The Mediating Role of Business Simulations on the Relationship between University Role Entrepreneurship Curriculum and Assessment of Teaching Approaches and Entrepreneurial Inclination

Mohd Noor Mohd Shariff [#1], Muhammad Salman Shabbir[#2], Muhammad Shukri Bin Bakar [#3], Mohd Sufli Yusof[#4]

[#] *School of Business Management, University Utara Malaysia, 06010 Sintok, Kedah*
[1]*mdnoor@uum.edu.my*
[2]salman.shabbir55@gmail.com
[3]shukribakar@uum.edu.my
[4]Mohdsufli@uum.edu.my

***Abstract*— The primary purpose of the paper is provide an insight into present landscape of the role that universities are playing through entrepreneurship curriculum and business simulations in enhancing entrepreneurial inclination of the students through business simulations. The underlying theories of Experiential learning theory, Constructivist learning Theory and Bloom's Taxonomy are described in relation with the objectives of the research. This study is conducted in the context of Malaysian Universities. The results of PLS-SEM illustrate that there is a significant positive mediating effect of business simulations on the relationship between entrepreneurship curriculum and contents, assessment of teaching approaches and entrepreneurial inclinations of students at Universiti Utara Malaysia. The present study aimed at providing an overview of the role that is assumed by the institutions of higher education whereas recommendations have been proposed for practitioners and researchers to cope with the challenges that higher education is facing currently. The future agenda of the research on similar lines has also been proposed.**

***Keywords*—** *Business Simulations, Entrepreneurial Inclinations, Curriculum and Contents, University Role, Assessment and Teaching Methods.*

1. Introduction

The importance of entrepreneurship has been on increasing end in many parts of the world, especially in less developed and developing countries due to numerous factors. Firstly entrepreneurship has been acknowledged as a probable catalyst and incubator for technological development, product and market innovation (GEM, 2017), secondly entrepreneurship is considered as an engine of economic growth, creation of employment and fostering economic growth. Entrepreneurship is considered as one of the finest economic growth strategy to develop country's economy and competitiveness in emerging challenges of globalization [1], [2]. The term entrepreneurship is usually referred to explain small scale businesses, management style, creating contemporary companies implementing innovative strategies in organizations [3].

Universities and higher education institutions play an essential role by providing support in improving the societal and regional economy through strengthening entrepreneurship education [4]. Malaysia being a developing country has placed a great importance on the role of entrepreneurship, which can play in the development of the country. It seems very clear from the government initiatives that entrepreneurship is getting multiple support initiatives, policies, support for physical infrastructure, advisory services for business and funding opportunities for young and emerging entrepreneurs which reflect the required attention from the government [5]. According to [6] the Malaysian government is striving to join the elite club of developed nations by 2020, keeping in view the vision, human capital development is given

International Journal of Supply Chain Management
IJSCM, ISSN: 2050-7399 (Online), 2051-3771 (Print)

prioritized on higher order and special attention has been given for producing proficient, self-motivated, and resilient graduate entrepreneurs.

The ultimate responsibility for producing skilled, self-motivated, and resilient graduate entrepreneurs lies on higher education institutions. For this purpose, university role of promoting entrepreneurship, curriculum and content of the program, evaluation and assessment of the courses, and pedagogical approaches are important elements [7]. Pedagogical approach has an essential part to inculcate the qualities in prospective entrepreneurs. From this perspective, there are numerous research studies which propose different pedagogical methodologies should be adopted while imparting entrepreneurial knowledge and skills to the students [8]. For example, [9] explained that the choice to apply a certain pedagogical approach while teaching entrepreneurship is commonly rotates around that decision whether the programs are about entrepreneurship or for entrepreneurship. It has been established that entrepreneurship curriculum is one of the vital elements in provision of learning and training models. Essentially, it is a process to develop entrepreneurial competencies and mind-set. However, several pedagogical methods with variety of models, approaches, and modalities have been adopted in the field of entrepreneurship [10]. Moreover, the conception of pedagogical model incorporates a number of dimensions related to both the ontological and educational levels [10]. Therefore, most of the business schools use blend of theoretical and applied approaches in entrepreneurship programs.

The role of universities in promotion of entrepreneurship is considerably important in developing the individual' entrepreneurial career. The university environment is the most dominant factor in students' perception of an entrepreneurial career and inclination [10], [11]. Individuals who experienced entrepreneurial activities at university were seen to be more likely to become self-employed [12]. The enterprises and entrepreneurship are therefore, learned phenomena and higher education institutions can play a vigorous part in inspiring individuals by providing entrepreneurial opportunities to flourish.

2. Problem Statement

The significance and importance of education demands the quality in the processes and its delivery. Universities bear a profound and moral responsibility to increase awareness, knowledge, skills, and values needed to create a just and sustainable future. From one of the numerous academic disciplines, entrepreneurship education is such a guideline, which helps in developing entrepreneurial behaviour. It develops the idea, how to live and manage with scarce resources, how to communicate to people, help people & enterprises in identifying the best opportunities for business and society.

Universities are a major source of preparing entrepreneurs. Rapid and drastic changes in economic growth and sustainability are creating higher demands for employability skills in the workforce as labour market is becoming more competitive and depends more on quality of knowledge and skills as the globalization come across in all industry. The major issue is the compatibility of education with the corporate sector and possible employers [13]. Therefore, in the perspective of all challenges, the ultimate responsibility lies on the higher education institutions to produce individuals those who would have the ability to cope with all the challenges. In the industry, employers prefer to hire graduates who possess high technical, analytical, and interpersonal skills, so they highly expect from institutions of higher education to great emphasis on the development of skills necessary for the entrepreneurs and managers to ensure organizational success [14].

Keeping in view the problems facing by higher education institutions, having practical experience is an essential qualification for securing a position being graduated. Accordingly, business simulation and gaming that would be both pedagogical useful and provide theoretical-research perspective conceived as useful for entrepreneurship [15]. This suggest that there is a need to explore both side of equation, how much students learn, and separately, whether what they learn is relevant. One practical application of this study was to identify whether different teaching methods are needed depending on the student's entrepreneurial inclinations. Unlike traditional marketing and management courses where lecturers seldom concern themselves with several instructional methods to suit to different types of students in the same class, the researchers believe that entrepreneurship lecturers should have this concern. This study aims at proving a reason for the concern.

3. Literature Review

3.1. Assessment and Teaching Method

The assessment and teaching methods are essential part to inculcate the qualities in prospective entrepreneurs. Most business schools appear to use combination of theoretical and practical approaches in entrepreneurial studies. From this perspective, there are numerous research studies which propose different pedagogical methodologies should be adopted while imparting entrepreneurial knowledge and skills to the students [8]. For example, [9] explained that the choice to apply a certain pedagogical approach while teaching entrepreneurship is commonly rotates around that decision whether the programs are about entrepreneurship or for entrepreneurship. Different entrepreneurship education programs are aimed at different objectives, these objectives may be short term and immediately measurable or more abstract and complex in nature. As far as the teaching and assessment methods are concerned, no specific pattern or method is generally applied. The review of the existing literature on entrepreneurship [16] indicates some variations in conventional teaching of entrepreneurship to modern approaches based on "action learning".

3.2. Entrepreneurship Curriculum and Content

Entrepreneurship Curriculum in the institutions of higher education has been taken as an imperative factor in enhancement of skills, knowledge, training, and world-class learning that focus of the development of students [17]. Entrepreneurship education has now been considered as an important area in most industrialized countries through providing courses related to curricula. Entrepreneurship education is generally concerned with learning and facilitating entrepreneurship (what to do and how to make it happen) and less studying about it. These approaches are not sufficient for a wider concept of high –level entrepreneurship education and often conceived as having highly practical subject matter with a functional curriculum. Discussion regarding entrepreneurial education distinctions between a "traditional" and an "entrepreneurial" ways of teaching and assessment. A common way is to demonstrate the differences by showing a table with two columns contrasting the two methods of teaching, advocating for a paradigmatic change from traditional to entrepreneurial teaching and assessment [18]. Standardized, content focused, passive and single-subject based curriculum in traditional education is contrasted with an individualized, active, process-based, project centric, collaborative, experiential and multidisciplinary approach in entrepreneurial education. Most of this discussion is, however, being held without reference to the century-long debate between traditional and progressive education [19] and the corresponding debate in philosophy between positivism and interpretivism. A few number of researchers have pointed out the striking similarities between entrepreneurial education and constructivist education [20], but general awareness is very low. Other pedagogical approaches and movements with similarities to entrepreneurial education are experiential learning [21] situated learning [22], service-learning, problem and project-based learning [23], adult learning [24], cognitive apprenticeship [25] and social constructivist learning [26].

3.3. University Role in Promoting Entrepreneurship

The role of universities in promoting entrepreneurship were considered due to organizational and societal changes [10]. This increased the interest to teach through entrepreneurship using the new venture creation processes to involve students in business understanding, and transferable skills and competencies. Universities and academic institutions can reap numerous financial, societal and reputational benefits through successfully engaged in entrepreneurship as an academic entity. There has been considerable research on the role that university needs to play for the promotion of entrepreneurship in the context of academic milieu. [27] proposed and discussed different Theories on the role of the university and key ideas for entrepreneurship. In addition to the overall summary of the research discussion based on the role of the university and key ideas for entrepreneurship, [27] also proposed a model of university entrepreneurial competency in relation to overall entrepreneurial on different dimensions.

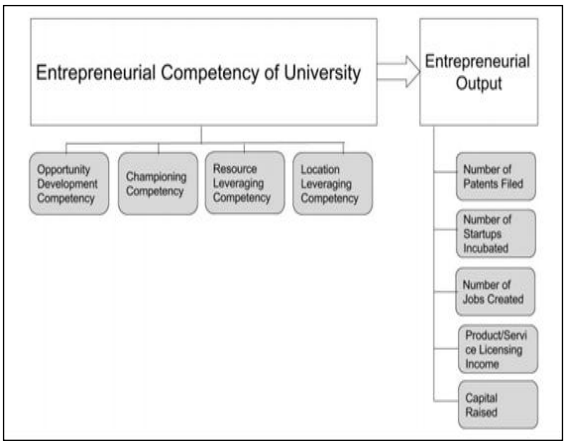

Figure 1. Entrepreneurial Competency Model of University [27]

3.4. Business Simulation

The use of business simulations can be traced into early 1960s [28]. [29] explained the business simulations as "a simulation is an exercise involving reality of function in an artificial environment, a case study but with the participants inside". Business simulations can help students to envision, discover, and coherent explanations for complex phenomena that otherwise would be very difficult to observe, comprehend and manipulate. Alongside the importance of business simulations, the impact of the business simulation and experiential learning has been discussed in the research literature [12]. [30] states the fact that by applying business simulations in learning and teaching can help is development of workplace competencies and also enhance the skills and knowledge in the students. Business simulation games are a performance-based environment where learning through performance requires active discovery, analysis, interpretation, problem-solving, memory and physical activity which results in the sort of extensive cognitive processing that deeply rooted learning in a well - developed neural network [31].

3.5. Research Framework

The research framework of this study was based on the review of literature, which has already been discussed in chapter 2. The framework was developed after a thorough review of preceding research studies and mainly based on the experiential learning theory [21], constructivist learning theory, and bloom's taxonomy of learning theory, which support the research problem of this study. The selection of these theories were conditional with their compatibility, relevance, and explanatory support from the literature. Following is the framework of the study:

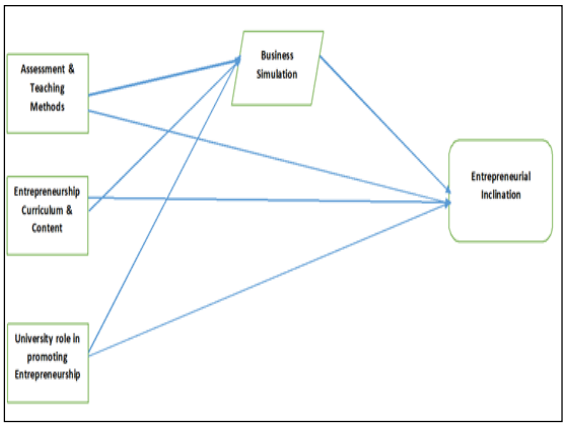

Figure 3.1. Research Framework of the Study

3.6. Hypotheses Development

Based on the aforementioned research framework in line with preceding studies resulted in the development of a number of hypotheses and a model as shown in Fig.1. Based on the objectives of this paper and available evidence in the literature, the following hypotheses were developed;

H1= Assessment and teaching methods have significant effect on effectiveness of business simulation of the students learning basic entrepreneurship course at Universiti Utara Malaysia.

H2= Assessment and teaching methods have significant effect on entrepreneurial inclinations of the students learning basic entrepreneurship course at Universiti Utara Malaysia.

H3= Business Simulation has significant effect on entrepreneurial inclinations of the students learning basic entrepreneurship course at Universiti Utara Malaysia.

H4= Entrepreneurship curriculum and content have significant effect on effectiveness of Business Simulation of the students learning basic entrepreneurship course at Universiti Utara Malaysia.

H5= Entrepreneurship curriculum and content have significant effect on entrepreneurial inclinations of the students learning basic entrepreneurship course at Universiti Utara Malaysia.

H6= University role of promoting entrepreneurship has a significant effect on effectiveness of business simulation of the students learning basic entrepreneurship course at Universiti Utara Malaysia.

H7= University role of promoting entrepreneurship has a significant effect on entrepreneurial inclinations of the students learning basic entrepreneurship course at Universiti Utara Malaysia.

H8= Business simulation positively mediates the relationship between assessment and teaching methods and entrepreneurial inclinations of the students learning basic entrepreneurship course at Universiti Utara Malaysia.

H9= Business simulation positively mediates the relationship between entrepreneurship curriculum and content and entrepreneurial inclinations of the students learning basic entrepreneurship course at Universiti Utara Malaysia.

H10= Business simulation positively mediates the relationship between university role of promoting entrepreneurship and entrepreneurial inclinations of the students learning basic entrepreneurship course at Universiti Utara Malaysia.

4. Methodology

4.1. Sample and Data Collection

This paper followed a quantitative methodology and adopted a survey research design. The degree students at University Utara Malaysia was the targeted population of this study. The students enrolled in BS degree program at University Utara Malaysia consist of population frame of the present study. The sample of the respondents (students) was identified from the list of students provided by the School of Business Management at university Utara Malaysia. About 350 students were presented and explained about the simulation process as a learning process for entrepreneurship education. A thorough discussion session was conducted to ensure the students understand about business simulation approach of teaching and learning about entrepreneurship. Using the list of students studying at University Utara Malaysia, 250 students were randomly selected and questionnaires were personally administered on the randomly selected target respondents (students of degree program of business school). A total of 187 questionnaires were returned making it a response rate of 74. 80%: however, out of the returned questionnaires, only 178 questionnaires were used for further analysis making a valid response rate of 71.20%. It was done because out of the 187 questionnaires collected, nine questionnaires were identified as wrongly filled, and thus excluded from further analysis.

4.2. Questionnaire Design

The constructs of entrepreneurial inclinations, business simulations, and university role of promoting entrepreneurship, entrepreneurship curriculum and assessment of teaching approaches were adapted from [32]. The questionnaire formed in two languages of Malay and English to reflect the multilingual society. Research scales of this study were operationalized on the basis of prior work. Consequently, modifications were also made in order to fit the current research context and purpose.

5. Data Analysis and Results

A structural equation modelling (SEM) technique utilizing Smart Partial Least Squares (PLS) statistical software was used to test the hypothesized relationships between Islamic banking, business simulations, and entrepreneurial inclinations.

5.1. Measurement Model

The measurement model is *"the portion of the model that specifies how the observed variables depend on the unobserved, composite, or latent variables"* [33]. Each one of the variable under consideration, including entrepreneurial inclination, university role of promoting entrepreneurship, curriculum and content, pedagogical approaches and business simulation were analysed in a measurement model. The measurement model aimed at specifying which items correspond to each

latent variable. The basic aim of employing measurement model was to assess construct and convergent validity of the constructs [34]. A confirmatory factor analysis (CFA) using PLS-SEM was conducted to assess the convergent and discriminant validity of the constructs in the research model. [35] suggested that construct validity can be established by undertaking convergent validity and discriminant validity.

5.1.1.Convergent and Discrimination Validity

According to [36] convergent validity can be described, as the degree to which the items of a particular scale measure the same construct. To assess the convergent validity of all the variables, composite reliability, the Average Variance Extracted (AVE), the item factor loadings [36] and the significance of the outer loadings [37] were examined. Discriminant validity was assessed for constructs through determining whether the square root of the AVE of a given construct is larger than its correlation with any other construct [37]. For a construct to demonstrate discriminant validity, each square root of the AVE should be larger than its correlation with the other constructs [37]. As shown in Table1 and 2, all constructs meet this requirement, thereby indicating convergent and discriminant validity.

Table 1. Convergent Validity

Constructs	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Assessment & Teaching Methods	0.82	0.86	0.57
Business Simulations	0.82	0.85	0. 62
Etp Curriculum & Contents	0.79	0.81	0.58
Ent. Inclinations	0.83	0.86	0. 69
University Role	0.75	0.78	0.54

Table 2. Discriminant Validity

	ATM	BS	ECC	Ent-I	URPE
ATM	**0.86**				
BS	0.59	**0.84**			
ECC	0.59	0.57	**0.83**		
Ent-I	0.60	0.70	0.55	**0.87**	
URPE	0.56	0.67	0.61	0.70	**0.81**

Note: (√Ave) 2 > Correlation

Having established the construct validity of the outer model, it is assumed that the obtained results pertaining to the hypotheses testing should be valid and reliable.

5.2. The Structural Model

A systematic model analysis of the structural model was employed to offer a comprehensive view of the results and to test the Hypotheses from 1 to 7 comprehensibly. The assessment of the inner model starts with an analysis of the direct relationships between the independent variables and the dependent variable. The size of the path coefficients was observed through PLS-SEM Algorithm, while PLS-SEM bootstrapping procedure in the SmartPLS 3.0 was used to examine the significance of the relationship between variables. The original number of cases was used as the number of cases, and 5,000 were used as bootstrapping samples [35].

The first model consists of the analysis of the direct relationship between the independent variables with mediating and the dependent variable (H1 to H7). In the second model, three hypothesis were presented, and the analysis of mediating relationships between the independent variables mediator, and independent variable (H8 to H10) was carried out.

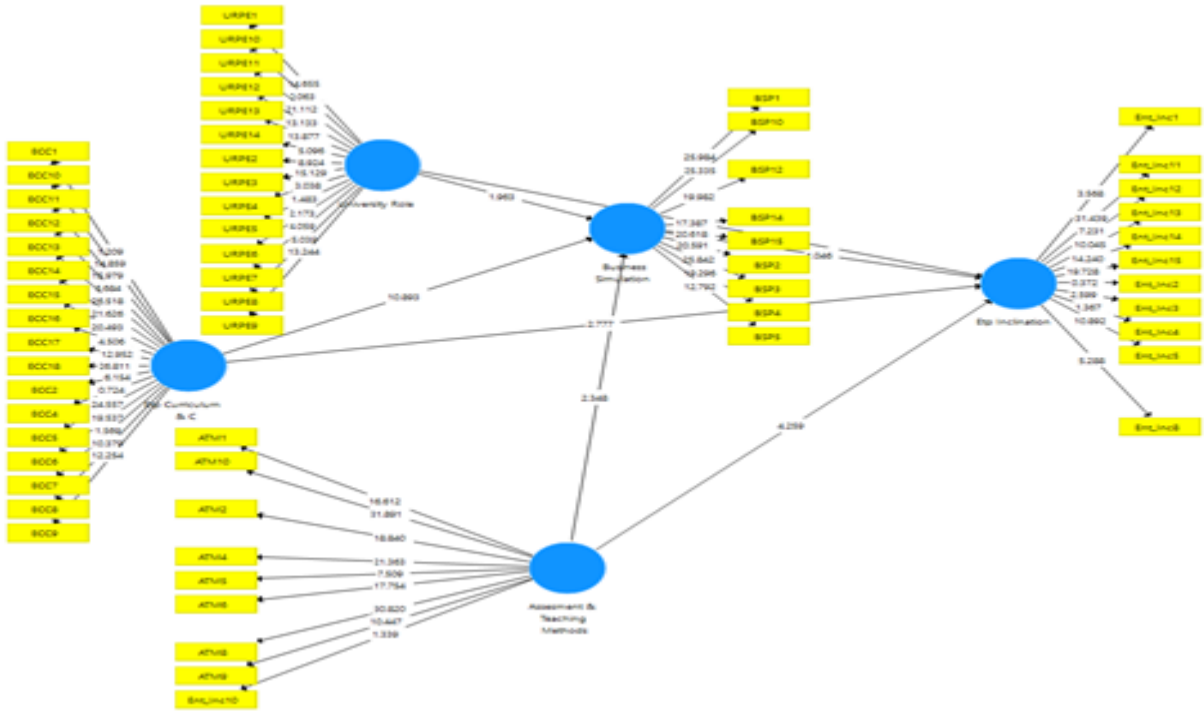

Figure 2. PLS-SEM Bootstrapping Direct Relationship

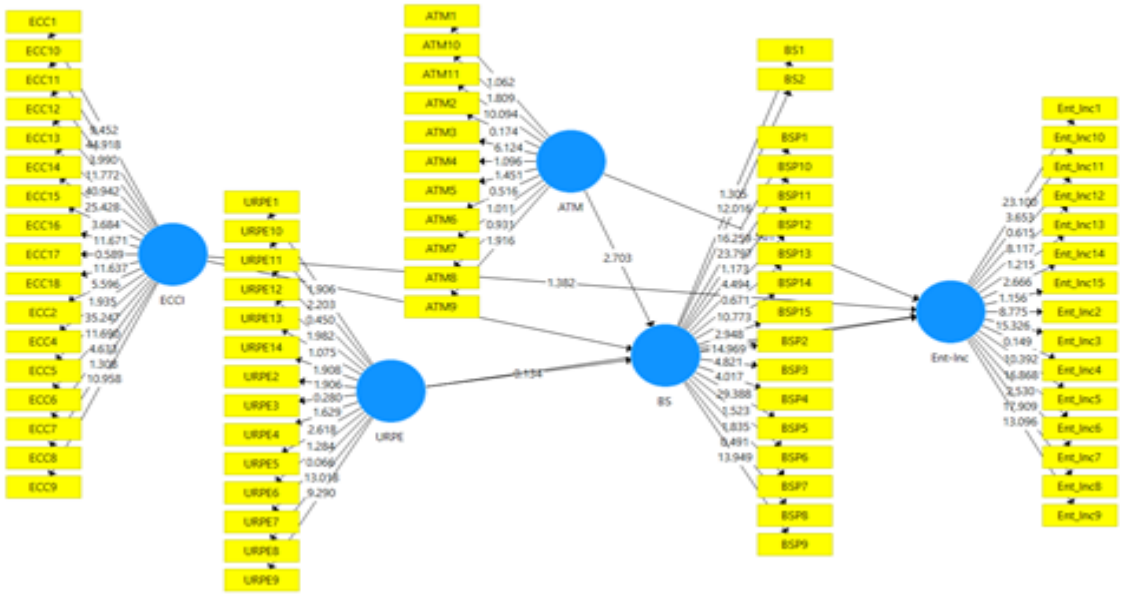

Figure 3. PLS-SEM Bootstrapping Mediating Relationship

Based on the PLS-SEM algorithm and bootstrapping procedure as mentioned above, Figure 4.2 shows the path coefficient of the independent variables and the dependent variable. The result reveals that all the exogenous variables have a positive coefficient with the endogenous variable. The bootstrapping result in Figure 4.3 shows that the relationship between four of the independent variables and the dependent variable is

significant at p<.01. Table 4.3 presents the path coefficients, t-statistics and p-values.

With respect to H1, the results provide the support of significant effect of assessment and teaching methods on business simulation (β0. 3; t=2.703; p> 0.00); so H1 is supported. Similarly, the second hypothesis suggests the significant effect of assessment and teaching methods on entrepreneurial inclination, whereas results show the same as hypothesized (β 0.5; t=6.0; p> 0.00), therefore, H2 is also accepted. Likewise, H3 assumed that there is a positive effect of business simulation on entrepreneurial inclination, the results provide evidence of positive significant effect of business simulation on entrepreneurial inclinations (β.8; t=6.62; p< 0.00); therefore H3 is also accepted. With regards to H4, which suggests that entrepreneurship curriculum and content significantly related to business simulation. Equally, the result also provide evidence of such relationship (β.5; t=2.43; p> 0.01), accordingly H4 is also accepted.

However, the fifth hypothesis suggests that entrepreneurship curriculum and content significantly effect on entrepreneurial inclination, however, the result does not support the assumed relationship (β.19; t=1.90; p<.89), therefore H5 is rejected. Similarly, the sixth hypothesis H6 assumed that there is a significant effect of university role of promoting entrepreneurship on business simulation, the result also contradicts the hypothesized relationship (β.09; t=0.13; p<.89) thus H6 is rejected. Likewise, the next hypothesis suggests that there is an effect of university role of promoting entrepreneurship on developing entrepreneurial inclination. However, the result does not support the assumed relationship (β.20; t=1.60; p> 0.10); therefore, H8 is rejected.

Table 3. Results of Hypotheses Testing (Direct Relationships)

Hypothesized Path	Path coefficient	Standard Error (STERR)	T Value	P Value	Decision
H1 ATM -> BS	0.34	0.11	2.70	0.00*	Supported
H2 ATM -> Ent-Int	0.56	0.10	6.00	0.00*	Supported
H3 BS -> Ent-Int	0.88	0.12	6.62	0.00*	Supported
H4 ECC -> BS	0.52	0.27	2.43	0.01**	Supported
H5 ECC -> Ent-Int	0.15	0.23	0.19	0.84	Not Supported
H6 URPE -> BS	0.07	0.21	0.13	0.89	Not Supported
H7 URPE -> Ent-Int	0.28	0.18	1.60	0.10	Not Supported

*p<0.00**p<0.01***p<0.05

As shown in Table 3 and in Figures 2 and 3, hypotheses H1, H2, H3, and H4 were supported, though hypotheses H5, H6, and H7 were not supported.

After including the mediator construct of business simulation, in the model 2, the bootstrapping result of 5,000 samples was used to multiply path a and path b. Then the product of the two significant paths was divided by the standard error of the product of the two paths to get the t-value. It is therefore clear from Table 4 that business simulation mediates the positive relationship between assessment and teaching methods and entrepreneurial inclinations (β.04; t=2.493; p<.05); leadership skills and entrepreneurial inclinations (β.25; t=2.43; p<.02); and entrepreneurship curriculum and content on entrepreneurial inclinations (β.54; t=2.16; p<.03). However, Table 4 shows that business simulation did not mediate the relationship between university role of promoting entrepreneurship and entrepreneurial inclinations (β.02; t= 0.17; p> 0.90).

Table 4. Results of Mediating Tests

	Hypothesized Path	Path coefficient	Standard Error (STERR)	T Value	P Value	Decision
H8	ATM -> BS-> EI-INT	0.30	0.10	2.34	0.02***	Supported
H9	ECCI -> BS> EI-INT	0.46	0.25	2.16	0.03***	Supported
H10	URPE ->BS -> EI-INT	0.02	0.08	0.19	0.11	Not Supported

*p<0.00**p<0.01***p<0.05

6. Conclusions and Recommendations

Based on the Experiential Learning Theory and the Social Cognitive Career Theory, seven hypotheses on the positive relationship between assessment and teaching and business simulation; assessment and teaching methods and entrepreneurial inclinations; business simulation and entrepreneurial inclinations; entrepreneurship curriculum and content and business simulation; entrepreneurship curriculum and content and

entrepreneurial inclinations; university role of promoting entrepreneurship and business simulation; university role of promoting entrepreneurship and entrepreneurial inclinations. The result of data analysis showed that there was a significant effect of assessment and teaching methods on the effectiveness of business simulation H1; assessment and teaching methods on entrepreneurial inclinations H2; business simulation on entrepreneurial inclinations H3; and entrepreneurship curriculum and content on the effectiveness of business simulation H4. The results of the study confirmed the previous studies that considered assessment and pedagogical approaches have an essential part to inculcate the qualities in prospective entrepreneurs [12]. From this perspective, there are numerous research studies which also proposed different pedagogical methodologies to adopt imparting entrepreneurial knowledge and skills to the students [8]. The findings of this study were also in line with the preceding research, which had already been acknowledged the impact of assessment and teaching methods on entrepreneurial inclinations [12]. Furthermore, a number of studies also recognized the substantial impact of assessment and teaching methods in entrepreneurship education [12].

Furthermore, the results were also in line with the number of studies which has been published to determine the effectiveness of business simulations at helping students achieve learning objectives [38]. In terms of pedagogical value, business simulation significantly contributes to the development of decision making [12]. The results were also confirmed the previous studies [17], which considered entrepreneurship curriculum is one of the vital elements in provision of learning and training models and prepare individuals for decision making. Essentially, it is a process to develop entrepreneurial competencies and mind-set. Nevertheless, the hypothesis which examined the positive significant effect of entrepreneurship curriculum and content on developing entrepreneurial H5; the effect of university role of promoting entrepreneurship on effectiveness of business simulation H6; and effect of university role of promoting entrepreneurship on entrepreneurial inclinations H7, the results fail to provide statistical support of such relationships. The findings of this study may affected from the population selected for the empirical analysis, and according to these results, it might be said that the insignificant direct effect of entrepreneurship curriculum and content on developing entrepreneurial inclinations of the students can be explained by two reasons. Firstly, entrepreneurship would not be valued as a feasible career option, leading to low closer valuation. Secondly, entrepreneurship curriculum and content were not satisfactorily developed among the students, leading to low desirability towards entrepreneurship.

Furthermore, the three hypothesis were formulated to examine the mediating role of business simulation on the relationship between university role, entrepreneurship curriculum, and assessment of teaching approaches and students' entrepreneurial inclination of the students learning basic entrepreneurship course at Universiti Utara Malaysia. The results of data analysis confirmed the significant mediating role of business simulation on the relationship between entrepreneurship curriculum, and assessment of teaching approaches and students' entrepreneurial inclination of the students learning basic entrepreneurship course at Universiti Utara Malaysia. The findings are linked with preceding studies that have been emphasized on the significant of business simulations in preparing individuals for entrepreneurship [39]. In addition, the findings were also confirmed the experiential learning theory and constructivist learning theory by providing empirical evidence.

However, the hypothesis formulated to examine the mediating role of business simulation on the relationship between university role of promoting entrepreneurship and developing entrepreneurial inclinations of the students failed to provide statistical support of such mediating effect. The findings of this study may affect from the targeted population (students learning basic course of entrepreneurship) selected for the empirical analysis, and according to these results, it might be said that the insignificant effect of business simulations on university role of promoting entrepreneurship and developing entrepreneurial inclinations , can be explained by two reasons. In university, students with initial involvement in business simulations activities are not confident to show their inclinations to become entrepreneurs due to low level of university support, which results the lower inclinations. Secondly, the understanding and involvement in business

simulations not allowed students to show their inclinations to start their own business, which leading to low desirability towards entrepreneurship.

Based on the findings of this paper, it is therefore, suggested that the more involvement in business simulations activities increase the inclinations of an individual to be entrepreneur, which in turn, provide the base for flourishing entrepreneurial activity in the society. Furthermore, it is also recommended that in the context of Malaysian Higher education Institutions, universities should focus on facilitating students by providing them learning by doing opportunities, which will help to make the entrepreneurial activity more desirable and feasible and the entrepreneurial environment can be flourished.

7. Limitations and Future Research Direction

Keeping in view the time, capacity and resource contrasts present study had multiple limitations. Firstly, the current study was focused on the data gathered from the university students in Malaysia, so the implication of the study will also be limited to the Malaysian context, future research can be aimed at replication of the current model to any other territory in order to contextualize the results. Secondly, the data was collected from one university, whereas future studies may be conducted to gather data from more than one university so that more rigor and generalize results can be sought and also the comparison can be made. Thirdly, the current study is aimed on the investigation of the proposed impact of pedagogical approaches, entrepreneurship curriculum and content, assessment and university role in promoting entrepreneurship and mediating effect of business simulations on the decision to opt entrepreneurial career, these were only factors which have been examined under this research, future study can broaden the spectrum by adding more contextual variables into the research study. Considering the limitations of the current study, there are promising avenues for future research Future research may also be conducted by amending some of the dimensions found in the present study. Such studies could enrich knowledge on variables in the evaluation of entrepreneurial inclinations. The present study employed the survey method that used a set of questionnaires as measurement scale. Future studies could consider the use of other tools, such as interviews and focus groups, to collect the required data for examining the role of business simulations and entrepreneurial inclinations.

References

[1] M. Volery, T., & Schaper, “Entrepreneurship and small business: a Pacific Rim perspective.,” p. 482, 2007.

[2] V. B. Venkatachalam and A. a Waqif, “Outlook on Integrating Entrepreneurship in Management Education in India.,” *Decis.*, 2005.

[3] L. Serviere, “Forced to Entrepreneurship: Modeling The Factors Behind Necessity Entrepreneurship,” *J. Bus. Entrep.*, 2010.

[4] M. J. Co and B. Mitchell, “Entrepreneurship education in South Africa: A nationwide survey,” *Educ. Train.*, 2006.

[5] M. N. Sarimah, C. H., Armanurah, M., & Amir, “Potensi kolej komuniti sebagai wadah pembentukan ‘majikan’ lestari.,” 2013.

[6] E. P. Unit, “The Tenth Malaysia Plan 2011-2015,” Kuala Lumpur, 2010.

[7] M. F. Shabbir, M. S., Shariff, M. N. M., Salman, R., & Shabbir, “Exploring the link between entrepreneurial skills and entrepreneurial intentions: Proposing a hypothesized model for future research.,” *Paradigms*, vol. 11, no. 1, p. 72, 2017.

[8] J. O. Fiet, “The pedagogical side of entrepreneurship theory,” *J. Bus. Ventur.*, 2001.

[9] J. Levie, “Entrepreneurship education in higher education in England: A survey,” *UK, Dep. Employ. Educ.*, 1999.

[10] I. (Rengiah, P., & Sentosa, “A Conceptual Development of Entrepreneurship Education and Entrepreneurial Intentions among Malaysian University Students,” *J. Bus. Manag.*, vol. 16, no. 11, pp. 68–74, 2014.

[11] K. Fekri, A. Shafiabady, R. Nooranipour, and G. Ahghar, “Determine and Compare Effectiveness of Entrepreneurship Education based on Multi- Axial Model and Theory of Constraints and Compromises on Learning Entrepreneurship Skills,” *Procedia - Soc. Behav. Sci.*, 2012.

[12] P. Rengiah Assoc Ilham Sentosa, “the Effectiveness of Entrepreneurship Education in Developing Entrepreneurial Intentions Among Malaysian University Students: (a Research Findings on the Structural Equation Modeling),” *Eur. J. Bus. Soc. Sci.*, 2016.

[13] F. Ferraro, J. Pfeffer, and R. I. Sutton, “Economics language and assumptions: How theories can become self-fulfilling,” *Acad. Manag. Rev.*, 2005.

[14] M. Armanurah, M. Hussin, and N. A. Buang, “Exploring dimensions of entrepreneurial skills

among student enterprise at higher learning institution in Malaysia: A case of student enterprise of University Utara Malaysia," *Int. Multiling. J. Contemp. Res.*, 2014.

[15] C. N. Bodea, R. I. Mogoş, M. I. Dascălu, A. Purnuş, and N. G. Ciobotar, "Simulation-based e-learning framework for entrepreneurship education and training," *Amfiteatru Econ.*, 2015.

[16] R. Denanyoh, K. Adjei, and G. E. Nyemekye, "Factors That Impact on Entrepreneurial Intention of Tertiary Students in Ghana," *Int. J. Bus. Soc. Res.*, 2015.

[17] I. G. Oyugi, "The effect of automated service on financial performance of Savings and Credit Cooperative Societies licensed by Sacco Society Regulatory Authority in Kenya," University of Nairobi., 2014.

[18] S. Ollila and K. W. Middleton, "The venture creation approach: integrating entrepreneurial education and incubation at the university," *Int. J. Entrep. Innov. Manag.*, 2011.

[19] D. F. Labaree, "Progressivism, schools and schools of education: An American romance," *Paedagog. Hist.*, 2005.

[20] H. Löbler, "Learning entrepreneurship from a constructivist perspective," *Technol. Anal. Strateg. Manag.*, 2006.

[21] D. a Kolb, "Experiential learning: Experience as the source of learning and development," *J. Organ. Behav.*, 1984.

[22] J. Lave and E. Wenger, *Situated learning: Legitimate peripheral participation*. 1991.

[23] L. Helle, P. Tynjälä, and E. Olkinuora, "Project-based learning in post-secondary education - Theory, practice and rubber sling shots," *High. Educ.*, 2006.

[24] P. Jarvis, "Lifelong learning and the learning society. Towards a Comprehensive Theory of Human Learning," 2006.

[25] L. A. Collins, A. J. Smith, and P. D. Hannon, "Discovering entrepreneurship: An exploration of a tripartite approach to developing entrepreneurial capacities," *J. Eur. Ind. Train.*, 2006.

[26] J. E. Steffe, L. P., & Gale, *Constructivism in education*. Hillsdale, NJ: Lawrence Erlbaum, 1995.

[27] B. Rao and B. Mulloth, "The Role of Universities in Encouraging Growth of Technology-Based New Ventures," *Int. J. Innov. Technol. Manag.*, 2017.

[28] J. M. Kibbee, *Management games: A new technique for executive development*. Reinhold Pub. Corp, 1961.

[29] P. Thavikulwat, "The architecture of computerized business gaming simulations," *Simul. Gaming*, 2004.

[30] W. Rhude, "Skill development simulations," *Plant Eng.*, vol. 63, no. 12, p. 34, 2009.

[31] J. Foreman, "Next generation educational technology versus the lecture," *Educause Review*. 2003.

[32] M. Sørensen, "Learning with simulation games. Evaluating Hotel Simulation Games' Efectiveness on Higher Academic Performance within Service and Hospitality.," Copenhagen Business School: Handelhøjskolen.

[33] W. Arbuckle, J. L., & Worthke, *SPSS® AMOS™ 6.0 User's Guide.* Spring House, PA: Amos Development Corporation.

[34] E. J. Pedhazur and L. P. Schmelkin, *Measurement, design, and analysis: An integrated approach*. 1991.

[35] J. F. Hair, C. M. Ringle, and M. Sarstedt, "PLS-SEM: Indeed a Silver Bullet," *J. Mark. Theory Pract.*, 2011.

[36] C. Fornell and D. Larcker, "Evaluating structural equation models with unobservable variables and measurement error," *J. Mark. Res.*, 1981.

[37] D. Gefen, "A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example," *Commun. Assoc. Inf. Syst.*, 2005.

[38] P. H. Anderson and L. Lawton, "Demonstrating the Learning Effectiveness of Simulations: Where We are and Where We Need to Go," *Dev. Bus. Simulations Exp. Learn.*, 1997.

[39] Y. K. Ooi and A. Nasiru, "Entrepreneurship education as a catalyst of business start-ups: A study on Malaysian community college students," *Asian Soc. Sci.*, 2015.