

The Influence of Entrepreneurship Education and Experience on Students' Entrepreneurship Spirit: The Moderating Effects of Internal Locus of Control

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Abstract

Entrepreneurship has long been recognized as the main source of economic wealth. Entrepreneurship spirit cannot be developed overnight. It has to be nurtured among school children so that they are well equipped with the relevant knowledge and experience required when they get involved in entrepreneurial activities later on. This study is meant to examine the role of entrepreneurial education and experience in influencing entrepreneurship spirit among secondary school students. Using 200 samples, the analysis revealed that current involvement and future

engagement in entrepreneurial activities are the significant predictors of entrepreneurship spirit. However, for those with high level of internal locus of control, entrepreneurship education and current involvement in entrepreneurial activities significantly improve their level of entrepreneurship spirit as compared to those with low degree of internal locus of control. The implication of the findings is discussed in greater detail in the paper.

Keywords: entrepreneurship, internal locus of control, students, spirit,

1. Introduction

Entrepreneurship has its long history that can be traced to the earlier era when people started to exchange goods to fulfil

their needs. After the creation of money as the medium of exchange, the entrepreneurship activities intensified, whereby western traders travelled to the east and vice versa to sell and buy goods. Later, entrepreneurship activities opened

up the opportunities for manufacturers to produce goods and products, which marked the beginning of industrialized era. In this era, entrepreneurship activities built up to a higher degree where many countries competed with each other to control the required materials to fulfil their industry requirements. Over the years, entrepreneurship activities had contributed significantly to the wealth and development of nations.

Previously, entrepreneurship spirit was developed gradually through involvement and engagement in entrepreneurship activities. Besides, not everybody had the opportunity to participate in these activities. They were centralized among certain groups of people who were entrusted by the government. However, in recent years, realizing the importance of entrepreneurship, a lot of effort has been put in to ensure that individuals are equipped with the necessary knowledge and experience in this regard.

In the Malaysian context, the government has introduced the subject of entrepreneurship in the school curriculum especially for students in secondary schools. However, the effect of its inclusion is not very satisfying. Most of the students are still lacking in the required entrepreneurship spirit as they are unable to engage in entrepreneurial activities after leaving school. This is evidenced by a low level of entrepreneurship knowledge (Cheng & Chan, 2002) and low participation in setting up new business ventures despite their high level of readiness (Othman, Hashim & Wahid, 2012).

Due this phenomenon, this research was conducted to examine the factors that

influence students in secondary schools to have entrepreneurship spirit.

2. Literature Review

Taking risks of today's resources in order to be successful in the unknown future is a challenge that entrepreneurs have to endure. They often see hardship and doing something extraordinary as something that are worth to be pursued in return for success that they had envisioned. While not every business owners are entitled to be classified as entrepreneurs, governments are seeking ways to inculcate the entrepreneurial spirit among the young adults through assimilation of entrepreneurial education into the present educational curricula.

In this regard, entrepreneurship is often seen as something that is attainable and self-developed through education and continuous training. The issue stems from the fact that not all students are driven to become entrepreneurs. They can learn all that they need to learn, but it is the motivation or spirit of becoming an entrepreneur that really matters. From the discussion above, Shepherd and Douglas (1997) contended that entrepreneurship can be differentiated into teachable and non-teachable elements, which requires classroom logical thinking for the former and real-world creativity for the latter.

Surprisingly, the debate on whether entrepreneurs are made or born among researchers in the entrepreneurial education field is still ongoing over the last three decades. The main gist of the contention is whether entrepreneurs can be produced through the education system or

they are born with exclusive entrepreneurial behaviour. This distinction is often regarded as science versus art (Sexton & Smilor, 1986; Saeed, 1996), nature versus nurture (Lee & Wong, 1997), deduction versus induction of resource management (Henry, Hill & Leitch, 2005a) and *Kirznerian* entrepreneurship (opportunity identification) versus *Schumpeterian* entrepreneurship (opportunity creation) (Dana, 2001).

The theme that underlines their views is centred on classifying entrepreneurship as either an externally driven or internally driven behaviour. There is small homogeneity between entrepreneurial education and training, with little evidence of their outcomes assessment (Henry et al., 2005b). Rasmussen and Sørheim's (2006) case study of professors and administrators who engaged in entrepreneurial education activities from five Swedish universities showed that entrepreneurship education was very successful based on the number of new ventures initiated by the participants. The authors iterated that the 'inborn' concept of entrepreneurship are sometimes overemphasized.

2.1 Entrepreneurship Spirit

There is no doubt that there are many business schools that are successful in producing entrepreneurial graduates through courses that emphasize on theories and practice that are dominantly confined in the classroom environment. Although some may argue that case studies provided the students' opportunity to perform analysis based on practical experience, the fact remains that the text books where these case studies came from, do not really

provide the students with the right skills, creativity and initiative to start implementing entrepreneurship activities.

Hegarty and Jones (2008) through their case study of entrepreneurial curriculum, found that there are misalignment between the university's courses and students' resource profiles. Their findings indicate that nurturing graduates into entrepreneurs is not an easy task. Ming and Amir (2009) remarked that entrepreneurship education failed to persuade students to participate in entrepreneurial activities. Most of the graduates become entrepreneurs as a short term solution while waiting to secure employment, instead of envisioning a longer lasting entrepreneurial career (Nor Aishah, 2005; Salmah, 2009).

The challenge here lies among the educators to inculcate the entrepreneurial spirit, which skill is not available in textbooks and difficult to be conceptualized (Shepherd & Douglas, 1997). According to them, the spirit of entrepreneurship may not be academic in each person thus it may require 'gut-feel' lateral thinking compared to 'tried and tested' logical thinking. By encouraging entrepreneurial thinking (thinking outside the box) through innovative learning methods, it has the potential to spark creativity and intuition among students.

To solve the missing link, entrepreneurial spirit can play an important role. According to Cestická (2014) who quoted Claudette Rowley, an entrepreneur coach from MetaView Consulting and Coaching:

A healthy entrepreneurial spirit requires trust in yourself and your intuition, an ability to make clear choices, a flare for mobilizing resources, and a capacity to move beyond

obstacles created by fear. Connect with your entrepreneurial spirit and see where it leads you.

Meanwhile, Smith (2013) provided a simple yet direct interpretation of entrepreneurial spirit:

Entrepreneurial spirit is a mindset. It's an attitude and approach to thinking that actively

seeks out change, rather than waiting to adapt to change. It's a mindset that embraces critical questioning, innovation, service and continuous improvement.

The table below highlights several important works that accentuate entrepreneurship spirit:

Table 1: Diverse views on entrepreneurship spirit

Authors (year)	Highlights on Entrepreneurship Spirit
Buchholz & Rosenthal (2005)	Imagination, creativity, novelty and sensitivity are the necessary qualities that make up the spirit of entrepreneurship, which should not only be kept alive economically, but also ethically.
Souitaris, Zerbinati & Al-Laham (2007)	Entrepreneurial attitude is driven by inspiration, instead of 'textbook knowledge', where passionate and emotional side of entrepreneurship are as equally important as intelligence and rational thinking.
Contiu, Gabor & Stefanescu (2012)	The characteristics associated with entrepreneurs namely creativity, innovativeness and courage were ranked higher than practical experience, risk taking ability and adaptability.
Gebhardt & Pohlmann (2013)	Entrepreneurship spirit is described as entrepreneurial thinking and acting that involve risk taking, decision making, leadership autonomy and strategy-driven behavior.

As reported by the European Union, entrepreneurship education in schools has emphasized on the encouragement of enterprise spirit as a pre-condition for young adults to embark in new business ventures (European Union, 2002). The purpose of the report which involves entrepreneurial education experts from 26 European countries, is to identify initiatives that aim to promote the entrepreneurship education across Europe's formal education system. Although it does not specifically define entrepreneurship spirit, the document highlights the personal qualities that students should have in order to be entrepreneurially driven: namely initiative,

risk-taking, innovativeness, creativity and responsibility.

Furthermore, Shane, Locke and Collins (2003) argued that human motivation is an essential part of the entrepreneurial process and decision making. The authors asserted that motivation helps entrepreneurs to acquire knowledge, skills and abilities effectively before gaining the required energy and drive to implement entrepreneurial actions. It is important to understand entrepreneurial motivations as they are critically linked to entrepreneurial intentions and subsequent entrepreneurial behaviours (Carsrude & Brännback, 2011).

Entrepreneurs' intrinsic personality and achievement motivation are undoubtedly recognized as predictors for entrepreneurship success (Baum, Frese & Baron, 2007). The researchers have pointed out that inspired entrepreneurs make up the integral part of the entrepreneurship process, in which theories concerning human motivation should be given emphasis. Therefore, in this research, entrepreneurial spirit is more concerned with intuition, desire and initiative of a person as compared to being resourceful, skilful or knowledgeable.

2.2 Entrepreneurship Education and Entrepreneurship Spirit

Globally, the demand for degrees and professional qualifications that fuels the ever-increasing workforce never slows down. From institutions that are social-oriented and humanized, entrepreneurial universities are now becoming victims of marketization and commoditization (Lee, 2008). With this regard, the author proposed that their role should be re-focused towards human and social challenges through lifelong learning, globalization and integration.

Henry et al. (2005a) pointed out that learners must indulge in real work situations for entrepreneurial programs to be effective. The notion of interpreting entrepreneurship as an ongoing and informal lifelong learning experience has been mooted by numerous researchers in the entrepreneurial learning and education field (Timmons & Stevenson, 1985; Taylor & Thorpe, 2004; Lans et al., 2004; Politis, 2005). To have that lifelong learning experience be put into practice, a potential

entrepreneur ought to have the basic managerial skills.

Timmons and Stevenson (1985) outlined the management courses that should be taught to entrepreneurs such as analytical thinking, accounting, finance, marketing, management information systems and manufacturing. However, the authors noted that other more critical skills can only be learned in the real world and cannot be taught in classrooms such as managing people, fortitude, judgement, and responsibility. These skills can be acquired over time through experience and involvement in entrepreneurship activities.

Academicians who taught entrepreneurship must realize that teaching the subject is a complex process that requires numerous interactions. Giving classroom lectures and exams are no longer effective and often seen as outdated teaching methods. Active participation and involvement are keys to entrepreneurship education success. Action-based and practical pedagogy may transform passive students into 'project owners' through simulation of students' ventures instead of traditional case-based teaching (Rasmussen & Sørheim, 2006). There are mixed results of whether the traditional teaching through cases and texts can generate successes or failures (Gartner, 1994).

Researchers have compared education level attained with entrepreneurial activities (starting new business). Previous findings indicated the positive link between education level and entrepreneurial endeavours. Douglass's (1978) study in Atlanta found that half of all entrepreneurs are well educated although education does not contribute

directly to business success. Formal education was also found to have stronger relationship with self-employment when compared to work experience (Robinson & Sexton, 1994).

The relationship between education and entrepreneurship is U-shaped, which means people with moderate levels of education (Bachelor's degree) are less inclined to become entrepreneurs while people with low (high school) or high levels (post graduate) of education are more likely to become entrepreneurs (Poschke, 2013; Hipple, 2010; Schjerning & Le Maire, 2007). It is worth to note that the lower end of the U carries more weight, due to the possibility that school leavers have better desire to be self-employed which yields better returns in order to match the income of their employed graduated peers. Based on the discussion, the following hypothesis is developed:

H1: There is a positive relationship between an individual's entrepreneurship education and entrepreneurship spirit.

2.3 Entrepreneurship Experience and Entrepreneurship Spirit

In the process of running a business, fundamental theories and case study applications learnt by a graduate from the previous educational curricula are not sufficient in equipping him or her with solid entrepreneurship knowledge. It is the practical and hands-on experience that provides him or her with the exact 'know-how' and the 'inside-out' of operating a business. Small successes are potential drivers to achieve greater milestones with

invaluable lessons learnt particularly from the mistakes and pitfalls that should have been avoided.

Nowadays, primary schools promote opportunities for students to engage in entrepreneurial activities which are simple and direct to garner their interests. These activities are monitored through teachers' supervision which include fund raising, car boot sale and sports carnival. As they enter high school and colleges, they are exposed to retail and customer service through school co-operatives, photocopy and binding business, laundry services, food and beverage retail, and corporate sponsored events.

The role of experience in assisting the planning and implementation of start-up ventures is highly undeniable. Entrepreneurial experience is defined by Stuart and Abetti (1990) as "the number of previous new ventures and the role played in such entrepreneurial ventures by the entrepreneur". The entrepreneurial experience is further segregated by the authors into smaller and specific dimensions namely leader, management, technical, marketing and team. Nevertheless, the research did not provide any specific entrepreneurial experience exposed during the education stage.

Given the right amount of exposure to entrepreneurial activities can stimulate positive development of the students' entrepreneurial personality. Low and McMillan (1988) suggested that entrepreneurial experience has the possibility to shape a person's entrepreneurial traits. Despite earlier objections on entrepreneurial traits approach by psychologists (Brandstätter, 1997), a study on personality traits among

entrepreneurs have revealed that conscientious level of an entrepreneur has positive relationship with long term business survival (Ciavarella et al., 2004).

In another case, entrepreneurial experience causes the influence of sustainability orientation on entrepreneurial intention to diminish among students (Kuckertz & Wagner, 2010). In other words, students who care about ethical, societal and environmental issues tend to be less influenced to become potential entrepreneurs when they are more exposed to business dealings. Thus, the researchers suggested that entrepreneurial education be given equal emphasis in promoting sustainable development-oriented entrepreneurial behaviour.

Other than influencing entrepreneurship traits, entrepreneurship experience is also associated with business success. By analysing data from 5911 Japanese companies, Harada (2003) discovered that entrepreneurs' related business experience before start-up has positive relationship with the probability of business success. It is also worth to note that the researcher's result suggests that young adults tend to be more successful in entrepreneurship rather than the matured ones, implying that they are internally driven despite their assumed lesser economical resources compared to their older peers. Based on the discussion, the following hypothesis is highlighted:

H2: There is a positive relationship between an individual's entrepreneurship experience and entrepreneurship spirit

2.4 Locus of Control as a Moderator

Every entrepreneur who is in charge of his or her own business usually has no clue of what is going to happen in the future. Entrepreneurial destiny is often ambiguous and vague. It is too easy to attribute success or failure to either internal or external forces when the outcomes are either met or beyond reach. This phenomena is described by Rotter (1966) as 'locus of control', which consists of internal and external dimensions. A study by Brandstätter (1997) on successful and non-successful Austrian entrepreneurs found that internal attribution is related to future business success for the former case, while general economic situation (external attribution) tend to be linked to business failure for the latter case.

Internal locus of control refers to the belief that events surrounding the person's life are consequential to his or her own actions. Meanwhile, people with high external locus of control hold the belief that their decisions and life are controlled by external environmental factors, which are beyond their influence, which include fate and chances. Despite the act of venturing into a new business in an uncharted market territory seems to be like a gamble, a strong belief towards own actions, may steer the entrepreneur's direction towards the correct path.

Those who have high internal locus of control trust in their own abilities and efforts in pursuing goals. In this case, it naturally happens in people who have better control of their own lives and highly independent from others' assistance. This view is consistent with Mueller and Thomas's (2001) findings that internal locus of control is likely to develop in

cultures that value individualism as opposed to collectivism.

Based on the premise that entrepreneurs are the ‘master’ of their own fate, there are certain studies which indicate that locus of control is the antecedent of entrepreneurial behaviour (Lüthje & Franke, 2003), entrepreneurial orientation (Mueller & Thomas, 2001) and achievement motivation (Suárez-Álvarez, Campillo-Álvarez, Fonseca-Pedrero, García-Cueto & Muñiz, 2013). A study by Wijnbenga and van Witteloostuijn (2007) showed that entrepreneurs with specific locus of control may engage in specific strategies that are contingent to their surroundings. Entrepreneurs with internal locus of control prefer to be innovative in stable environments, while those with external locus of control are more likely to cut costs in dynamic environments.

In this case, locus of control is considered as a relevant and potential antecedent variable of entrepreneurship spirit from the psychological point of view. Therefore, the following hypotheses are developed:

H3: The positive relationship between an individual's entrepreneurship education and entrepreneurship spirit will be stronger for individuals with higher internal locus of control than for individuals with lower internal locus of control.

H4: The positive relationship between an individual's entrepreneurship experience and entrepreneurship spirit will be stronger for individuals with higher internal locus of control than for individuals with lower internal locus of control.

3. Methodology

This study is primarily based on a sample of secondary school students in the Klang district, Selangor, Malaysia. A total of 200 students from four selected secondary schools: namely, Sekolah Menengah Kebangsaan Meru, Sekolah Menengah Kebangsaan Perempuan Kapar, Sekolah Menengah Tengku Idris and Sekolah Menengah Sungai Kapar Indah, took part in the survey. The sample is considered to be particularly suitable to illustrate the hypothesized relationship, given that the students were taking Economics, Accounting and Commerce courses which expose them to entrepreneurship experience through classroom and extra-curricular activities.

There were two independent variables (entrepreneurship education and entrepreneurship experience), one moderating variable (locus of control) and one dependent variable (entrepreneurship spirit) involved in the study. Entrepreneurship education and entrepreneurship experience were measured using 13 items adapted from Nur Aishah (2006) and Norasmah (2002). Samples of the items are “I learn a lot about entrepreneurship in the classroom” and “I am satisfied with my role as an entrepreneur at my school”. Locus of control was measured using 10 items adapted from Rotter (1966). A sample of the items is “My life is determined by my own actions”. Entrepreneurship spirit was measured using 20 items adapted from Soriano and Martinez (2007). An example of the items is “I identify my talent and use it to achieve my goals”.

A total of 200 questionnaires were distributed to secondary school students using purposive sampling by choosing those who were taking Economics, Accounting and Commerce courses. They were given 30 minutes to complete the

questionnaire and after the lapse of the given time all 200 questionnaires were collected and analyzed. The analysis was performed using SPSS 20, involving descriptive and inferential statistics.

4. Findings

Table 1: Results of Factor Analysis for Entrepreneurship Orientation

	Component		
	1	2	3
EE12	.853		
EE8	.711		
EE7	.626		
EE11	.589		
AE2		.842	
AE1		.726	
AE3		.725	
EE10			.856
EE9			.820
EE13			.568
Variance Explained	22.704	20.315	19.362
Kaiser-Meyer-Olkin Measure Of Sampling Adequacy.	.764		
MSA	.707-.831		
Bartlett's Test Of Sphericity	Approx. Chi-Square		583.501
	Df	45	
	Sig.	.000	

Exploratory factor analysis with varimax rotation was performed to examine the factor structure of entrepreneurship education and experience. The results of the analysis show that the KMO value of 0.764 indicates the appropriateness of factor analysis to be conducted. The values for MSA are in the range of .707-.831, signifying the sampling adequacy for each item. Originally, 13 items were used to measure entrepreneurship education and experience. However, only ten items were retained and produced three components whereas three items were removed due to

high cross loadings. The first component comprises items pertaining to involvement in entrepreneurship activities, thus, the name of current involvement is used. The second component contains items representing entrepreneurship education, therefore the name was retained. The third component consists of items reflecting future direction of students' entrepreneurship engagement, therefore the name of future engagement was used.

With regard to the moderating variable in the study, a total of 10 items were used to measure locus of control. Exploratory factor analysis with varimax rotation was performed on the items. The KMO value of .817 indicates that the correlation matrix is sufficient for factor analysis to be conducted. The MSA values that are in the range of .583 -.900 further support the appropriateness of factor analysis. The results of factor analysis indicate that nine items were retained and produced two

factors. One item was removed due to high cross loadings. The first factor contains six items measuring external locus of control, therefore the name was used. The second factor that comprises three items concerns internal locus of control, thus the name was retained. For this paper, only internal locus of control will be subsequently used to examine its influence on the relationship between entrepreneurship education and experience and entrepreneurship spirit.

Table 2: Results of Factor Analysis for Internal Locus of Control

	Component	
	1	2
LOC23	.830	
LOC15	.830	
LOC22	.785	
LOC14	.720	
LOC16	.704	
LOC19	.516	
LOC20		.828
LOC18		.808
LOC17		.506
Variance Explained	38.757	20.147
Kaiser-Meyer-Olkin Measure Of Sampling Adequacy.	.817	
MSA	.583-.900	
Bartlett's Test Of Sphericity	Approx. Chi-Square	613.229
	Df	36
	Sig.	.000

Table 3: Results of Factor Analysis for Entrepreneurship Spirit

	Component			
	1	2	3	4
PACS42	.790			
PACS43	.676			
PACS41	.673			
PACS40	.649			
MFA30		.884		
MFA29		.799		
MFA31		.707		
PAOS37			.787	
PAOS38			.782	
IS24				.842
IS25				.747
Variance Explained	17.873	17.303	15.011	14.532
Kaiser-Meyer-Olkin Measure Of Sampling Adequacy.			.777	
MSA			.658-.836	
Bartlett's Test Of Sphericity		Approx. Chi-Square		666.082
		Df		66
		Sig.		.000

For the dependent variable, a total of 20 items were used to measure five dimensions of entrepreneurship spirit: namely, self-knowledge and self confidence, motivation for achievement, vision for future, planning and organizational skills and persuasion and communication skills. Based on the results of factor analysis, the value of KMO of .777 indicates sampling adequacy for factor analysis to be conducted. The MSA values in the range of .658-.836 support the sampling adequacy for each item. The outcome indicates that only 11 items were retained to form four clear factor structures whereas nine items were removed due to high cross loadings or loaded on different

components from the original conceptualization. Vision for the future was removed due to the same reasons. The first component reflects four items on persuasion and communication skills, the second component contains three items of motivation for achievement, the third component comprises two items on planning and organizational skills, and the fourth component consists of two items on self-knowledge and self-confidence. Since the study is intended to look at the general entrepreneurship spirit of the students, all four dimensions were grouped together under one factor and the average value was used.

Table 4: Results of Correlation and Reliability Analyses

No	Variables	Mean	SD	1	2	3	4	5
1	Entrepreneurship Education	3.98	.56	(.710)				
2	Current Involvement	3.83	.60	.410**	(.750)			
3	Future Engagement	3.98	.70	.246**	.491**	(.720)		
4	Internal Locus Control	4.26	.64	.151*	.279**	.280**	(.596)	
5	Entrepreneurship Spirit	3.89	.44	.301**	.481**	.504**	.436**	(.808)

** . Correlation is significant at the 0.01 level (1-tailed).

* . Correlation is significant at the 0.05 level (1-tailed).

The mean values for all the variables are in the range of 3.83-4.26 with the standard deviation values in the range of .44-.70, indicating that the students scored high on all the variables with certain degree of variation. The results of reliability analysis signify that the items measuring each variable are highly reliable with the Cronbach's alpha values in the range of .596 to .808. Pearson correlation analysis was used to examine the relationships between variables. The results show that all relationships are significant and they are considered very low to moderate correlations. These findings present the potential influence of the independent variables on the dependent variable and the moderating influence of locus of control on the studied relationships with certain levels of accuracy since the interrelationships among the independent variables are minimal.

To confirm the influence of internal locus of control on the relationships of entrepreneurship education and experience (current involvement and future engagement) with entrepreneurship spirit, hierarchical regression analysis was performed. The outcome of the analysis reveals that the three regression models are

significant with F values of 32.984, 22.654 and 3.397, respectively.

For model 1, the R² value of .335 indicates that 33.5% of the variance is explained by the independent variables. Specifically, current involvement and future engagement are significant predictors of entrepreneurship spirit ($\beta=.268$, $p<0.01$; $\beta=.346$, $p<.01$, respectively). The findings are consistent with those of Harada (2003) indicating that those with previous entrepreneurship experience are likely to experience success. However, entrepreneurship education is not significant to influence entrepreneurship spirit ($\beta=.106$, $p>0.05$). This is consistent with the findings from Ming and Amir's (2009) study that education is non-significant to inculcate entrepreneurship spirit among students.

For model 2, the R² value of .405 denotes that the inclusion of the moderating variable improves the explanation of variance by 7%. In other words, internal locus of control significantly influences entrepreneurship spirit ($\beta=.278$, $p<.01$). Internal locus of control may act as the predictor of entrepreneurship spirit. The finding is consistent with the one found by

Brandstätter (1997) and Lühje and Franke (2003) that internal locus of control is the antecedent of entrepreneurial behaviour.

For model 3, the R^2 of .435 indicates that the inclusion of the interaction terms further increases the explanation of the variance by 3%. The interactions between internal locus of control and

entrepreneurship education and between internal locus of control and current involvement are significant to influence entrepreneurship spirit ($\beta=-.140$, $p<0.05$; $\beta=.137$, $p<.05$, respectively). The interaction between internal locus of control and future engagement is not significant to influence entrepreneurship spirit ($\beta=.064$, $p>0.05$).

Table 5: Results of Moderated Multiple Regression Analysis

Variables	Standardized β Coefficients		
	Model 1	Model 2	Model 2
Independent Variables			
Entrepreneurship Education (EE)	.106	.097	.082
Current Involvement (CI)	.268**	.219**	.250**
Future Engagement (FE)	.346**	.295**	.318**
Moderator			
Internal Locus Control (ILC)		.278**	.232**
Interaction terms			
EE*ILC			-.140*
CI*ILC			.137*
FE*ILC			.064
R	.579	.636	.659
R^2	.335	.405	.435
Adjusted R^2	.325	.392	.414
R^2 change	.335	.069	.030
F values	32.984	22.654	3.397
Sig F change	.000	.000	.019
Durbin Watson			1.842

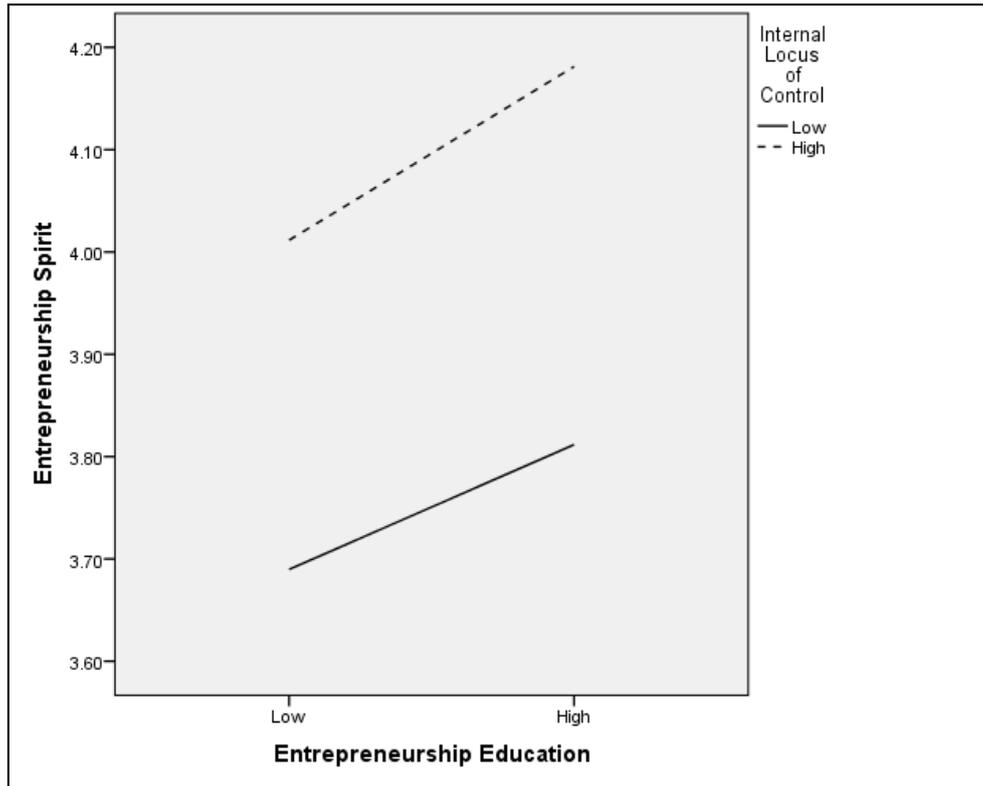


Figure 1: The Moderating Effect of Internal Locus of Control on the Relationship between Entrepreneurship Education and Entrepreneurship Spirit

The effect of internal locus of control can be clearly understood by referring to Figure 1. With low level of Entrepreneurship Education, students with high internal locus of control reported higher level of Entrepreneurship Spirit than those with low level of internal locus of control. With high level of Entrepreneurship Education, both types of students (high and low internal locus of control) reported an increase in the level of Entrepreneurship Spirit. However, the increment is greater for those with high internal locus of control. The findings are consistent with the exertion from Lüthje and Franke (2003), Mueller and Thomas (2001) and Suárez-Álvarez et al. (2013) that those with internal locus of control are having higher entrepreneurship spirit than

those with lower internal locus of control although both groups are exposed to the same entrepreneurship education. This group is self motivated and they set their own destiny.

The findings indicate that entrepreneurship education provides greater benefits to students with high internal locus of control. School administrators should consider this outcome when planning for entrepreneurship education in schools. They might screen students with high internal locus of control and group them together and those with low locus of control are assembled in another group. The entrepreneurship education will be more effectively conducted with different focus and concentration according to the level of students' locus of control.

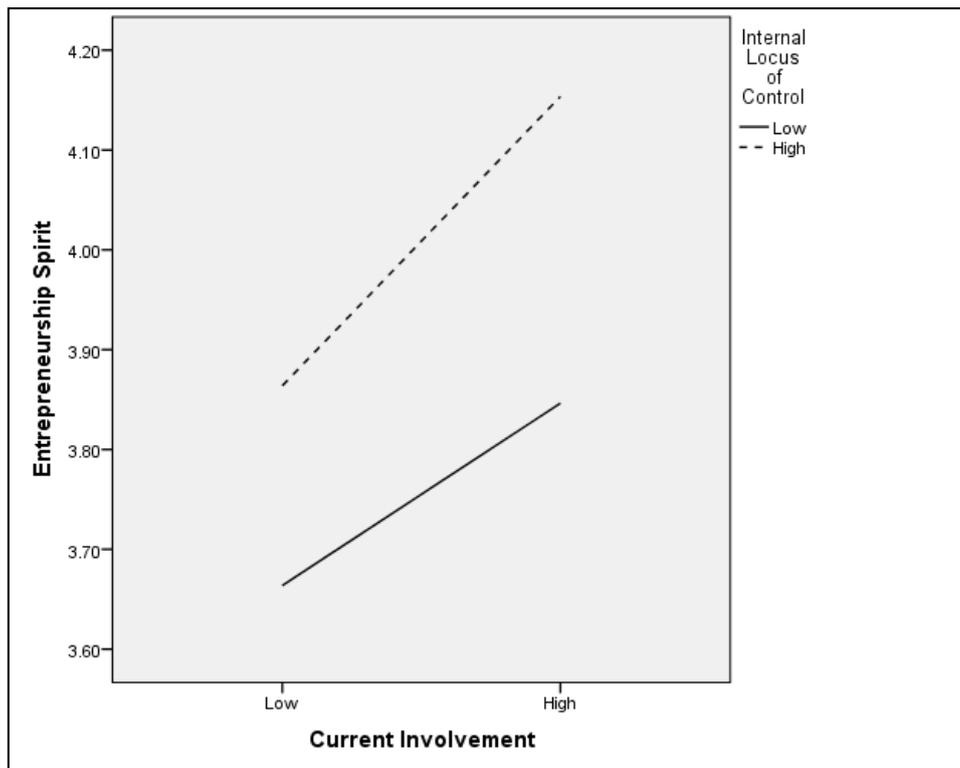


Figure 2: The Moderating Effect of Internal Locus of Control on the Relationship between Current Involvement and Entrepreneurship Spirit

Students with high internal locus of control reported higher entrepreneurship spirit than those with low internal locus of control although their involvement with entrepreneurial activities is at a low level. At the high level of involvement in entrepreneurial activities, students with high internal locus of control reported greater entrepreneurship spirit than those with low internal locus of control although both types of students registered significant improvement in their level of entrepreneurship spirit. However, the increment is much greater for those with high internal locus of control. Wijbenga and van Witteloostuijn (2007) have shown that entrepreneurs with specific locus of control may engage in specific strategies that are contingent to their surroundings.

Entrepreneurs with internal locus of control prefer to be innovative in stable environments. That is why students with higher internal locus of control reported higher entrepreneurial spirit than those with lower internal locus of control although both groups were involved in entrepreneurial activities.

The findings indicate that students with high locus of control will gain greater benefits from their involvement in entrepreneurship activities in school. School administrators should classify students according to their levels of internal locus of control. Not all students are destined to become successful entrepreneurs. Therefore, those with high internal locus of control should be exposed

to various activities so that they are equipped with the required skills and experience to become successful entrepreneurs in the future.

5. Conclusion

This study is intended to investigate the factors that contribute to entrepreneurship spirit among students in secondary schools. Three variables are identified to be the possible predictors of entrepreneurship spirit: namely, entrepreneurship education, current involvement and future engagement. However, only current involvement and future engagement are empirically proven to predict entrepreneurship spirit. Entrepreneurship education is not a significant predictor. However, when students' internal locus of control is considered, it interacts with entrepreneurship education to influence entrepreneurship spirit where entrepreneurship education is more beneficial to those with high internal locus of control. Similarly, internal locus of control moderates the link between current involvement and entrepreneurship spirit. Current involvement is more meaningful to those with high internal locus of control.

6. Managerial Implication

The findings of the study provide evidence for school administrators that entrepreneurship agenda should be properly implemented so that its outcome can be optimized. Students should not be treated equally since they have different levels of motivation and characteristics. Their differences should be properly

assessed (at the early stage of secondary education) especially with regard to their levels of internal locus of control. Students with high internal locus of control should be grouped differently from those with low level of this aspect so that various entrepreneurship activities and educational programs can be specifically tailored to the needs of this group. Hopefully by doing so, the entrepreneurship agenda implemented by schools can achieve its goals of increasing the number of Bumiputra (native) entrepreneurs in the future.

7. Theoretical Implication

This area of study is crucial for the growth of entrepreneurs in the country. However, the present study is limited to certain variables of interests. Future studies should look into the characteristics of entrepreneurs such as personality traits so that those with these traits can be identified and groomed to become entrepreneurs at their earliest stage of education. The present study focuses on students from selected secondary schools in Klang, Selangor, Malaysia. The generalization of the findings is limited towards a certain extent. Future studies should include larger representatives from different types of schools in Malaysia to enable the generalization of the findings. The present study was conducted using survey method and there are some limitations in applying it. Future studies should consider using mixed methods, combining qualitative and quantitative approaches to ensure greater reliability of the responses.

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