</td>
<td>30</td>
<td>4.722</td>
<td>0.351</td>
<td>0.064</td>
<td>4.591</td>
<td>4.853</td>
<td>3.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Group with NO treatment (OETEL)</td>
<td>30</td>
<td>4.144</td>
<td>0.485</td>
<td>0.089</td>
<td>3.963</td>
<td>4.325</td>
<td>3.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

An analysis of variance showed that there was a significant difference in the entrepreneurial intention of the group that received OETEL and the group that did not receive OETEL [F(1.58)=27.946, p=0.000]. Also, it showed that the group that received OETEL had higher scores on their entrepreneurial intention (Mean=4.722) than the group that did not receive OETEL (Mean=4.144). Thus, the null hypothesis of this first experiment was rejected and the alternative hypothesis was accepted. Students who received OETEL had greater Entrepreneurial Intention than the students who did not received OETEL.

After analysing whether the group that received OETEL will make a greater score than the group that did not receive OETEL or not, the relationship of Perceived Desirability (PD), Perceived Feasibility (PF), Interracial Intentional (EI) and OETEL were considered and analysed afterward. The SPSS (PROCESS macro) which is a Versatile Computational Tool for Observed Variable Mediation, Moderation and Conditional Process Modelling (Hayes, 2012) were selected to operate on the application of OETEL through Viability (OETEL), Perceived Desirability (PD) and Perceived Feasibility (PF) as mediators and on Entrepreneurial Intention (EI) as the outcome of statistical model.

To test H2, two relationships were examined; 1) Application of OETEL through Viability to Perceived Desirability and 2) Perceived Desirability to Entrepreneurial Intention. For the first relationship, Hayes’ PROCESS analysis showed that Application of OETEL through Viability significantly affected Perceived Desirability (p=0.0000). Besides, for the second relationship, it appeared that Perceived Desirability effected Entrepreneurial Intention (p=0.0075). Regarding this finding, it can be concluded that H2 is accepted. The effect of application of OETEL through Viability (V) on Entrepreneurial Intention (EI) is mediated by Perceived Desirability (PD).

To test H3, two relationships were analysed; 1) Application of OETEL through Viability to Perceived Feasibility and 2) Perceived Feasibility to Entrepreneurial Intention. For the first relationship, the PROCESS analysis indicated that there is a significant effect from Application of OETEL through Viability to Perceived Feasibility (p=0.0000). For the second relationship, it showed that Perceived feasibility significant effect Entrepreneurial Intention (p=0.0000). It can be concluded that H3 is accepted. The effect of the application of OETEL through Viability (V) on Entrepreneurial Intention (EI) is mediated by Perceived Feasibility (PD) (Table 4).
Table 4
RESULTS OF PROCESS MACRO ANALYSIS ON THE APPLICATION OF OETEL

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff</td>
</tr>
<tr>
<td>H2</td>
<td></td>
</tr>
<tr>
<td>Application of OETEL → Perceived Desirability</td>
<td>0.6677</td>
</tr>
<tr>
<td>Perceived Desirability → Entrepreneurial Intention</td>
<td>0.1873</td>
</tr>
<tr>
<td>H3</td>
<td></td>
</tr>
<tr>
<td>Application of OETEL → Perceived Feasibility</td>
<td>0.4432</td>
</tr>
<tr>
<td>Perceived Feasibility → Entrepreneurial Intention</td>
<td>0.7261</td>
</tr>
</tbody>
</table>

IMPLICATIONS AND CONCLUSION

Implication

For educators, policy makers and university management; the findings supported the action based or experiential learning for entrepreneurship education over the traditional teaching style. Educators could try to strengthen entrepreneurship education with more experiential learning style such as start-up simulation, business plan and product launch. In terms of practical implication, the study provides valuable information and insight for those who will use such opportunity evaluation instrument for their business decision before the decision to go forward with investment implementation. In addition, the study found a practical process to formulate and deliver such training programs aimed at increasing the intention of entrepreneurs.

Conclusion

The results from the pilot and experimental study show that OETEL affects perceived desirability, perceived feasibility and entrepreneurial intention significantly. This study shows how the innovative learning application of experiential learning theory affects entrepreneurial intention. The would-be entrepreneurs who participated in research confirmed that both perceptions of the desirability and feasibility of starting a business have increased significantly.

The study measured the short-term effect of the OETEL and entrepreneurship education program on entrepreneurial intention. This study has shown that perceptions of both desirability and feasibility of starting a business are strongly influenced by opportunity evaluation through the experiential learning process. The result of this confirmed that entrepreneurship education has an impact on participants’ perceptions of starting a business.

REFERENCES


