THE IMPACT OF ENTREPRENEURIAL LEARNING COMPETENCY USING LEADERSHIP ENHANCING ACTIVITIES AMONG THAI STUDENTS

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ABSTRACT

The objectives of this research are aimed to study the relationship between leadership skills affecting entrepreneurial learning competency through Leadership Enhancing Activities (LEA) process in students in secondary school. The population in this study included 100 tenth grade students, which were divided into a control group and an experimental group, 50 students each. The instruments used for data collection were classified and based on two aspects: A leadership aspect considering four aspects including speaking communication, proactive, teambuilding, and self-confidence, in which the data were collected by a four-point Likert's Scale questionnaire developed from related studies, and Entrepreneurial learning competency aspect considering six aspects including the entrepreneur, business management, starting a business, business operations, marketing and sales, and financial management, in which the data were collected from Entrepreneurship and Small Business (ESB) Test. The finding of the study revealed that the mean of leadership in the experimental group increased by 43.43 % and the percentage of entrepreneurial learning competency increased by 32.39 % after the experiment, respectively. Thus, the result confirmed that LEA had a significant impact on entrepreneurial learning competency among secondary students and LEA is recommended for entrepreneurial learning in secondary school.

Keywords: Leadership Skill, Entrepreneurial Learning Competency, Communication, Proactive, Teambuilding, Self-Confidence

INTRODUCTION

Nowadays, there has been a rapid change in secondary learning system followed by the 21st learning dimension and social 5.0 era, where not only is general knowledge in class emphasized, but activity and skill development and enhancement corresponding to future career is also highlighted. According to issues and trends in education for sustainable development, Agenda 21 to Target 4.7 (Alexander et al., 2018) stated that Sustainable Development Goals: SDG4 (Quality Education) had aimed to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. In 2030, SDG4 will be related to 8 out of 17 targets (UNESCO, 2016) which will achieve direct link among such areas as economic vitality, entrepreneurship, job market skill, and level of education.

Moreover, OECD (2018) suggested the key transformative competency to be prepared for creating a new value of education in 2030 as stated that, "People should be able to think creatively, develop new products and services, new jobs, new processes and methods, new ways of thinking and living, new enterprises, new sectors, new business models and new social models".

Also, Incheon Declaration and SDG4 – Education 2030 Framework for Action, (UNESCO, 2015) has focused on global education framework in 2030 which is referred to

SDGs (Sustainable Development Goals) stated that "By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship".

Besides, the European Commission (2018) has designed a framework for standardized learning and a skill test on Entrepreneurship and Small Business (ESB), known as "ENTRECOMP" in 15 competencies to measure and test the qualifications of learning entrepreneurship in the EU. Then, they can be summarized in six aspects as follows: the entrepreneur, business management, starting a business, business operations, marketing and sales, and financial management.

Additionally, the World Economic Forum (2014) presented a lifelong learning model in the 21st century, comprising 16 skills in three categories: foundational literacy, competencies, and character qualities. For the third category, learners must develop skills in curiosity, initiative, persistence, leadership, and social and cultural awareness.

From the above mentioned, it clearly indicated the consistency with the National Strategy (2018-2037) in Thailand (Thailand Strategy, 2018). According to the National Strategy for National Competitiveness Enhancement, it aims to encourage and provide youth in the elementary and tertiary level an opportunity to learn and develop competency in entrepreneurship and leadership. It is believed that this concept would be one factor contributing to the 55% increase of economic GDP in 2037, as well as sustainable social and national development in the future.

From the rationale stated above relating to the relationship between the development of students' entrepreneurial learning competency and leadership enhancement, the researchers aim at two main points: to identify appropriate leadership enhancing activities to entrepreneurial learning and to determine the initial impact of leadership enhancing activities on entrepreneurial learning among secondary students and answer the question on how the leadership skills have an impact on entrepreneurial learning competency and what factors of leadership skills affect entrepreneurial learning competency.

LITERATURE REVIEW

The Relationship between Entrepreneurial Learning and Leadership Characteristics

According to related study conducted by Felix, et al., (2019) on the relationship of leadership influencing students' entrepreneurial learning competency, data was collected from 34 countries worldwide from 2013 – 2019 and revealed that charismatic, humane and self-proactive leadership significantly positively affected entrepreneurship the most. On the other hand, autonomous leadership negatively affected entrepreneurial learning competency.

Kadwa & Barnard (2019) analyzed the impact of leadership on entrepreneurship in South Africa and found that leadership skill played an important role in shaping future successful entrepreneurial personality such as self-confidence, problem-solving skill, engagement, and determination. The more these skills were developed, the higher efficiency of entrepreneurship was.

From the study by Zimmerman (2014), five leadership characteristics – openness, conscientiousness, extraversion, agreeableness, and neuroticism – were significantly correlated with entrepreneurship development.

Furthermore, the study on an impact of leadership on entrepreneurship in 422 people in Turkey conducted by Uslu, et al., (2015) revealed that open leadership consisting of knowledge management skill contributes to success of corporate entrepreneurship within an organization as well.

As we can see, the researchers have studied and compared the importance of leadership from related studies since 1991 such as Blake (1991); Lee (2001); Hackman (2004); Bass (2008); Javitch (2009); Sugarman (2010). It was discovered that 4 out of 18 leadership skills were referred to the most, which may affect leadership enhancing activity.

These skills included speaking communication skill, proactive skill, self-confidence, and teambuilding skill. All of the four factors here were then used as a framework for this study.

Conceptual Framework and Hypotheses

The conceptual framework in this research covers analyzing and comparing factors as follows: Leadership Enhancing Activities (LEA) for four skills including speaking communication skill (*x*1), proactive skill (*x*2), teambuilding skill (*x*3), and self-confidence skill (*x*4) and impacts of leadership experiment on student entrepreneurial learning competencies in six aspects including the entrepreneur (*y*1), business management (*y*2), starting a business (*y*3), business operations (*y*4), marketing and sales (*y*5), and financial management (*y*6). Based on the research conceptual framework, two hypotheses are raised in this study:

H1: Leadership Enhancing Activities (LEA) has a significant impact on the entrepreneurial learning competencies of Thai secondary students.

H2: Leadership Enhancing Activities (LEA) has a significant impact on leadership skill development of Thai secondary students.

The conceptual framework is shown in the Figure 1.

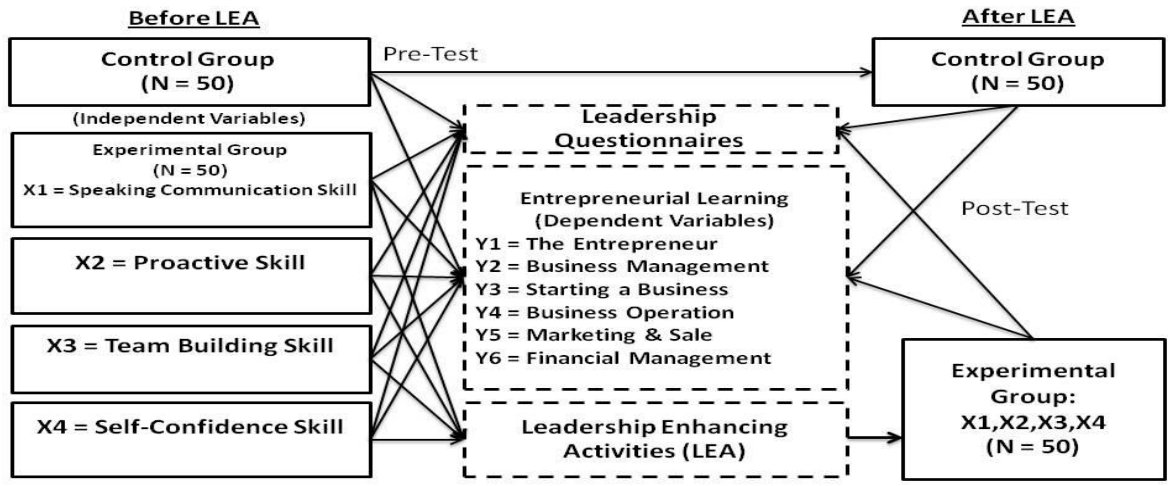

FIGURE 1
RESEARCH CONCEPTUAL FRAMEWORK

METHODOLOGY

Scope of Content

This study was focuses on two main factors. Firstly, the leadership skill used in the experiment (independent variable=x) was determined in four aspects, namely speaking communicational skill (*x1*), proactive skill (*x2*), teambuilding skill (*x3*), and self-confidence skill (*x4*), which were expected to have an effect on the entrepreneurial learning competency of tenth grade students, Montfort College, Secondary School. Secondly, the entrepreneurial competencies (dependent variable=y) were determined using the model based on the European Commission Learning Framework (2018) for six competencies: the entrepreneur (*y1*), business management (*y2*), starting a business (*y3*), business operations (*y4*), marketing and sales (*y5*), and financial management (*y6*). This study was conducted in Montfort College, Secondary Section, Muang Chiang Mai Thailand, which is one of the leading schools in the country. It is now in the 90th year of existence, and there are 3,300 students both in the lower and higher secondary levels.

Population and Sample

One hundred tenth-grade students in Montfort College, Secondary Section, for Academic Year 2020 were divided into two groups: a control group (*A*) for 50 students, consisting of 32 male students (64%) and 18 female students (36%) and an experimental group (*B*) for 50 students who participated in Leadership Enhancing Activities (LEA), consisting of 24 male students (48%) and 26 female students (52%).

Instruments and Data Collection

As this research is an action research to find the difference between the two groups: the control group and the experimental group, two instruments were used to measure and assess the population before and after implementation as follows.

Leadership Enhancing Activities (LEA) in this study refers to leadership enhancing activity used to experiment tenth grade students for a total of 10 weeks. The data were collected from a 40-item questionnaire on student leadership adapted from Eysenck's conceptual (1969) and measurement framework. The questionnaire consisted of three sections: (1) demographic data, (2) leadership characteristics for four skills: speaking communication skill ($x1$) for 10 items, proactive skill ($x2$) for 10 items, self-confidence skill ($x3$) for 10 items, and teambuilding skill ($x4$) for 10 items, and (3) further suggestions. The questionnaire was a checklist based on 4-point Likert's Scale (1932) ranging from 1-4 with rating scale as follow: Strongly Agree=4, Agree=3, Disagree=2 and Strongly Disagree=1. Index of Item-Objective Congruence (IOC) was determined from experts in the development and promotion of leadership skill with at least 15 years of experience from agencies at the secondary education level for two people and higher education level for three people, for the total of five people. Ten aspects in the questionnaire such as consistency of questionnaire content with research objectives, suitability of demographic groups etc., and the content of the independent variable (four aspects of leadership) were considered. The mean of congruence of the questionnaire used as a student leadership skill tool was 0.82 (IOC>0.5, indicating that the tool was consistent with content within the criteria that could be used for data collection (Peter, 1994). Moreover, the researchers also tested the reliability of the test in a volunteer group of 30 tenth-grade students, and then it was analyzed using Cronbach's alpha coefficient. And the value was 0.892 (α>0.80, indicating that the tool has reliability that could be used for data collection (Nunnally, 1978).

Entrepreneurial learning competency test used in this experiment was adapted from Entrepreneur and Small Business (ESB) Test from the MBA Research and Curriculum Center, USA. It is a 150-item international standard test based on European Commission's ENTRECOMP Framework (2018), comprising of entrepreneurship competency for 6 aspects: the entrepreneur ($y1$), business management ($y2$), starting a business ($y3$), business operation ($y4$), marketing and sale ($y5$), and financial management ($y6$), 25 items each.

The Design and Duration of the Experiment

This study was conducted in the second semester of Academic Year 2020 using the design of student club activities in the tenth-grade students for three hours per week, a total of 10 weeks, totaling 30 hours.

RESULTS

Descriptive Statistics Analysis

The results of the research can be summarized in order to compare the results before and after participation of LEA between the control and experimental groups as shown in Tables 1-2.

Table 1
COMPARISON TABLE OF INDEPENDENT AND DEPENDENT VARIABLES OF CONTROL AND EXPERIMENTAL GROUP BEFORE PARTICIPATING THE LEA

Variables	**Skill/Competency**	**Average Mean of Leadership Skill**			
		Control		Experimental	
	Leadership Skills	*Mean*	*S.D.*	*Mean*	*S.D.*
Independent	Speaking communication (x1)	1.646	0.505	1.608	0.525
	Proactive (x2)	1.672	0.521	1.660	0.522
	Teambuilding (x3)	1.682	0.527	1.616	0.560
	Self-confidence (x4)	1.674	0.530	1.700	0.542
	Total Average	1.668	0.015	1.646	0.042
		Average Score of ESB			
Variables	**Skill/Competency**	Control		Experimental	
	Entrepreneurial Learning	*Mean*	*S.D.*	*Mean*	*S.D.*
Dependent	The entrepreneur (y1)	10.08	2.570	10.18	2.826
	Business management (y2)	6.60	1.714	6.80	1.807
	Starting a business (y3)	6.64	1.782	6.66	1.698
	Business operation (y4)	7.22	1.645	7.46	1.555
	Marketing and sale (y5)	7.46	1.487	7.24	1.519
	Financial management (y6)	7.32	15.84	7.00	1.807
	Total Average	7.55	1.286	7.55	1.317

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Table 2
COMPARISON TABLE OF INDEPENDENT AND DEPENDENT VARIABLES OF CONTROL AND EXPERIMENTAL GROUP AFTER PARTICIPATING THE LEA

After LEA					
Variables	**Skill/Competency**	**Average Mean of Leadership Skill**			
		Control		Experimental	
	Leadership Skills	*Mean*	*S.D.*	*Mean*	*S.D.*
Independent	Speaking communication (x1)	1.636	0.519	3.298	0.450
	Proactive (x2)	1.664	0.520	3.482	0.477
	Teambuilding (x3)	1.676	0.527	3.340	0.460
	Self-confidence (x4)	1.688	0.526	3.414	0.487
	Total Average	1.666	0.222	3.383	0.081
		Average Score of ESB			
Variables	**Skill/Competency**	Control		Experimental	
	Entrepreneurial Learning	*Mean*	*S.D.*	*Mean*	*S.D.*
Dependent	The entrepreneur (y1)	10.04	1.937	20.46	1.876
	Business management (y2)	6.66	1.847	11.48	0.641
	Starting a business (y3)	6.68	1.932	11.98	0.358
	Business operation (y4)	7.26	1.664	12.12	0.745
	Marketing and sale (y5)	7.48	1.432	11.51	1.036
	Financial management (y6)	7.28	1.552	11.06	0.366
	Total Average	7.56	1.257	13.10	3.624

From the experiment, it was found that the statistical parameters variables of the questionnaire on leadership of the experimental group for 50 people classified by independent variables, was shown as follows: speaking communication (*x1*) obtained *M*=3.298, *S.D.*= 0.450; proactive (*x2*) obtained *M*=3.482, *S.D.*= 0.477; teambuilding (*x3*) obtained *M*=3.340, *S.D.*= 0.460; and self-confidence (*x4*) obtained *M*=3.414, *S.D.*= 0.487, with a total mean of 3.383, and *S.D.* of 0.081. Thus, rating level can be interpreted according to the Likert's Scale principle as Strongly Agree. Additionally, it was found that the mean score from the ESB test of entrepreneurship of the experimental group for 50 people, classified by dependent variables, was presented as follows: the entrepreneur (*y1*) had a mean score of 20.46%, the

S.D. was 1.876; business management (*y2*) had the mean score of 11.48%, *S.D.* was 0.641; starting a business (*y3*) had a mean score of 11.98%, *S.D.* was 0.358; business operations (*y4*) had a mean score of 12.12%, *S.D.* was 0.745; marketing and sales (*y5*) had a mean score of 11.51%, *S.D.* was 1.036; and the financial management (*y6*) had a mean score of 11.06%, the *S.D.* was 0.366, with a total mean of 13.10%, and *S.D.* of 3.624.

SUMMARY OF FINDINGS AND DISCUSSION

From the LEA, it was revealed that four aspects of leadership skill (independent variables) tend to develop in a better way. By considering before and after participating in LEA, the efficiency can be sorted from the highest to the lowest as follows: proactive skill (*x2*) has increased leadership efficiency with an average of 45.50%; teambuilding skill (*x3*) has increased leadership efficiency with an average of 43.25%; self-confidence (*x4*) has increased leadership efficiency with an average of 42.75%; and speaking communication skill (*x1*) has increased leadership efficiency with an average of 42.25%.

Furthermore, from the results of testing research hypothesis of the experimental group before and after LEA participation, it was found that *t* - Test=-59.798 and Sig. (2-Tailed)=0.000 (Sig<0.05). Thus, it can be interpreted that the Leadership Enhancing Activities (LEA) had a statistically significant difference in leadership skill. Therefore, it can be concluded that the LEA in this study affected entrepreneurial learning in tenth-grade students in Montfort College in a more effective way.

In addition, from an analysis of dependent variables which included six aspects of entrepreneurial learning of the experimental group affected by the LEA before and after implementation, the efficiency can be sorted from the highest to the lowest as follows: the entrepreneur competency (*y1*) has increased learning competency with an average of 41.12%; starting a business (*y3*) has increased learning competency with an average of 35.46%; business management (*y2*) has increased learning competency with an average of 31.20%; business operations (*y4*) have increased learning competency with an average of 31.06%; marketing and sales (*y5*) has increased learning competency with an average of 28.46%; and financial management (*y6*) has increased learning competency with an average of 27.06%.

Furthermore, from the results of testing research hypothesis of the experimental group before and after participating in LEA, it was found that *t* - Test=-5.757 and Sig. (2-Tailed)=0.002 (Sig<0.05). Thus, it can be interpreted that the LEA had a statistically significant difference in entrepreneurial learning. Therefore, it can be concluded that the LEA in this study affected entrepreneurial learning in tenth grade students in Montfort College in a more effective way.

From the research results above, the research hypothesis can be analyzed and tested as illustrated in Table 3.

Table 3
RESULTS OF ANALYZING AND TESTING OF RESEARCH HYPOTHESIS

H1: Leadership Enhancing Activities (LEA) have a significant impact on the entrepreneurial learning competencies of Thai secondary students.

Status	N	Mean	S.D.	t	Sig.(2-Tailed)
Before LEA	50	7.55	1.317	-5.757	0.002
After LEA	50	13.10	3.624		

H2: Leadership Enhancing Activities (LEA) have a significant impact on leadership skill development of Thai secondary students.

Status	N	Mean	S.D.	t	Sig.(2-Tailed)
Before LEA	50	1.646	0.042	-59.798	0.000
After LEA	50	3.383	0.081		

Remark: Statistical Significance=0.005

From the above discussed, the results can be summarized to compare the leadership skill and the entrepreneurial learning competency from the LEA of the experimental group in a descending order as shown in Table 4.

Table 4
SUMMARY OF THE LEADERSHIP SKILL AND ENTREPRENEURIAL LEARNING COMPETENCY FROM LEADERSHIP ENHANCING ACTIVITIES (LEA) IN A DESCENDING ORDER

The Effectiveness of Leadership Skill		
Ranking	**Leadership Skill**	**An Average of Development**
1	Proactive skill (*x2*)	45.50 %
2	Teambuilding skill (*x3*)	43.25 %
3	Self-confidence skill (*x4*)	42.75 %
4	Speaking communication skill (*x1*)	42.25 %
Entrepreneurial Learning Competency		
Ranking	**Type of Competency**	**An Average of Development**
1	The entrepreneur (*y1*)	41.12 %
2	Starting a business (*y3*)	35.46 %
3	Business management (*y2*)	31.20 %
4	Business operations (*y4*)	31.06 %
5	Marketing and sales (*y5*)	28.46 %
6	Financial management (*y6*)	27.06 %

Moreover, the researchers found the relationship of the factors affecting the leadership skill and the entrepreneurial learning competency as shown in Table 5.

Table 5
THE RELATIONSHIP BETWEEN LEADERSHIP SKILL DIRECTLY AFFECTING ENTREPRENEURIAL LEARNING COMPETENCY OF THE EXPERIMENTAL GROUP

Leadership Skill (Independent Variables)	**An Average of Leadership Skill**	**The Most Affected Entrepreneurial Learning Competency (Dependent Variables)**	**Summary of the Relationship between Independent and Dependent Variables**
Proactive skill (*x2*)	89.28 %	The entrepreneur (*y1*)	*x2 → y1*
Teambuilding skill (*x3*)	80.66 %	Business management (*y2*)	*x3 → y2*
Self-confidence skill (*x4*)	87.33 %	Starting a business (*y3*)	*x4 → y3*
Teambuilding skill (*x3*)	87.06 %	Business operations (*y4*)	*x3 → y4*
Speaking communication skill (*x1*)	86.80 %	Marketing and sales (*y5*)	*x1 → y5*
Proactive skill (*x2*)	75.33 %	Financial management (*y6*)	*x2 → y6*

According to the Table 5, it displays the relationship of leadership skills (independent variable) affecting entrepreneurial learning competencies (dependent variable) using the LEA experiment. The relationship can be described that proactive skill (*x2*), representing 89.28 percent, is the predominant factor that has the greatest impact on the entrepreneur competency (*y1*). Therefore, in order to enhance students' entrepreneur competency, more activities for promoting leadership skills in proactive aspect should be organized in a classroom. Furthermore, it was discovered that teambuilding skill (*x3*), accounted for 80.66 percent, is the factor mainly influencing business management competency (*y2*); self-confidence skill (*x4*), accounted for 87.33 percent, is the main factor affecting starting a business competency (*y3*); teambuilding skill (*x3*), representing 87.06 percent, is the main factor affecting business operations competency (*y4*); speaking communication skill (*x1*), representing 86.80 percent, is the predominant factor influencing marketing and sales (*y5*); and proactive skill (*x2*), accounted for 75.33 percent, is the main factor affecting financial management (*y6*). From the relationship mentioned here, it was also revealed that proactive skill (*x2*) and teambuilding skill (*x3*) are the main factors influencing the overall entrepreneurship learning competency using LEA in this research.

CONCLUSIONS

According to related studies such as the research conducted by Sandybayev (2019), the experiment results were consistent with this research. That is, leadership has an impact on entrepreneurial learning competency in 4 aspects based on domestic context: creativity, passion, vision, and risk taking. However, in this recent study, the researchers have adopted an international standard framework based on the European Commission (2018) employing a total of 6 factors. Hence, the relationship between leadership and entrepreneurial learning can be more clearly analyzed in relationship order as shown in Table 5. It was also found that the study by Kadwa & Barnard (2019) examined the impact of relationship between leadership and entrepreneurial learning in only 3 aspects including market, consumer, and community. As well, the study by Felix, et al., (2019) also investigated in 3 aspects: total entrepreneurial activity, opportunity entrepreneurship, and necessity entrepreneurship. Those researches displayed the same direction and were consistent with the result of this recent study. That is, the more leadership potential increases, the more entrepreneurial learning competency improves. In addition, from a previous relevant study in Thailand, leadership skill, such as communication, has a positive impact on entrepreneurship (Chienwattanasook & Jermsittiparsert, 2019).

RECOMMENDATIONS

The research result can be used to design and develop course plan or activity plan for students at the upper secondary by extending time duration from 10 weeks to 20 weeks or a semester. The tools - measurement and evaluation, as well as the activity patterns that the researchers have conducted experiments on can be applied and adapted to suit the context of each educational institution. Furthermore, the researchers are working on collecting data and expanding the results of the research to launch the Montfort College Entrepreneurship Development Center project in collaboration with International College of Digital Innovation, Chiang Mai University, Thailand (CMU: ICDI) and The Center of Thai Studies of Yunnan University of the People's Republic of China at Montfort College, Secondary Section to promote and develop the potentials of students in the Art-Business of the English Program in the Academic Year 2021. Teaching and learning will be in an international curriculum (application for both Thai and foreign students) with Thai and foreign teachers. It focuses on modern, internationally standardized, and effective learning (UKCES, 2014), as well as considering global citizen attribute in social 5.0 era (OECD, 2018). Also, financial, economic, business entrepreneurial literacy skills are emphasized as well (OECD, 2010). This center operates in three main areas of development: promotion and development of entrepreneurial activities both domestically and internationally, entrepreneurship curriculum management, and organization of the international standardized test on entrepreneurship.

Further Study

In the future, the researchers expected to analyze and compare other factors that may affect the success of the development of entrepreneurial learning competencies, such as autonomy, visionary, risk-taking, and other new concepts to create creative business opportunities (opportunity recognition and acting proactively) etc. (Miller, 1983). In addition, Lambing (2007) addressed the factors contributing to entrepreneurial success: need of achievement, resilience, locus of control, etc. The researchers expected to apply and link the theory related to the four areas of Whole Brain Literacy (WBL) (Takyo et al., 2010) with the development of six aspects of entrepreneurial learning competency (the entrepreneur, business management, starting a business, business operations, marketing and sales, and financial management) based on Entrepreneurship and Small Business (ESB) Test. This is to realize the relationship between human brain function and the entrepreneurial response,

which can lead to a broad enhancement and development of research both in entrepreneurship business, education, psychology and medical fields, etc.

ACKNOWLEDGEMENTS

I would like to express my special thanks of gratitude to Bro. Dr. Surakit Srisrankulwong, the director of Montfort College for supporting the research scholarship.

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