

Entrepreneurial Intent and Orientation Developments in Thai Students under an Entrepreneurship Curriculum

การพัฒนาความตั้งใจในการเป็นผู้ประกอบการและบุคลิกความเป็นผู้ประกอบการของนักศึกษาปริญญาตรีไทยหลักสูตรการเป็นเจ้าของกิจการ

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Abstract

This study's purpose was to examine the impact of years of studying in Bangkok University's School of Entrepreneurship (BUSEM), gender and family business background (FB) on students' entrepreneurial intent (EI) and entrepreneurial orientation (EO) with hypotheses that EI and EO scores were impacted by differences in FB, Gender and Years of studies (Year) in BUSEM program. Five hundred and fifty (out of seven hundred and fifty) BUSEM students were accidentally selected to participate in this survey. The questionnaire was administered to 550 students (out of 750). Data analysis of this research included mean, standard deviation, and 3-way MANOVA. The results showed that 73% of the sampling came from family business ownership background. Trading is the main source of their FB income. Seventy-five percent of those businesses belong to their father side. Most students' household income per month is over 100,000 baht/month. The first year students had the highest EI and EO scores followed by the second, third, and fourth year students. This research showed that EI and EO scores were significantly affected by the combination of Years of study, Gender and the FB ownership of students. The interaction between Gender and Year significantly affected the EO score of female students with family business ownership. Among female students with FB, years of study impacted their EI and EO scores. Specifically, the first year female students with FB had significantly higher EI scores than the third and fourth years. They also had significantly higher EO scores than the second year female students with FB. At the same time,

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female students without FB, Year of studies significantly impacted the EI scores. The first year female students without FB had significantly higher EI scores than second, third, and fourth year female students without FB. However, neither Years of study nor FB ownership impacted the EI and EO scores of male students.

Keywords: *Entrepreneurial Education, Entrepreneurial Intent, Entrepreneurial Orientation*

บทคัดย่อ

งานวิจัยนี้ศึกษาปัจจัยที่ส่งผลต่อความตั้งใจเป็นผู้ประกอบการและบุคลิกการเป็นผู้ประกอบการ ได้แก่ ชั้นปีการศึกษา เพศ และการมีธุรกิจครอบครัวของนักศึกษา ประชากร คือ นักศึกษาคณะกรรมการสร้างเจ้าของธุรกิจและการบริหารกิจการ มหาวิทยาลัยกรุงเทพ ชั้นปีที่ 1-4 จำนวน 750 คน สุ่มตัวอย่างแบบบังเอิญได้จำนวน 550 คน เครื่องมือที่ใช้ คือ แบบสอบถาม สถิติที่ใช้วิเคราะห์ข้อมูล ได้แก่ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และการวิเคราะห์แปรปรวนแบบพหุนาม 3 ทิศทาง ผลการวิจัยพบว่า ร้อยละ 73.00 ของนักศึกษาในกลุ่มตัวอย่างมาจากครอบครัวที่มีธุรกิจ ประเภทของธุรกิจครอบครัวส่วนใหญ่ คือ การค้าขายโดยร้อยละ 75.00 ของกลุ่มกิจการเป็นธุรกิจฝ่ายพ่อ โดยมีรายได้มากกว่า 100,000 บาทต่อเดือน ความตั้งใจที่จะเป็นผู้ประกอบการและบุคลิกการเป็นผู้ประกอบการของนักศึกษาชั้นปีที่ 1 มีค่าสูงสุด รองลงมา คือ นักศึกษาชั้นปีที่ 2 ชั้นปีที่ 3 และชั้นปีที่ 4 ตามลำดับ ผลการทดสอบอิทธิพลของเพศ ชั้นปีการศึกษา และการมีธุรกิจครอบครัวพบว่า ในกลุ่มนักศึกษาเพศหญิงที่มีธุรกิจครอบครัว ชั้นปีการศึกษามีผลต่อความตั้งใจเป็นผู้ประกอบการและบุคลิกการเป็นผู้ประกอบการ โดยนักศึกษาชั้นปีที่ 1 มีความตั้งใจที่จะเป็นผู้ประกอบการสูงกว่าชั้นปีที่ 3 และ 4 และนักศึกษาชั้นปีที่ 1 ยังมีบุคลิกการเป็นผู้ประกอบการสูงกว่าชั้นปีที่ 2 ส่วนในกลุ่มนักศึกษาเพศหญิงที่ไม่มีธุรกิจครอบครัว ชั้นปีการศึกษามีผลต่อความตั้งใจที่จะเป็นผู้ประกอบการเท่านั้น โดยนักศึกษาชั้นปีที่ 1 มีความตั้งใจที่จะเป็นผู้ประกอบการสูงกว่าชั้นปีที่ 2 3 และ 4 ในขณะที่ในกลุ่มนักศึกษาเพศชาย ทั้งการมีธุรกิจครอบครัวและชั้นปีการศึกษามีผลต่อความตั้งใจที่จะเป็นผู้ประกอบการและบุคลิกการเป็นผู้ประกอบการอย่างไม่มีนัยสำคัญทางสถิติ

คำสำคัญ: *การศึกษาด้านผู้ประกอบการ ความตั้งใจเป็นผู้ประกอบการ บุคลิกการเป็นผู้ประกอบการ*

Introduction

Entrepreneurship stimulates the world economy as it creates new businesses development and more jobs for society (Linan, Rodriguez-Cohard, & Rueda-Cantuche, 2011). The governments of many countries are promoting programs and policies to create new businesses and Start-ups (Canever, Barral, & Ribeiro, 2017). Entrepreneurship education (EE) plays a key role to increase entrepreneurial attitudes and skills of the population (Potter, 2008). Students who had EE were having higher

entrepreneurial intent (EI) and entrepreneurial orientation (EO) scores compared to students from other faculties (Westhead & Solesvik, 2016). Entrepreneurship can be learnt by a well-designed curriculum (Mandel & Noyes, 2016; Noyes, 2018). Bangkok University's School of Entrepreneurship and Management (BUSEM) believed that and has been developing a curriculum on Entrepreneurship since 2008. Students learn directly from lecturers and experts in corresponding fields (Mentors). This 4-year bachelor course consists of 4 stages:

Stage 1: Business idea generation First year students would learn about the Foundation of Entrepreneurship, Business Management, and Creativity Thinking and Innovation. During this stage, students were encouraged to explore their creative business ideas and transform those thoughts into reality by participating in a retail fair where they gained experience with real elements of business operation such as sourcing material, planning, and selling to real consumers.

Stage 2: Business model planning Students would transform their business ideas into business plans and models. This venture draft helped the students really understand the business (McKeever, 2016). They were learning about Business Models, Business Plans, Production and Operation Management, Family Business and Business Strategies. They also had their very first prototype of products/ services and met mentors for expert advises (Cannavacciuolo, Capaldo, Esposito, Landoli, & Raffa, 2006).

Stage 3: Business launching or pursue At this stage, business plans and prototypes were presented to real investors at the Investor Pitches (Noyes, 2018). The students had to procure raw materials & packaging, production process and quality control for their products. BUSEM created a Business Fair for the students to trade their products in leading shopping malls where they received direct comments from real consumers. Success or failure from mentioned activities would be their life long experience (Mandel & Noyes, 2016).

Stage 4: Wrap up The final stage of the curriculum was to prepare and establish the students as entrepreneurs in the competitive world. The students learnt how to correct

their errors and improve their business plans (Gasse & Tremblay, 2006). In addition, BUSEM facilitated business matching programs between the students and investors who could grow the start-ups further.

At each stage of the BUSEM curriculum, students experienced different business situations; therefore, their entrepreneurial motivations might not be stable toward the end of the program. This motivation would be captured by their EI (Canever et al, 2017). Students with high EI often had a strong desire to become one's own boss rather than being employees in big firms (Nabi & Linan, 2013). Well established entrepreneurs were having a common set of behaviors or EO (Lumpkin & Dess, 1996). Each stage of curriculum would generate different degrees of individual EO (Bolton & Lane, 2012).

Purpose

The primary objective of this study was to investigate the impact of the number of years of studying (or entrepreneurial experience) in the BUSEM curriculum on students' EI and EO. In addition, this research also investigated the differences (if any) in EI and EO levels between Gender and family business ownership (FB). This study divided the students into two groups; with and without FB to learn how family background impacted the level of EI and EO. The findings and conclusions from this research will help BUSEM to improve its current entrepreneurship curriculum.

Literature Review

Mandel and Noyes (2016) mentioned that entrepreneurship can be taught and EE curriculum should provide opportunities for students to

explore themselves by having direct experiential EE rather than only learning inside the class. Educators had to provide other activities such as problem-based learning approaches, mentoring sessions, social networking, etc. to enhance the EI and EO of the students (Ting, Feng & Qin, 2017).

Human Intention to perform behaviors is the basis of Icek Ajzen's Theory of Planned Behaviour (TPB) (Ajzen & Fishbein, 1980). Individual interest was influenced by attitudes towards behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). Other influencing factors on EI are demographic characteristics (e.g. age, gender, etc.) and personality traits (Rauch & Frese, 2007). Linan et al. (2011) reported that EE was the key instrument to increase the entrepreneurial attitudes. Kolveried (1996) developed Prediction of Employment Status Choice Intentions scale to define degree of intention to become self-employed. Students with FB background had greater chance of being an entrepreneur than those from non-entrepreneurial family (Oluwafunmilayo, Olokundun, Moses, & Grace, 2018). The studies on correlation between Gender and EI had been discussed in a number of researches that the levels of EI between male and female were very close (Gupta, Turban, Wasti, & Sikdar, 2009). On the other hand, a number of studies found out that the levels of EI amongst male and female were significantly different (Perez-Quintana, Hormiga, Martori, & Madariaga, 2017). EI Development was suggested to arise from personal needs, values, wants, habits, and beliefs (Bird, 1988). Ajzen (1991) proposed that 'Motivation Antecedents' influenced personal intention. External factors such as situations were also found to influence EI via attitudes

(Boyd & Vozikis, 1994), time constraints, task difficulty and social pressures (Lee & Wong, 2004). Linan and Chen (2009) compared the influences of three motivational antecedents (influence of personal attitudes, subjective norm, and perceived behavioral control) on the development of EI and concluded that the influences were cultural dependent. Al-Jubari, Hassan, and Linan (2018) proposed a full-mediational model which has an indirect impact on EI via their attitudinal antecedents.

Entrepreneurial Orientation has been reported to affect the growth of entrepreneurship, firm performance, profitability, growth and product innovation of ventures (Bolton & Lane, 2012). Lumpkin and Dess (1996) mentioned that the characters of EO are propensity to act autonomously, innovativeness, risk taking, proactiveness and competitiveness. Bolton and Lane (2012) had developed and validated an instrument called the Individual Entrepreneurial Orientation (IEO) scale to capture three dimensionalities of the EO (i.e. Risk-taking, Innovative, and Proactiveness). There were discussions on the correlation between EO scores and Gender. Although researchers found differences between male and female EO scores (Goktan & Gupta, 2015), some have not found any significant difference between these factors (Zimmerman, Barsky, & Brouthers, 2009). The students with FB background had higher EO scores than students without FB (Gurol & Atsan, 2006). Researchers found that students who have studied in EE programs (or related to entrepreneurship) are having higher EO than students from other faculties (Tautila & Down, 2012). EO Development was proposed to be constructed from a firm's knowledge-based resources to discover and exploit

business opportunities (Lumpkin & Dess, 1996). Business Knowledge and skills encourage the entrepreneurs to have confidence in predicting the outcome of each decision. Surjanti, Nugrohoseno, and Muafi (2018) identified that a necessary designed learning method is affecting the IEO of Indonesian students and concluded that a problem-based learning module had a significant effect on those students' IEO. In a classroom activity, some students show aggressiveness and competitiveness to obtain the best result. Those became the reason why an active learning method affecting individual behavior is necessary in order to improve students' IEO.

Hypothesis

BUSEM believes that Entrepreneurship can be taught to every student. However, the level of EI and EO on each person was different due

to a number of factors. Family background and family support were the key roles to influence students to develop EI and EO (Gurol & Atsan, 2006; Oluwafunmilayo et al., 2018). Students with different genders should have different levels of EI and EO as entrepreneurs were seen as masculine rather than feminine (Gupta et al., 2009). EE influences (directly and indirectly) the level of EI and EO of students (Ting et al., 2017). In this research, we measured the degree of Entrepreneurial Education by Year of studies at BUSEM.

This research hypothesized that BUSEM students with different family business ownership backgrounds (FB) were having different EI and EO scores, which were also influenced by Gender and Year of studies.

H1: Years of study impacted on EI (H1a) and/or on EO (H1b) scores

H2: Gender impacted on EI (H2a) and/or on EO (H2b) scores

H3: FB impacted on EI (H3a) and/or on EO (H3b) scores

H4: There was the interaction effect of Years of study, Gender and FB impacted on EI (H4a) and/or on EO (H4b) scores

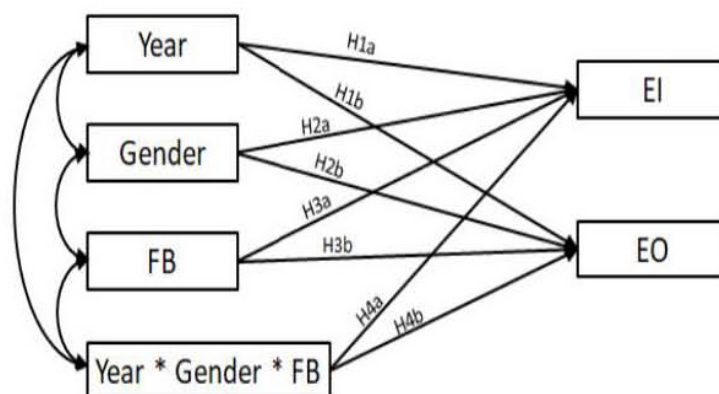


Figure 1 Research Conceptual Model

Method

The impact of BUSEM curriculum on its students' entrepreneurial potential was measured through a survey employing EI (Souitaris, Zerbinati, & Al-Laham, 2007) and EO instruments (Bolton & Lane, 2012). Entrepreneurial Intent (EI) was captured through three questions that asked about the levels of 1) their intent to be owner of venture, 2) their desire to be self-employed and 3) their desire to work in an organization (Souitaris et al., 2007). Entrepreneurial Orientation (EO) was captured through three items that were 1) Risk taking, 2) Innovativeness, and 3) Proactiveness (Bolton & Lane, 2012). The survey was administered to BUSEM students in classrooms during different lectures (during December 2017) using a self-administered questionnaire.

Population and sample

The size of this research sampling for 3-way MANOVA was verified by the G* Power program.

We expected Median Effect size = 0.035, $\alpha=0.05$, Power of test=0.95, maximum number of groups 16 groups, number of dependent variables = 2 variables. The program calculated and got the data of 528 samples (Faul, Erdfelder, Lang, & Buchner, 2007). The over size of sampling to 550 samples happened because the expected dropout rate was less than 5% of the particular population. Five hundreds and fifty BUSEM students (year 1 - 4 Undergraduate students) participated in this survey. The sample size constituted 73% of the BUSEM student population. The primary purpose of this research to improve the BUSEM curriculum; therefore, the accidental sampling method was adopted and we gathered as many subjects as possible (Table 1). Of these respondents, 57% were male and 43% female with the majority age (96% of the whole sample) ranging between 16 – 23 years. Out of the 550 students, 549 students completed the survey with 86% having FB and 14% not having FB (Table 1).

Table 1 The Distribution of Male and Female Students with/without FB among BUSEM Students (N=549)

		Years in BUSEM program			
		1	2	3	4
With Family Business	Male	146 (53)	64 (58)	36 (67)	23 (68)
	Female	128 (47)	46 (42)	18 (33)	11 (32)
	Total	274 (100)	110 (100)	54 (100)	34 (100)
Without Family Business	Male	27 (60)	12 (71)	4 (40)	1 (20)
	Female	18 (40)	5 (29)	6 (60)	4 (80)
	Total	45 (100)	17 (100)	10 (100)	5 (100)
	Year Total	319	127	64	39
	Percentage of total students within each year	89%	80%	73%	49%

Note: Number in the Blanket is the Percentage of the Sampling

Instrument

The questionnaire was divided into three sections: 1) Demographic information, 2) EI instrument, and 3) EO instrument. Demographic information included gender, number of years with BUSEM program, sources of family income, ownership of FB and level of household income. Students' EI was captured through the three EI items: 1) their intent to be owner of venture, 2) level of desire to be self-employed, and 3) level of desire to work in an organization (Souitaris et al., 2007). The students' EO was captured through three EO items: 1) Risk taking, 2) Innovativeness, and 3) Proactiveness (Bolton & Lane, 2012). A five-point Likert's agreement scale (1 = completely disagreed, 5 = agreed completely) was used to capture EI and EO (Linan & Chen, 2009). This instrument of this research was based on previous researches by Souitaris et al. 2007 and Linan and Chen 2009. Therefore, this research instrument did not verify the validity. The instruments were used in different countries at the international level of studies. This research had a reliability test by Cronbach Alpha Coefficient, the values of EI=0.889 and EO=0.957.

Data collection

A questionnaire was administered to the BUSEM students in their native language; Thai. The data collection was accidentally administered to BUSEM students during the 1st – 15th December 2017. The survey was conducted in classrooms during different classes at Bangkok University.

Analysis of variances

Gender, FB and the number of years of study in the BUSEM program (Year) were used as fixed factors in the model along with all 2-way and 3-way interactions between the three factors. EI and EO were used as dependent variables in the analyses. The analyses were run using General Linear Model to detect the global effects of the factors. With significant effects detected, Tukey's-b multiple comparison procedure was employed to discern the sources of significant differences detected. All analyses were performed at 95% confidence level.

Findings

From 472 students with FB, the majority of the business belonged to their father side (figure 2). Interestingly, a very small number of the students mentioned that the FB belonged to both sides of their parents. Trading was their major source of incomes (51%), government contractor (13%) and agriculture (13%). More than 85% of the students came from the household with a monthly income higher than 50,000 Baht (table 2) which is higher than the average annual household income of Thai family (26,946 Baht) (National Statistic Office of Thailand, 2018).

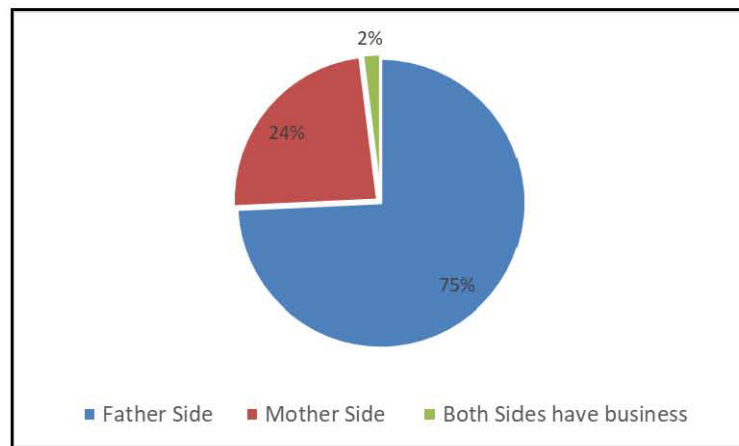


Figure 2 Distribution (%) of Family Business Ownership

Table 2 Sources of Family Business Income and Household Income

Source of Family Business Income		Household Income	
Source of Income	% of cases (N=579)	Range of Income per month (Baht)	Percent
Trading	51	< 50,000	11
Government contractor	13	50,001 – 100,000	32
Agriculture	13	> 100,000	57
Cooperate Employee	12	Total	100
Subcontractor	11		
Total	100		

MANOVA revealed a significant effect of the 3-way interaction of Year, Gender and FB ($F=2.822$, $P=0.010$). Therefore, in order to study into more detail, the sampling was separated into groups. Table 3 shows that Gender and FB alone did not significantly impact the EI and EO ($P>0.05$). Years of study was the only main influential factor which significantly impacted EI and EO of BUSEM students ($P<0.05$). This researcher divided the sampling into 2 groups of Gender, male and female.

In the group of male students, the interaction effect of Year and FB were not significantly impacted to EI and/or EO ($P>0.05$).

Neither the main effect of FB nor Years of study significantly impacted the EI and/or EO of male students ($P>0.05$).

In the group of female students, the interaction effect of Year and FB were significantly impacted to EI and/or EO ($F=2.840$, $P=0.010$). Therefore, the group of Female students was separated by their FB ownership. Female with FB group, main effect of Year was significantly impacted to EI and EO ($F=7.698$, $P=0.001$ and $F=4.636$, $P=0.009$ respectively). The Female without FB, main effect of Year was significantly impacted to EI only ($F=3.488$, $P=0.014$) but not to EO ($P>0.05$).

Table 3 MANOVA of the Effects of Year, Gender, FB and all Interaction on EI and EO of BUSEM's Students**Multivariate Testsa**

Effect		Value	F	Hypothesis df	Error df	P-value
All Gender						
Year	Wilks' Lambda	0.956	4.032	6	1064	0.001
Gender	Wilks' Lambda	0.991	2.485	2	532	0.084
FB	Wilks' Lambda	0.991	2.457	2	532	0.087
Year x Gender x FB	Wilks' Lambda	0.969	2.822	6	1064	0.010
Male						
Year x FB	Wilks' Lambda	0.978	1.146 ^b	6	608	0.334
Year	Wilks' Lambda	0.984	0.843 ^b	6	608	0.537
FB	Wilks' Lambda	0.992	1.149 ^b	2	304	0.318
Female						
Year x FB	Wilks' Lambda	0.929	2.840 ^b	6	454	0.010
With FB						
Year	Wilks' Lambda	0.917	2.905 ^b	6	396	0.009
Without FB						
Year	Wilks' Lambda	0.521	3.600 ^b	6	56	0.004
Between subjects effects						
	SS	df	MS	F	P	Poshoc
Female with FB						
Effect of Year to EI	7.717	3	2.572	7.698	0.001	Year1>3,4
Effect of Year to EO	1.930	3	0.643	4.636	0.009	Year1>2
Female without FB						
Effect of Year to EI	3.488	3	1.163	3.644	0.014	Year1>2,3,4
Effect of Year to EO	1.288	3	0.429	2.156	0.095	

Table 4 shows the estimated means of EI and EO among the BUSEM students as categorized by their Year, Gender, and FB. Interestingly, both genders of the first year students had higher scores of EI and EO than other years of students. Male students well maintained their EI and EO scores throughout the whole course. However, first year female students had the highest EI and EO scores compared to other years. This research divided female samplings into 2 groups,

with and without FB. The EI score of first year female students with FB was significantly higher than third and fourth year female students with FB (Figure 3b). The first year female students with FB had a significantly higher EO score than the second year female students with FB (Figure 3d). In addition, the level of EI upon female freshmen without FB was significantly higher than other years of female students without FB (Figure 3b).

Table 4 Comparison between the Means of EI and EO after Taking BUSEM Courses Separated by Gender, Year and FB of the Students

			Year 1	Year 2	Year 3	Year 4	Total
Male	With FB	EI	4.518	4.381	4.407	4.251	4.448
		EO	4.148	4.172	4.088	3.798	4.116
	Without FB	EI	4.284	4.222	4.250	4.333	4.265
		EO	4.047	4.140	3.736	5.000	4.066
	Total	EI	4.482	4.356	4.392	4.255	4.422
		EO	4.132	4.167	4.053	3.848	4.109
Female	With FB	EI	4.464	4.407	4.111	4.036	4.397
		EO	4.118	3.942	4.136	3.951	4.071
	Without FB	EI	4.670	3.467	3.889	3.833	4.244
		EO	4.330	3.739	3.921	3.909	4.115
	Total	EI	4.489	4.315	4.056	3.982	4.375
		EO	4.144	3.922	4.082	3.940	4.077
Total	With FB	EI	4.493	4.392	4.309	4.182	4.426
		EO	4.134	4.076	4.104	3.847	4.096
	Without FB	EI	4.438	4.000	4.033	3.933	4.256
		EO	4.160	4.022	3.847	4.127	4.087
	Total	EI	4.485	4.340	4.266	4.150	4.402
		EO	4.138	4.069	4.064	3.883	4.095

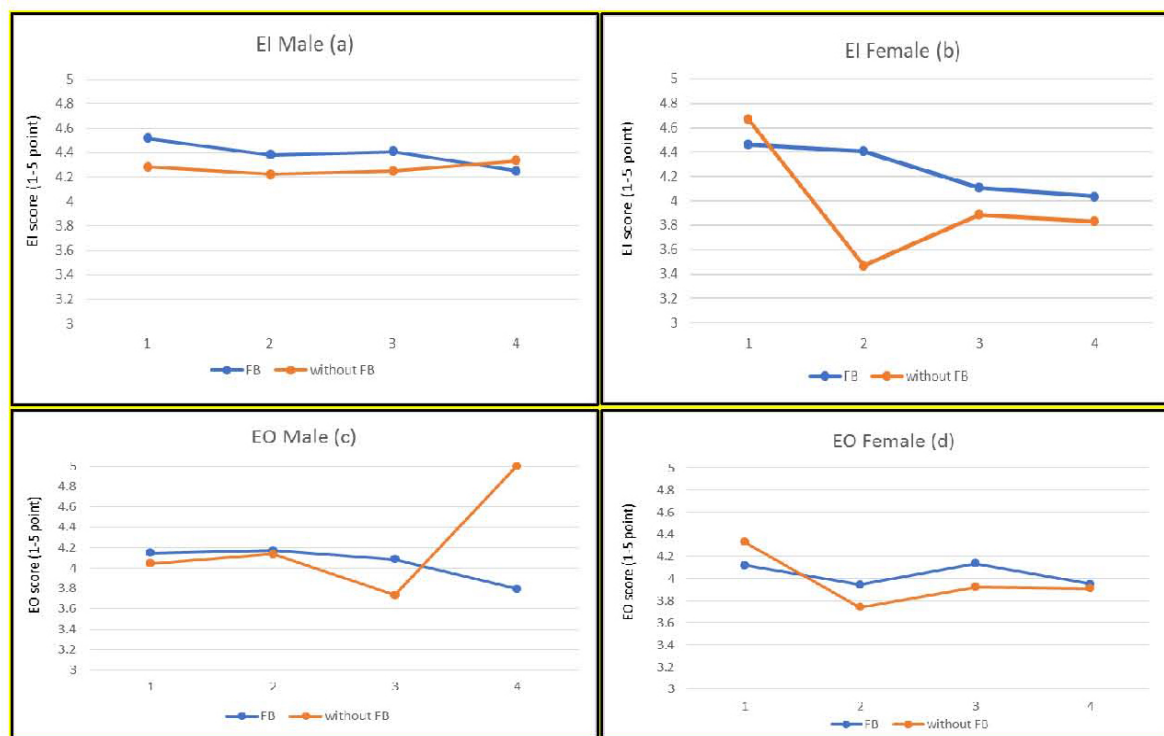


Figure 3 Comparison of the EI and EO Scores of the Students' Gender between Year and FB

Discussion

The number of students registered for the BUSEM program has been increasing each year because of positive perception on entrepreneurship in Thailand. GEM Global Report 2016/17 mentioned that, compared to other 65 nationalities, Thais were the 26th on having entrepreneurial intentions. Since entrepreneurship is becoming a social norm in Thailand, parents are giving their full support to children to have an entrepreneurial education. This can be seen through the increase in number of BUSEM students during the last 10 years (from 34 new entry students in 2011 to 346 new entry students in 2018).

EI score on each stage in curriculum: High EI scores of the first year students confirmed that they wanted to become a successful entrepreneur and the reason they chose to study at BUSEM (Table 4). Generally, students

with FB had higher levels of and stabilized their EI scores more than those without FB. This result suggested that having FB is a positive drive for students to either continue their FB or starting a new business (Espiritu-Olmos & Sastre-Castillo, 2015). Even though students without FB had lower EI scores than those with FB, their EI scores were also at the high level. This indicates their strong intention to become a new start-up who would build their own wealth (Nabi, Walmsley, Linan, Akhtar, & Neame, 2018).

However, the second year BUSEM students were starting to know the details in running a business from the courses which may cause the separation of the female students in the second year based on their FB status; students with FB have significantly higher EI scores than those without FB (Figure 3b) (Oluwafunmilayo et al., 2018). Students with FB could see opportunities to continue their family business further.

They started to develop business ideas by converting resources of FB to create their very first business plans. Unfortunately, students without FB found it difficult to apply what they had learnt to realize their dream in real life. The students without FB had to create a start-up's business plan from scratch. Due to this hurdle, the EI score would naturally decline (Altınay, Madanoglu, Daniele, & Lashley, 2012).

In the third year, both male and female students with FB still had higher EI score than none FB students (Figure 3a & 3b). They might find it easier to transform their business plan (done in the second year) into real business. They could leverage resources from their family or seek expert advices from their family member(s). Therefore, the EI scores of students with FB remained high (Espiritu-Olmos & Sastre-Castillo, 2015). The students without FB had completed the stage of creating their Business Plan. They did gain some confidence to pursue their business plan and turned it into tangible products. Specially, female students without FB had increased level of their EI score (from 3.467 in the second year to 3.889 in the third year) (Figure 3b).

In the fourth year, both groups of students' EI scores were dropping (Figure 3a & 3b). This may be caused by the realization after launching their products in a number of exhibitions. On this final stage of curriculum, the seniors would learn about their mistakes and corrective actions to amend their business models. Setting up a new business is not as easy as they expected (Nabi et al., 2018). It was within expectation to see a decrease in their EI scores. At this stage, they were ready to venture into the real world.

EO score on each stage of curriculum: The freshmen had highest scores of EO compared to the other years (Table 4). The curriculum encouraged the freshmen to generate their business ideas and perform feasibility evaluation of their products. They felt enthusiastic to learn both inside and outside their classrooms (Mandel & Noyes, 2016). Third year male students started to have significantly difference in their EO scores between students with FB and those without FB (mean=4.088 and 3.736) (Figure 3c). At the time of completion of this survey, the third year students were preparing their business fair (in the first term of Year 3). They may unintentionally learn and apply some trade secrets or tactics which are only shared within family to their new business. On the other hand, students without FB had to create a business plan from scratch which is known to be a challenging task for anyone. Therefore, the increase in gap of EO between these two groups of students was not unexpected.

Final year students with FB were having a lower level of EO than those without FB (Figure 3c and 3d). These seniors without FB might consider this period to be the last chance to have a grab of their EE in order to start their new venture (Figure 3c). This result proves that EO could be increased by proper design of EE that was comprehensively designed for every kind of student (Canever et al., 2017).

Implications and Recommendations

The results showed that female students had a lower level of EI and EO compared to male students (Table 4). BUSEM would redesign the lecturing content and activities to fit better

with female students such as fashion business, on-line marketing, and beauty and health care business development. The impact of such curriculum should be further investigated as well.

Regarding further investigation of the differences between students with/without FB background in the meantime, BUSEM should add more optional subjects for students to choose such as family business spin off, innovative technology in family business, and excellence in family business for students with FB background. The department should also create Start-ups track for interested students with or without FB background. The examples of the subjects are creating a new venture, searching fund and venture capitalist, and attempting to achieve excellence in start-ups businesses. It would be useful to invite guest speakers who are start-ups to share their experience with students without FB, as well as successors of family business to share their experiences with students with FB background. These real live case studies would maintain or eventually increase EI and EO levels of BUSEM students.

Conclusion

The result clearly indicated that:

1) Level of EI and EO of different year of students are well maintained by BUSEM curriculum. The level of EI score in both male and female shifted lower by the higher year of students. This is due to the intensive inputs by lecturers or mentors passed on to the students, which could reduce EI of each student (Ting et al., 2017). The level of EO in BUSEM students in each year seem to be maintained at a positive

level. BUSEM students develop higher EO by learning in class and completing their practicums (Ekpe & Mat, 2015).

2) Year of studies did affect both EI and EO scores. Low EI score in year 2 and year 3 led to low EI score in the student's final year at BUSEM. The team of educators and mentors should discuss how to balance the pressure throughout the whole course. This can also apply to Dunning-Kruger Effect where students seem to have smaller confidence after they have received enough knowledge. The higher number of years they studied, the higher fear of failure they have. They will regain the confidence back after they have enough life experience and their EI level will go up substantially.

3) Even though the samples in this study are supposed to have positive social desirability bias due to the fact that they were students from Entrepreneurship program; however, the results showed decreasing trends of EI and EO throughout the years and also some impact of gender and FB background on EI and EO. This agrees with research of Podsakoff, MacKenzie, Lee, and Podsakoff (2003) that the impact of common method variance can inflate or deflate the relationships between difference types of constructs such as attitude, personality, and aptitude. Therefore, further research on EI and EO of Entrepreneurship students should guard against social desirability bias by applying the techniques for Controlling Common Method Biases. Different kinds of response formats can be introduced such as digital based rather than paper base, private location rather than completing the questionnaire with peers at the same venue (Podsakoff et al., 2003).

Lastly, this study proved that the years of study influenced the EI and EO (H1a and H1b were confirmed). In the group of male students, years of study did not impact neither EI nor EO (H1a and H1b were rejected). However, in the group of female students, years of study influenced the EI and/or EO (H1a and H1b were partially confirmed). Gender did not impact either EI or EO (H2a and H2b were rejected). The family business background did not impact either EI or EO (H3a and H3b were rejected). The dependency between the three factors were found in both EI and EO (H4a and H4b were confirmed).

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. NJ: Prentice-Hall.
- Al-Jubari, I., Hassan, A., & Linan, F. (2018). Entrepreneurial intention among university students in Malaysia: Integrating self-determination theory and the theory of planned behavior. *International Entrepreneurship and Management Journal*, 14(56), 1-20.
- Altinay, L., Madanoglu, M., Daniele, R., & Lashley, C. (2012). The influence of family tradition and psychological traits on entrepreneurial intention. *International Journal of Hospitality Management*, 32(2), 489-499.
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, 13(3), 442-453.
- Bolton, D. L., & Lane, M. D. (2012). Individual entrepreneurial orientation: Development of a measurement instrument. *Education+ Training*, 54(2/3), 219-233.
- Boyd, N. G., & Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice*, 18(4), 63-77.
- Canever, M. D., Barral, M. R. M., & Ribeiro, F. G. (2017). How does the public and private university environment affect students' entrepreneurial intention? *Education+ Training*, 59(6), 550-564.
- Cannavacciuolo, L., Capaldo, G., Esposito, G., Iandolo, L., & Raffa, M. (2006). To support the emergence of academic entrepreneurs: The role of business plan competitions. In A. Fayolle & H. Klandt (Eds.), *International Entrepreneurship Education: Issues and Newness* (pp. 55-73). UK: Edward Elgar.
- Ekpe, I., & Mat, N. (2015). The moderating effect of social environment on the relationship between entrepreneurial orientation and entrepreneurial intentions of female students at Nigerian universities. *International Journal of Management Sciences and Business Research*, 1(4), 4-16.
- Espiritu-Olmos, R., & Sastre-Castillo, M. A. (2015). Personality traits versus work values: Comparing psychological theories on entrepreneurial intention. *Journal of Business Research*, 68(7), 1595-1598.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191.

- Gasse, Y., & Tremblay, M. (2006). Entrepreneurship education among students at a Canadian university: an extensive empirical study of students' entrepreneurial preferences and intentions. In A. Fayolle & H. Klandt (Eds.), *International Entrepreneurship Education: Issues and Newness* (pp. 241-262). UK: Edward Elgar.
- Goktan, A. B., & Gupta, V. K. (2015). Sex, gender, and individual entrepreneurial orientation: Evidence from four countries. *International Entrepreneurship and Management Journal*, 11(1), 95-112.
- Gupta, V. K., Turban, D. B., Wasti, S. A., & Sikdar, A. (2009). The role of gender stereotypes in perceptions of entrepreneurs and intentions to become an entrepreneur. *Entrepreneurship Theory and Practice*, 33(2), 397-417.
- Guroi, Y., & Atsan, N. (2006). Entrepreneurial characteristics amongst university students: Some insights for entrepreneurship education and training in Turkey. *Education+Training*, 48(1), 25-38.
- Kolvereid, L. (1996). Prediction of employment status choice intentions. *Entrepreneurship Theory and Practice*, 21(1), 47-58.
- Lee, S. H., & Wong, P. K. (2004). An exploratory study of technopreneurial intentions: A career anchor perspective. *Journal of Business Venturing*, 19(1), 7-28.
- Linan, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, 33(3), 593-617.
- Linan, F., Rodriguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, 7(2), 195-218.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *The Academy of Management Review*, 21(1), 135-172.
- Mandel, R., & Noyes, E. (2016). Survey of experiential entrepreneurship education offerings among top undergraduate entrepreneurship programs. *Education+training*, 58(2), 164-178.
- McKeever, M. (2016). *How to write a business plan* (13th ed.). CA: Nolo.
- Nabi, G., & Linan, F. (2013). Considering business start-up in recession time: The role of risk perception and economic context in shaping the entrepreneurial intent. *International Journal of Entrepreneurial Behavior & Research*, 19(6), 633-655.
- Nabi, G., Walmsley, A., Linan, F., Akhtar, I., & Neame, C. (2018). Does entrepreneurship education in the first year of higher education develop entrepreneurial intentions? The role of learning and inspiration. *Studies in Higher Education*, 43(3), 452-467.
- National Statistic Office of Thailand. (2018). Average monthly income per household. Retrieved February 19, 2019, from http://www.nso.go.th/sites/2014en/Survey/social/household/household/2017/ExecutiveSummary_60.pdf
- Noyes, E. (2018). Teaching entrepreneurial action through prototyping: The prototype-it challenge. *Entrepreneurship Education and Pedagogy*, 1(1), 118-134.

- Oluwafunmilayo, A. M., Olokundun, M. A., Moses, C. L., & Grace, A. C. (2018). The role of prior family business background on entrepreneurial intentions. *Covenant Journal of Entrepreneurship*, 2(1), 1-14.
- Perez-Quintana, A., Hormiga, E., Martori, J. C., & Madariaga, R. (2017). The influence of sex and gender-role orientation in the decision to become an entrepreneur. *International Journal of Gender and Entrepreneurship*, 9(1), 8-30.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Potter, J. (2008). *Entrepreneurship and higher education: Future policy directions*. Paris: Organisation for Economic Cooperation and Development (OECD).
- Rauch, A., & Frese, M. (2007). Born to be an entrepreneur? Revisiting the personality approach to entrepreneurship. In J. R. Baum, M. Frese, & R. A. Baron (Eds.), *The Psychology of Entrepreneurship* (pp. 41-65). Mahwah: Lawrence Erlbaum Associates.
- Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmers raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), 566-591.
- Surjanti, J., Nugrohoseno, D., & Musfidah, H. (2018). The implementation of interest-based entrepreneurship curriculum in the theory of economics course. In *IOP conference series: Materials science and engineering* (pp. 1-6). United kingdom: IOP Publishing Ltd.
- Taatila, V., & Down, S. (2012). Measuring entrepreneurial orientation of university students. *Education+Training*, 54(8/9), 744-760.
- Ting, S. X., Feng, L., & Qin, W. (2017). The effect of entrepreneur mentoring and its determinants in the Chinese context. *Management Decision*, 55(7), 1410-1425.
- Westhead, P., & Solesvik, M. Z. (2016). Entrepreneurship education and entrepreneurial intention: Do female students benefit? *International Small Business Journal*, 34(8), 979-1003.
- Zimmerman, M. A., Barsky, D., & Brouthers, K. D. (2009). Networks, SMEs, and international diversification. *Multinational Business Review*, 17(4), 143-162.