

TEACHING STRATEGIES AS A PREDICTOR OF ENTREPRENEURIAL MINDSET: IMPLICATIONS FOR INNOVATIVE TEACHING STRATEGIES

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Abstract

The aim of this study is to offer innovative teaching strategies in Entrepreneurship Education towards nurturing entrepreneurial mindset among university students. The teaching strategies focused on educator-centered teaching and learner-centered teaching to stress the importance to cultivate innovative teaching strategies as a key way to improve the current practices of EE in universities. This article uses extensive reviews of literature in the fields of education and entrepreneurship to provide a bridge between innovative teaching strategies and current teaching practices in universities to build entrepreneurial mindset among university students. Findings indicated that teaching strategies such as business plan, presentation of business projects, discussion, doing real business and lecture are the most engaging teaching methods been used to stimulate entrepreneurial awareness and improve students' entrepreneurial mastery skills in producing entrepreneurial mindset among university students. This approach also identify that educator-centered teaching strategies are the predictor to students' entrepreneurial mastery skills followed by student-centered teaching strategies are the predictor to create entrepreneurial awareness among university students. This article contribute sheds a new light, on the concept of innovative teaching to enhance entrepreneurial awareness and improve students' entrepreneurial mastery skills in producing entrepreneurial mindset among university students.

Keywords: *awareness, educator-centered teaching strategies, entrepreneurial mindset, mastery skills, student-centered teaching strategies*

Introduction

The ability of an individual to produce and exploit ideas into action is known as Entrepreneurial Mindset (EM) (Zaidatol Akmaliah & Keetanjaly, 2016). In order to achieve the aim, an entrepreneurial mindset must be a risk-taker, creative, innovative as well as has the ability to plan and execute the

outcomes. In line with this, entrepreneurial mindset is seen as an important element to encourage the right mindset, entrepreneurial skills and awareness of career opportunities among university students (Zulhamri, Mohammad Shatar & Mohd Fauzi, 2014). Therefore, there is an urge to introduce entrepreneurship course into every degree programme in order to encourage and stimulate an entrepreneurial culture in our societies.

Entrepreneurship Education (EE) is defined as “the process of providing individuals with the concepts and skills to recognize opportunities that others have overlooked, and to have the insight, self-esteem and knowledge to act where others have hesitated” (Center for Entrepreneurial Leadership Clearing House on Entrepreneurship Education [CELCEE], 2003). EE plays a significant role in producing Entrepreneurial mindset among University students. However, one of the key issues of concern was on the new approach of innovative teaching strategies to create the awareness and vital skills needed to form entrepreneurial mindsets among university students.

It was noted that a strong knowledge in EE is the key propeller needed to produce students' entrepreneurial behavior and entrepreneurial mindset (Potinkara, Römer-Paakkanen, Suonpää & Kiviniemi, 2013). In this context, entrepreneurial pedagogy need to be more focus on hands-on activity, experimental learning and learning from mistakes (Thompos, 2005, p.115 & Potinkara, et al., 2013, p. 14). An enterprising mindset is about having a way of thinking, which sees opportunities, rather than barrier, that sees possibilities rather than failure and wants to do something to make a difference rather than sit and complain about the problems (Souitaris, et al., 2007; Osterbeek, et al., 2010).

Literature Review

Entrepreneurial Mindset

The aim to solve problems creatively is known as the fundamental of entrepreneurship (Zhao, 2014). The

specialization of introducing university students to entrepreneurial mindset is to get real-life perception and provide them with insights to reframe their idea to maximize their probability towards achievement (Rowan, 2016). Concurrently, it is important to equip university students with entrepreneurial mindset to recognize opportunity, acquire initiative to move coherently and be innovative in such tumultuous time. In this study, entrepreneurial mindset is considered as a holistic perception of generating novel ideas, evaluating opportunities and risks, starting and running a business, whereby an individual internally assesses his or her perceptions based on holistic rather than functional attributes.

Entrepreneurship Education

The focus of EE pedagogy is on students' responsibilities in learning, collectiveness, multidimensional and ongoing learning flexibilities (Gibb, 2005). The aim of teaching EE is to produce scholars with entrepreneurial mindsets, notable aptitude in learning, sharpen their abilities to grasp opportunities and venture into business field. However the implementation, awareness and mastery skills in deepening entrepreneurial mindsets among University students are still lagging behind.

Abbas & Zaidatol Akmaliah (2016) opined that gradually, the standard of methodologies in teaching entrepreneurship has been censured due to its inadequate realization towards executing positive results. This is due to few teaching methods are being used as non-enterprising in both content and delivery (Gibb, 1993). Learning can be in dualism of either student-centred learning or teacher-centred learning (O'Neill & McMahon, 2005). However, in the reality of practice, student-centred learning is seen as an important element of the learning continuum as shown in Table 1.

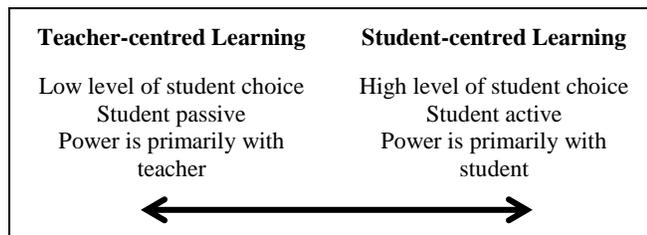


Table 1 Student-centred and teacher-centred continuum.

(Source: Adapted from O'Neill & McMahon, 2005, p. 29)

In this study, the term of innovative teaching methods is repeatedly used in juxtaposition with student-centred learning and educator-centred learning. Researcher has classified the innovative teaching methods for both student-

centred learning and educator -centred learning as shown in Table 2.

Student- centred learning	Teacher- centred learning
a) Entrepreneurs case analysis	a) Lecture
b) Business plan	b) Reading material
c) Presentation of business projects	c) Tutorial
d) Discussion	e) Entrepreneurs as guest speaker
e) Visit to the business location	
f) Interviews with entrepreneurs	
g) Doing real business	
h) Entrepreneurial self-analysis	

Table 2 Innovative teaching strategies.

(Source: Developed for this research)

Student-centred Learning

Student-centred learning is a learning process which focuses on student's ability to think out of the box, stimulate their higher order thinking skills and further towards hand-on activity. Through this learning technique, students have the ability to turn ideas into action by integrating creativity, innovation and risk-taking as well as the ability to plan and manage projects in order to achieve objectives (Potinkara, Römer-Paakkanen, Suonpää & Kiviniemi, 2013).

a) Entrepreneurs case analysis

In this teaching strategy, university students are exposed to utilize a problem-based learning to analyst the case studies from newspaper articles, video clips, company financial reports and a real-life situations (Tan & Ng, 2006). Each of these case studies will illustrate the generation of ideas and ways to transform those ideas into a marketable product. Ardalan (2008) has pointed out that through case study, university students able to "learn by reformulating past experiences, conducting situational analysis, evaluating the circumstances and constructing actions for the particular situation" (p. 19). This highlights the development of market strategies and the appropriate mechanisms to use or deploy case study analysis, in order to be a person with entrepreneurial mindset.

b) Business plan

Business plan is known as the theoretical knowledge on entrepreneurship and business planning. This teaching strategy will initiate university students "to find and test

business ideas, and assess business opportunities as well as to consult group work and business plan writing” (Arasti, Falavarja & Imanipour, 2012, p.5). This will be helpful for university students in exposing them in writing a business plan using their own business idea on the process of setting up an enterprise. Through this teaching method, students should be able to grasp the significance of formulating a business plan by expanding their overview of the Business Plan structure and the process of preparation. Balan & Metcalfe (2012) has introduced “one business idea” for all group students based Michaelsen and Sweet’s (2008) idea which emphasize on working on the same problem for classroom exercise. This will bring more of entrepreneurship in them.

c) Presentation of business projects

In this teaching method, university students are invited to present their business projects via oral presentation using PowerPoint slides or posters during their class or in a seminar presentation. This technique helps university students to gather data or sources by interviews, analyzing case studies, discussion and visiting to business location (Balan & Metcalfe, 2012). This will indirectly enrich students’ creative expansions by seeing and recognizing works that others have presented (Michaelsen & Sweet, 2008; Balan & Metcalfe, 2012).

d) Discussion

University students will be given space to creatively articulate their solutions as an entrepreneur. During the discussion session, students will brainstorm; pin down their ideas and facts of a situation which they were unable to solve. Through this activities, students will be assigned tasks among themselves and require them to gather information and resources in the second meeting. Later, students will come up with their mind-mapping, clarify the gaps and decide among themselves the solutions they should adopt in their third meeting (Tan & Ng, 2006).

e) Visit to business location and Interviews with entrepreneurs

Students were requested to visit entrepreneurs and/or their family members and friends who were in business. This approach will require students to take up field work by identifying and interviewing indigenous entrepreneurs in the community by sharing their advice and experiences. Through this learning strategy, university students are exposed to experiences of others and outside a formal educational setting (Balan & Metcalfe, 2012). This would create a motivation and lift the spirit in students to be an entrepreneur.

g) Doing real business

Through this teaching method, students will choose on the product or service they want to produce or sell, select their managers and increase capital. This requires them to prepare a business plan and finalize the marketing strategy to ensure whether they would like to produce or purchase/order the product design. Once they have decided, the students will start to sell their products or service within the university or outside the university surroundings as well as keep track of their accounts. In some situation, there might be cases of the sales goes into liquidation which requires students to present a report. If the business is continued, it will be handed over to students of subsequent academic years (Hatak & Reiner, 2011).

h) Entrepreneurial self-analysis

In this approach, students will be needed to evaluate themselves as an entrepreneur. From their observation and learning, students are required to apply or practices more of what their learnt into really life situation (Tan & Ng, 2006).

Educator-centred Learning

Under this method, the learning process is guided by facilitator or lecturer which focuses more towards content oriented. As a result, lecturer or facilitator plays the leadership role and controls the class activity. Students are allowed limited responsibilities (Garrett, 2008).

a) Lecture

Lecturer or facilitator will conduct classes and brief university students’ on the learning outcomes. Relatedly, this learning type will emphasize on cognitive, skill-based and affective among university students (Harrison & Leitch, 2008). In this learning technique, students will be nurtured and assisted to progress and develop their entrepreneurial mindset skills.

b) Reading material

Students are requested to read material related to entrepreneurship. Through reading, students are exposed to the important of basic knowledge of EE.

c) Tutorial

Students will be exposed to Q and A session to develop their knowledge and stimulate their critical thinking in EE.

d) Entrepreneurs as guest speaker

Through this learning approach, lecturer or facilitator will invite practicing entrepreneurs as guest speaker to share their experience and expertise of their business practices during a seminar or conference session (Abbas & Zaidatol Akmaliah, 2016). This learning technique will provide university students with the opportunity to gain information and learn

through experiences from others about the outside world (Balan & Metcalfe, 2012).

Each of these twelve teaching methods were assessed in this study through a survey form given to undergraduate University students. Particularly in this situation, students were asked to identify the best teaching practice with the aim of producing excellent learning outcomes and also to attract students' interest towards entrepreneurship.

Problem of Research

Traditionally, educators emphasize more on their lesson plan instead on developing the acquisition of students' knowledge. This situation leads to a passive learner, which focuses more on "educator-centered teaching" rather than "learner-centered teaching" (Gibb, 2005, 2011). Nevertheless, the literature does not indicate clear procedures or frameworks for choosing specific teaching approaches in entrepreneurship courses and programmes" (Balan & Metcalfe, 2012, p. 371).

Recently, learner-centered teaching is being emphasized in higher education (Arasti, Falavarjani, & Imanipour, 2014; Li-Hsien, 2014). This method does not focus solely on teaching method instead accentuates diverse teaching approaches such as entrepreneurs case analysis, business plan, presenting business projects, discussion, visiting business location, interviews with entrepreneurs, doing real business, entrepreneurial self-analysis and entrepreneurs invitation (Zaidatol Akmaliah & Abdullah Salleh, 2009; Balan & Metcalfe, 2012; Arasti, Falavarjani, Imanipour, 2012; Fayolle & Gailly, 2008). This has shifted the educators' role from providing information to aiding student learning.

Research Focus

- 1) What is the level of awareness and mastery skill to develop entrepreneurial mindset among university students?
- 2) What is the relationship between student-centred teaching and teacher-centred teaching with entrepreneurial mindset?
- 3) What is the predictor of developing entrepreneurial mindset among university students?

Methodology of Research

General Background of Research

This study adopted quantitative correlational design which was conducted at one of the public university in Malaysia.

Sample of Research

The sample size consist of 256 students who had taken basic entrepreneurship course and were selected using simple random sampling from four Faculty which are Faculty of Science, Forestry, Educational Studies and Human Ecology.

Instrument and Procedures

Entrepreneurial mindset questionnaires are obtained from Solesvik, et al., 2013 which consist 15 items. Meanwhile, teaching strategy techniques instrument was developed from extensive literature review reading. The questionnaires are modified to suit Malaysian culture and entrepreneurial practice. The instruments indicated overall excellent Cronbach α value for entrepreneurial mindsets ($\alpha = .931$) and overall teaching strategy for entrepreneurial awareness ($\alpha = .932$) and entrepreneurial mastery skill ($\alpha = .943$) as supported by the George & Mallery (2001, p. 127) rule of thumb.

Data Analysis

In this study, descriptive statistics such as mean and standard deviation are used to describe the level of entrepreneurial mindset, student-centred learning and teacher-centred learning strategies among University students. The level was classified into three levels namely; low level (1.000 – 2.339), moderate level (2.34 – 3.669) and high level (3.67 – 5.00). The inferential statistic method such as correlation analysis (Pearson Correlation) and multiple regressions are used. Pearson correlation is utilized to determine the relationship between the dependent (entrepreneurial mindset) and in dependent variable (student-centred learning and teacher-centred learning strategies) based on Guildford's (1973) Rule of Thumb. Lastly, multiple regressions are used to explore the influence of student-centred learning and teacher-centred learning strategies towards entrepreneurial mindset. All collected data were analyzed by using the Statistical Package for Social Science (SPSS) Version 21.0.

Results of Research

The level of entrepreneurial mindset is presented in Table 3. All the items were normally distributed, as the mean rating scale for each variable is approximately 3.0 midpoint on the rating scale. The entrepreneurial mindset indicated that moderate level with mean score is 3.30 and standard deviation is .73.

Item	Mean	SD	Level
Entrepreneurial mindset	3.30	.73	Moderate

Table 3 The level of entrepreneurial mindset.

(Source: Developed for this research)

From the findings depicted in Table 4, the overall awareness and mastery skills obtained through student-centered learning and teacher-centered learning are moderate level

among university students. However, it stipulated that student-centred learning approaches as the innovative teaching method in teaching entrepreneurship education is higher (78.9%) compared to teacher-centred learning (68.5%). Among the eight innovative teaching approaches in student-centred learning; around 95-98% university students have indicated that business plan, presentation of business projects, discussion and doing real business are being applied or implemented in their lesson. However, case study, visit, interviews with entrepreneurs and entrepreneurial self-analysis were moderately implemented.

	Implementation		Awareness			Mastery			
	Yes (%)	No (%)	Mean	SD	Level	Mean	SD	Level	
Student-centred learning									
1	Entrepreneurs case analysis	84	16	3.46	1.14	Moderate	3.38	1.158	Moderate
2	Business plan	98	2	3.86	0.91	High	3.80	0.94	High
3	Presentation of business projects	98	2	3.92	0.87	High	3.79	0.89	High
4	Discussion	98	2	3.85	0.91	High	3.85	0.90	High
5	Visit to the business location	43	57	2.83	1.45	Moderate	2.81	1.43	Moderate
6	Interviews with entrepreneurs	34	66	2.70	1.41	Moderate	2.67	1.41	Moderate
7	Doing real business	95	5	3.90	0.97	High	3.76	0.1	High
8	Entrepreneurial self-analysis	81	19	3.48	1.19	Moderate	3.40	1.16	Moderate
Overall		78.9	21.1	3.50	.80	Moderate	3.43	0.80	Moderate
Teacher-centred learning									
9	Lecture	99	1	3.88	.86	High	3.69	.89	High
10	Reading material	85	15	3.59	1.11	Moderate	3.43	1.12	Moderate
11	Tutorial	54	46	3.03	1.35	Moderate	2.99	1.34	Moderate
12	Entrepreneurs as guest speaker	36	64	2.78	1.46	Moderate	2.69	1.39	Moderate
Overall		68.5	31.5	3.32	0.93	Moderate	3.20	0.94	Moderate

Table 4 Student-centred learning and teacher-centred learning strategies.

(Source: Developed for this research)

For teacher-centred learning, the findings indicated that lecture method showed high level in achieving awareness (Mean = 3.88, SD = .86) and mastery skills (Mean = 3.69, SD = .89) to develop entrepreneurial mindset compared to reading material, tutorial and entrepreneurs invitation. This statement has been supported by 99% university students as they indicated that lecture is been implemented most in their class. However, “Entrepreneurs as guest speaker” received the lowest mean score for achieving entrepreneurship awareness (mean = 2.78, S.D = 1.46) and entrepreneurial mastery skills (mean = 2.69, S.D = 1.39). This finding is in line with Balan & Metcafe (2012) as they opined that entrepreneur presentations regarded as less influence and should be placed with other activity which provides greater contribution in teaching and learning.

The relationships between the variables were examined by Pearson Correlation analysis. Preliminary analysis was conducted to check normality and linearity of the sample, skewness is within 3, and kurtosis is within the range 10 as well as a linear scatter plot matrix was observed. Statistical significant was set at p=.05 level. All the correlation were found to be significant (p<.05) and positively correlated with entrepreneurial mindset. However, the findings indicated

moderate correlation for awareness in student-centred learning and mastery in teacher-centred learning to create entrepreneurial mindset among university students as depicted in Table 5.

	Awareness		Mastery	
	Student-centred learning	Teacher-centred learning	Student-centred learning	Teacher-centred learning
Entrepreneurial mindset	.417** (Moderate)	.317** (Low)	.391** (Low)	.439** (Moderate)

Table 5 Relationship between teaching strategies for awareness and mastery development of entrepreneurial mindset.

(Source: Developed for this research)

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.852	.197		9.395	.000
	Awareness - Student Centred	.336	.136	.347	2.471	.014
	Awareness - Teacher Centred	-.300	.128	-.368	-2.336	.020
	Mastery - Teacher Centred	.338	.137	.419	2.471	.014
	Mastery - Student Centred	.056	.143	.060	.393	.695

a. Dependent Variable: MeanEntreMindset
(Adjusted R² = .206, F = 17.669, p < .005)

Table 6 Estimates of coefficients for entrepreneurial mindset.

(Source: Developed for this research)

Entrepreneurial mastery skills among university students is encouraged by educator-centred teaching strategies (β = .419, α = .014), which makes the strongest unique contribution to explain entrepreneurial mindset followed by entrepreneurial awareness which is stimulated through student-centered teaching strategies (β = .347, α = .000). It can be concluded that 20.6 % of the variance entrepreneurial mindset among university students can be explained by teaching strategies as portrayed in Table 6. However, there are still 71.4% variation of entrepreneurial mindset can be explicated by other variables which is not carried out in this research. Blenker, et al. (2011) recommended that EE guided by social entrepreneurship perspective can be included in the pedagogy such as “selling a product and suing the proceeds to support socially disadvantaged groups” (Ruskovaara & Pihkala, 2013, p. 207).

Discussion

The result indicated that the students' entrepreneurial mindset development is sensible and modest. It clearly stated that student's ability to produce and exploit ideas are still at moderate stage. University students are not fully exposed to express their innovation, creative and the skills needed to be a risk-taker. University students need to be given opportunities by encouraging an entrepreneurial culture among them (Osterbeek, et al., 2010). A study conducted by Arasti, Falavarja and Imanipour (2012) on teaching methods in Entrepreneurship Education for Graduate Students indicated that "group project", "case study" and "individual project" are the three most appropriate teaching methods in the course of "business plan". It can be concluded that all student-centred learning strategies were utilized by basic entrepreneurship course lecturers with the exception of "visit to business location" and "interviews with entrepreneurs". According to students' perception; "business plan", "presentation of business project", "discussion" and "doing real business" contribute highly to their entrepreneurial awareness and entrepreneurial skills. However visit to business location and interviews with entrepreneurs are perceived as less important to develop their entrepreneurial awareness and skills.

The main focus in the presentation of business projects and "doing real business" is on the mental process as it incorporates constant individual and group discussions and interactions, reinforcing, negotiations, debates, working together and goal search" (Škudienė, 2012, p.15). Visiting to the business location and interviews with entrepreneurs has indicated the lowest moderate level for both awareness and mastery skills compared to the six learning approaches. This is due to educators seldom utilized these two approaches, as a result, university students are not exposed to the real situation life in business world. This statement also been supported by 34-43% of university students who have stated that the two approaches are less implemented in their lesson.

Scholars belief that the knowledge to obtain entrepreneurship requires practices and experiential learning to which is beyond level of understanding, knowing and speaking (Abbas & Zaidatol, 2016; Harry & Henry, 2013; Neck & Greene, 2011). Nevertheless, Handy (2006) has stated university students must have 'warehouse knowledge' in order for students to have an entrepreneurial mindset, it requires a transformation of knowledge that were taught, stored and applied when it is necessary.

Other learning techniques such as games involving entrepreneurship should be practiced as it is not frequently practiced in teaching and learning (Ruskovaara & Pihkala, 2013). Gibb (2005, 2011) has stated that the pedagogy of EE

should develop active learners through the learning process. Methods such as "cooperative learning, team learning, project-work, learning by doing, learning journals, drama pedagogy, practice enterprises, workplace guidance and enterprise visits" should be implemented in EE (Ruskovaara & Pihkala, 2013, p. 206).

It was noted that educator-centred teaching strategies plays an important role in shaping university students' entrepreneurial mindset skills and student-centred teaching strategies plays an imperative role in encouraging the consciousness or awareness of entrepreneurial mindset in them. Therefore lecturers and facilitators need to have a strong pedagogical content knowledge and deliver a constructive lecture to sharpen their student's entrepreneurial skills. In particular, it was found that "small business awards", "one business idea for each class" and "team-based learning" could be enhanced by identifying areas to refine students' mastery skills that could be addressed by these methods (Balan & Metcafe, 2012, p. 381). This finding also revealed that student-centered teaching strategies have a valuable asset in instilling awareness of entrepreneurial mindset in them. This learning process helps university students to better position themselves as entrepreneurs and also becoming more enterprising (Fayolle & Gailly, 2008, p. 582).

The effectiveness of innovative teaching methods in entrepreneurial pedagogy is prominent to cultivate entrepreneurial mindset among University students. Undoubtedly, student-centred learning should be practiced more towards stimulating awareness and mastery skills to develop entrepreneurial mindset among University students. Nevertheless, it is acceptable that entrepreneurship can be learned and taught through lecture. It indirectly will enhance University students' ability to impart the concepts and skills to facilitate them in the various business disciplines. Therefore, it is essential for University students to build their awareness and required mastery skills to stimulate entrepreneurial mindset in them.

From the findings, it is recommended that brainstorming exercise should be frequently carried out in conducting entrepreneurial lesson. It will enhance university students' imagination to think analytically and improve personal development to develop their self-competencies towards entrepreneurial mindset. Indeed, lecturers should implement and adopt "one business idea for each class" in their business plan activity to focus on all students at solving the same problem rather than using traditional way of recognizing and developing their own business idea. It is necessary to implement more hands-on skills in EE, in conjunction with well-trained lecturers. This is necessary as lecturers should obtain the required information before the

teaching and learning being carried out. The training should be more focused towards developing knowledge in entrepreneurship pedagogical content and the expansion of practice based learning.

Conclusions

In summary, these innovative teaching approaches, provides lecturers, educators and facilitators a view of the teaching strategies and its potential to develop entrepreneurial mindset among university students. It clearly shows that university educators need to emphasize on the innovative teaching techniques to stimulate the awareness of entrepreneurial mindset and mastery the skills required by university students to develop their entrepreneurial mindset. It is vital for lecturers who are teaching basic entrepreneurship course to be equipped with both content and pedagogical knowledge in entrepreneurship to ensure students can be an enterprising individual. This can be structured through utilization of multiple teaching strategies and learning process.

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