Entrepreneurship Development in Premier Polytechnics, Ministry of Education, Malaysia

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ABSTRACT
The establishment of Premier Polytechnics officially announced by The Minister of Ministry of Higher Education during the launching of Polytechnic Transformation Plan on 25 February 2010. The premier polytechnic is expected to lead the field of thrust programs (niche area) and specific technology that can produce quality graduates with entrepreneurship abilities. The primary aims of this paper are to explore the effectiveness of the entrepreneurship curriculum delivered in Malaysian polytechnics, a higher vocational institution. The paper seeks answers how current entrepreneurship education in Malaysia polytechnics encourages the development of entrepreneurship education in the institutions. The data gathered through the interview with the curriculum officer in the subject matter. In polytechnic, data were collected by interview and observation and were analysed manually. A finding shows that entrepreneurship has developed in Malaysia by new Policy on Entrepreneurship Development. Curriculum has changed according to industrial needs and based on the development of Malaysian Polytechnic Entrepreneurship Centre (MPEC) become a great achievement for polytechnic education system in Malaysia. The findings will draw a clearer understanding and better picture of the common features exist in what seems to be a fragmented field of study.

Introduction and background:
Entrepreneurship has become crucial to the economic growth and employment (Kuratko, 2005). Thus, many countries venture on various initiatives to foster entrepreneurship development at all levels of the society. At the educational levels for instance, entrepreneurship has become a common subject in schools, technical and vocational institutions, colleges, universities and other learning institutions in the industrialised and developing nations including in Malaysia. Many Malaysian universities and higher learning institutions started to introduce subjects and courses related to entrepreneurship or entrepreneurship programme since the mid-1990 in addition to traditional business courses such as finance, economic, management, accounting and marketing at both undergraduate and postgraduate levels (see Cheng et al., 2009). The expectation is that more and better entrepreneurship education and training would result in more and better entrepreneurs with the adequate business knowledge, skills and competencies that enable them to pursue a career in self/small business employment or to become entrepreneurs as an alternative graduate career path (Matlay, 2005). The effectiveness of EE offered in these higher learning institutions remains debatable and that such education and training is characterised by ambiguity and uncertainty about what and how it should be taught (Greene and Saridakis, 2007; Pittaway and Cope, 2007). Malaysia is not an exception. These have inspired a search for explanations. A recent study points out that Malaysian society does not promote nor value an entrepreneurial career (Cheng et al., 2009). In Malaysia higher learning institutions, entrepreneurship subject has been taught in classrooms using a didactic approach, such as lectures, provision of selected readings, text books, seminars and assignments (Garavan and O’Cinneide, 1994; Hytti and O’Gorman, 2004). However, growing
literature on EE tends to argue that a need of more holistic and different learning approach is required to support the study of entrepreneurship within higher institutional setting in order to promote the entrepreneurial behaviour, propensity and culture (e.g. Gibb, 2002). The effective delivery of programmes requires the need to encourage experiential, practice-based, hands-on business experience, action learning modes and to create different learning environments and opportunities for participants (Hannon, 2005). Thus, the primary aims of this paper are to explore the effectiveness of the entrepreneurship curriculum delivered in Malaysian polytechnics, a higher vocational institution. The paper seeks answers how current entrepreneurship education in Malaysia polytechnics encourages the development of entrepreneurship education in the institutions. The findings will draw a clearer understanding and better picture of the common features exist in what seems to be a fragmented field of study.

Premier Polytechnic:

The establishment of Premier Polytechnics officially announced by The Minister of Ministry of Higher Education during the launching of Polytechnic Transformation Plan on 25 February 2010. The three institutions chosen are Politeknik Sultan Salahuddin Abdul Aziz Shah in Shah Alam, Selangor, Politeknik Ungku Omar in Ipoh, Perak and Politeknik Johor Baru, Johor (The Star Online, 2010) The premier polytechnic is expected to lead the field of thrust programs (niche area) and specific technology that can produce quality graduates with entrepreneurship abilities. Graduates must be trained in entrepreneur skill in order for them to sustain in the respective industries. Addition to the above, by developing an international reputation and being preeminent national higher institution in TVET, polytechnic will become the attraction of higher education choice for students locally and internationally. (Shahul Hamid Abdul Wahab et al., 2010)

Entrepreneurship education:

Entrepreneurship education is, as defined by the Center for Entrepreneurial Leadership Clearinghouse on Entrepreneurship Education (refer to www.celcee.edu):

...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.

Historical perspective:

American universities have been known as the pioneers in the field of academic EE. The first entrepreneurship course was offered as an MBA course titled ‘management of new enterprise’ at Harvard Business School in 1947 (Katz, 2003). Peter Drucker taught another early course at New York University in 1953 (Brockhaus, 2001, p.XIV cited from Kirby, 2004). Babson College introduced the first undergraduate major in entrepreneurship in 1968. By 1970, there were approximately 25 institutions of higher education in the US offering courses in the field. The number increased to over 150 by 1980, and by 1985 there were 253 (212 business, 41 engineering) schools with entrepreneurship courses located at 245 institutions (Vesper, 1985).

According to Rajput and Murad (2008), EE was started in 1970s where University of Southern California launched the first graduate and undergraduate concentration in entrepreneurship in early 70s. This is in line with Finkle and Deeds (2001) who claims that the University of Southern California offered the first entrepreneurship major at the MBA level in 1972. In 1975, EE was firstly introduced in 104 academies and universities around United States of America. In 1983, the number increased to 163 academies and universities, and in the last five years, 90 faculties had offered entrepreneurial subject thus the total number became 253 (Donald and Raymond, 1986). By the start of the 1990s Solomon and Fernald (1991) recorded a dramatic rise in the number of US colleges and universities offering courses and programmes in the field from 6 in 1967 to 400 by 1990. Today the number has increased to over 500 in the US and schools are reporting a record number of students enrolling in such courses (Kuratko and Hodgetts, 1995). EE has exploded to more than 2,200 courses at over 1,600 schools; 227 endowed positions; 44 refereed academic journals; mainstream management journals devoting more issues to entrepreneurship; and over 100 established and funded centres (Kuratko, 2005). In addition, there are a few bodies that are responsible for developing entrepreneurship in the US such as the United States Association for Small Business and Entrepreneurship (USASBE) and Kauffman Foundation. The development of such institutions in countries as diverse as: Austria, Brazil, India, Malaysia, Singapore and the UK launched new entrepreneurship programmes between 1990 and 2000 (Dana, 2001).

Development of entrepreneurship education in Malaysia:

In Malaysia context, one of the main social development difficulties facing the government is graduate unemployment. Generally, there are four primary issues concerning the employment of graduates in Malaysia. Firstly, rising unemployment among graduates; secondly, a mismatch between the skills of graduates and the requirements of employers in the organisation; thirdly, the appropriateness of graduate employment; finally, the shrinkage of employment in the public sector and growth in the private sector (Annie-Wong and Jamil-Hamali, 2006). In addition, Malaysia continues to face problems of poverty and unemployment as well as income and...
economic imbalances among the various ethnic groups (Hussain, 1999) as revealed in a number of current government publications and reports. According to the Central Bank of Malaysia Report, the total number of unemployed graduates stood at 38,800 in 2001. By 2002, the number had risen to 45,400 (Annie-Wong and Jamil-Hamali, 2006). A recent survey conducted by the Economic Planning Agency found that almost 60,000 graduates are unemployed (The Economist, 2005; Mohar et al., 2008). One solution to this problem is through entrepreneurship (Bogenhold, 2004). He writes, it is being lauded in propaganda terms as the ‘medicine’ to cure stubbornly high unemployment is sometimes much more appropriately seen as the thermometer indicating how acute the sickness of unemployment really is. This is in line with the findings of previous studies in which entrepreneurship has been seen as a major source of job creation (Birch, 1979; McMullan and Long, 1987; Gibb, 1996) and economic development (Gibb, 1996).

The Malaysian government considers involvement in entrepreneurship as a possible solution to the problem of graduate unemployment. This is because many economists and politicians agreed that entrepreneurship stimulates the generation of employment opportunities and wealth creation (Dana, 2001; Garavan and O’Cinneide, 1994; Kong, 1996). In addition, formal EE has been found to affect attitudes amongst university students in such a way that entrepreneurship is seen as a career option (Hansemark, 1998). In this context, EE may promote an awareness of self-employment as a career option; it is suggested that this awareness motivates young people to equip themselves with the skills, knowledge and experience required for effective business ownership (Flemming, 1996). In view of this, most Malaysian higher institutions have taken further action to nurture the development of these skills among their graduates by introducing EE curriculum. It hopes to encourage graduates to become entrepreneurs. Table 1 illustrated the entrepreneurial academic programme offered by several Malaysian learning institutions. However, the dilemma is not the number of programmes offered, but more on the pedagogy used in these higher institutions. Most entrepreneurship courses are offered in Malaysia universities only to business students and use the didactic teaching approach instead of the entrepreneurial teaching approach (Jani et al., 2007). There are broad framework of differences and similarities in perception of the ability to ‘teach’ entrepreneurial behaviours and the manner in which this is best achieved. These issues underline the question “how the best approach to teach entrepreneurship?” and underpin the debate furthered in the current study on EE. According to McMullan and Long (1987), effective EE requires students to have substantial hands-on experience working with community ventures so that they can learn to add value to the real ventures as a preparation to add value to their own ventures. In Malaysia, the field of entrepreneurial studies is still new and is currently undergoing great changes (Othman et al., 2008; Mohar, et al., 2008). To resolve these issues, a re-evaluation of Malaysia higher education system is needed to find out the stumbling blocks that hinder the growth of entrepreneurship development.

### Table 1: List of Malaysia Higher Learning Institutions Offering Courses in Entrepreneurship.

<table>
<thead>
<tr>
<th>Names of public HEIS</th>
<th>Detail of entrepreneurial studies in the academic programmes at public IHL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universiti Sains Islam Malaysia (USIM) formerly known as Kolej Universiti Islam Malaysia (KUIM)</td>
<td>Entrepreneurial studies is one of areas at the Masters and PhD level offered by Economic and Muamalat Faculty</td>
</tr>
</tbody>
</table>
| Universiti Malaysia Pahang (UMP) formerly known as Kolej Universiti Kejuruteraan dan Teknologi Malaysia (KUKTEM) | Entrepreneurial studies is offered as a foundation programme and as an elective for the following programme:  
  a. Entrepreneurs and Business is a core course for the Bachelor Degree in Chemical Engineering (Biotechnology)  
  b. Entrepreneurship and Business is a core course for the Bachelor Degree in Mechanical Engineering  
  c. Cyber Entrepreneurship is a core course in the Diploma of Computer Technology (Software Engineering)  
  d. Entrepreneurship is an elective for the Bachelor of Electrical Engineering (Electronic) |
| Universiti Teknikal Malaysia Melaka (UTem) formerly known as Kolej Universiti Teknikal Kebangsaan Malaysia (KUTRM) | Entrepreneurial skills are offered as a core subject in the Faculty of Information Technology and Communication. The subject is offered in the degree Bachelor of Software Development, Computer Networking, Base Data, and Interactive Media. Apart from that, entrepreneurship is also offered as a specific programme for the Master’s programme i.e. Master for Entrepreneurial Science. For the Doctoral degree, entrepreneurship is one of the research areas. |
| Universiti Tun Hussein Onn Malaysia (UTHM) formerly known as Kolej Universiti Teknologi Tun Hussein Onn (KUITTHO) | Entrepreneurship as a subject is a core course for the following faculties:  
  a. Business and entrepreneurship is a core subject in the diploma programme offered by the Faculty of General Engineering and Environment  
  b. Basic Business and Entrepreneurship is a core subject for the diploma offered by the Mechanical Engineering and Manufacturing Faculty. |
| University Islam Antaraabangsa (UIAM)                                             | The subject of entrepreneurship is an elective for the Bachelor degree programme in Business Administration offered by the Economics and Management Science Faculty. |
| University Kebangsaan Malaysia (UKM)                                              | Entrepreneurship is an elective subject for the Bachelor degree course in Business Administration offered by Economics and Business Faculty. Entrepreneurship is a minor programme for the Bachelor degree course in Administrative Management offered by the Education Faculty. It is also one of the research areas in the Education Faculty for Maths and doctoral candidates. |
| University Malaya (UM)                                                            | Entrepreneurship is an elective subject for the Bachelor of Business Administration course and it focuses on management. It is an elective subject for the Master’s programme in |
How entrepreneurship should be taught:

Notwithstanding the general acknowledgement of the increasing significance of entrepreneurship programmes, the debate about the bearing of formal education in higher learning institutions on entrepreneurial success rages on (see, for example Inancevich, 1991; Morris and Hills, 1992). How the best approach to teach entrepreneurship subject?

According to McKeown et al., (2006), 86 percent of the higher learning institution programmes in the UK still use traditional teaching approach and conventional learning methods in teaching entrepreneurship subject. Traditionally, entrepreneurship has been taught in classrooms using a didactic approach; well-known as “teacher centred” – the students gain knowledge as the teacher is teaching. The use of didactic methods helps students to become accustomed to using immediate data, analysis and interpretation of these data (Garavan and O’Cinneide, 1994). The examples of didactic methods include lectures, provision of selected readings, text books, seminars and assignments (Garavan and O’Cinneide, 1994; Hytti and O’Gormon, 2004). However, Davies and Gibb (1991) criticise the adoption of traditional education methods, which focus mainly on theory and didactic approaches, suggesting that they are ‘inappropriate’ in the teaching of entrepreneurship. Klandt (1993) suggest that the most frequently used method in teaching entrepreneurship include: reading, lectures, guest speakers, case studies, on-site visits, research papers, thesis/dissertations, and workshops. For specifically educating about entrepreneurship, Klandt (1993) further added the following methods more commonly utilised: consulting services by students and researches while educating for entrepreneurship involves using techniques such as: videos, practical work, writing business plans, computer simulations, role playing games, working with entrepreneurs, and joining a students’ entrepreneurial club. Presently, there are other ways in which a realistic image of the entrepreneur can be brought into the classroom, such as accessing a Web site, watching a television series and using a training pack (Heck et al., 2000; Hytti and O’Gormon, 2004).

In awareness of the issue, there are alternative methodologies that related to teaching and learning entrepreneurship which includes experiential learning and problem-based learning. The Experiential Learning Association (ELA) defines EL as a process in which a student can create knowledge, skills and values from direct experience. Experiential learning theory defines learning as “the process whereby knowledge is created through the transformation of experience” (Kolb and Kolb, 2005). It builds on the work of several great social scientists and philosophers of the earlier part of the 20th century (Chell, 2001). EL is formulated based on the student and not the facilitator. The student is involved in carrying out activities, formulating questions, conducting experiments, solving problems, being creative and creating meaning from the acquired experience (Esters, 2004). EL is a learner-centred approach that caters to individual learning styles. Encouraging reflection along with the activity structure has proven to be an effective component of the cycle for students (Miettinen, 2000). EL provides the indigenous student with the task of being conscious about and taking responsibility for the reality of his/her own political and cultural awareness (O’Connor, 2009). EL is holistic in that it combines

<table>
<thead>
<tr>
<th>University Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>Universiti Malaysia Sabah (UMS)</td>
<td>Entrepreneurship is a core subject for the Bachelor degree of Business with credit and Bachelor for Economics degree with credit majoring in entrepreneurship offered by the School of Business and Economics. It is also one of the research topics for the Master and Doctoral degrees offered by School of Business and Economics.</td>
</tr>
<tr>
<td>University Malaysia Sarawak (UNIMAS)</td>
<td>Entrepreneurship is one of the major subjects in the Masters for Corporate Management Business Administration course (CMBA). It is also one of the research areas for the Master’s and Doctoral degrees for the Business and Economics Faculty.</td>
</tr>
<tr>
<td>Universiti Pendidikan Sultan Idris (UPSI)</td>
<td>Entrepreneurship is one of the major areas for Bachelor of Business Administration with credit offered by the Economic and Management Faculty. It is also one of the research areas for Master’s and Doctoral degrees offered by the English Studies Faculty. Established Small Business Development Centre</td>
</tr>
<tr>
<td>Universiti Sains Malaysia (USM)</td>
<td>Entrepreneurship is a minor subject in the Bachelor of Management course offered by the Centre of Management Studies. Established Centre for Policy Research (SMEs Research Group)</td>
</tr>
<tr>
<td>Universiti Teknologi Malaysia (UTM)</td>
<td>Entrepreneurship and Marketing is one of the elective subjects for Bachelor of Management (Marketing) with credit offered by the Human Resource Development Faculty. It is one of the research areas in Master’s and Doctoral programmes.</td>
</tr>
<tr>
<td>Universiti Teknologi MARA (UiTM)</td>
<td>Entrepreneurship is a core subject in all diploma courses except for the Business Study Diploma. Malaysian Entrepreneurship Development Centre (MEDEF)</td>
</tr>
<tr>
<td>Universiti Utara Malaysia (UUM)</td>
<td>Entrepreneurship is a core subject in the university. Entrepreneurship on the other hand, is a core subject for all programmes under the Business Management Faculty except for the Bachelor of Entrepreneurship with credit. Apart from that, it is also a core subject for Bachelor of Tourism Management with credit and the Bachelor of Educational Management. Established Entrepreneur Development Institute (EDID)</td>
</tr>
<tr>
<td>Politeknik, Ministry of Higher Education</td>
<td>Entrepreneurship is compulsory for commerce students. Co-curriculum module is a compulsory for all students, and entrepreneurship is one of the chapters incorporated in the module. Entrepreneurship is offered as elective module for all students.</td>
</tr>
</tbody>
</table>
experience, perception, cognition (thinking) and behaviour. Ideas are formed and reformed through experience – a process which permits adaptation (Chell, 2001). The premise of EE is that individuals create knowledge through the transformation of their lived experiences into existing cognitive frameworks, thus causing individuals to change the way they think and behave (Kolb, 1984). It is thought that such a process best provides the mix of enterprising skills and behaviours akin to those required to create and manage a small business.

On the other hand problem-based learning (PBL) is used to develop creative and problem-solving students (Klofsten, 2000). It is particularly useful for entrepreneurship, which is not distinguished as a specific subject but permeates all the activities of the university, including courses, research, and external activities (Gibb, 1987). According to Hanke et al., (2005) PBL was first implemented in the 1950s by Case Western Reserve University and in medical schools in the 1970s. Spence (2001) and Hanke et al., (2005) agreed that PBL means learning is student-centered, with teachers acting primarily in the role of facilitators. In a PBL curriculum, ‘the problem comes first’ as content is delivered via a set of problems which mirror as closely as possible, real-world situations. Students are encouraged to actively work with material and turn to the teacher for advice, mentorship, and answers to specific problems instead of being passive recipients of lectures. This view is supported by Jones and English (2004) who write that students have a great deal of autonomy over how they learn, when they learn and where they learn. Unlike conventional teaching strategies, it is not a passive experience, but rather a deeper learning process. It includes collaborative activities, goal-driven tasks, intellectual discovery, activities that heighten thinking and activities that provide practice in learning skills. A combination of new technology and traditional resources is used to provide students with a rich variety of learning experiences. The objective is to create an environment in which students are encouraged to engage actively with the entrepreneurial process rather than simply read about it.

In sum EE, a multi-faceted discipline which promotes creativity, cross-functional thinking and ambiguity tolerance, should, therefore, adopt an integrative and holistic approach. The development of the EE curriculum needs to include the principle of experiential and contextual education. Students can develop the skills and required knowledge effectively through the application of the entrepreneurial curriculum in situations that resemble the real business world (Othman et al., 2008). They added PBL provides opportunities to the students to: examine and experiment with what they know, explore what they need for knowledge, develop spiritual skills in order to achieve high performance in their groups, improve their oral and written communication skills, state and defend their arguments with the available evidence, be more flexible in processing knowledge and fulfilling obligation and practice skills that are needed after graduation.

Study Methodology:

The paper reflects on the experiences of practitioners, including the author, in embedding entrepreneurship education in Malaysian Polytechnic. Hence, in seeking to develop a holistic approach which connects enterprise and employability through personal and career development of the students.

Data Collection and Analysis:

In order to do this, students in Malaysian polytechnics, a higher vocational institutions is chosen for the study. The data gathered with the interview with the curriculum officer in the subject matter. In the polytechnic, data were collected by interview with entrepreneurship officer. The data were analysed manually. Generally, entrepreneurship subject has been taught in polytechnics with the aims to give students the exposure in developing their skills and interest in business. In this rapidly changing world, students need to be able to continually discover and exploit opportunities (beyond existing competencies) if they are to survive and prosper after graduation.

Findings:

Policy on Entrepreneurship Development in Malaysian Institutions of Higher Learning (IHL):

The policy has introduced on 13 April 2010 to encourage a strategic and holistic approach with three main objectives; (MOHE, 2010)

1) To produce quality human capital with an entrepreneurial mindset, attributes and values
2) To increase the number of graduate entrepreneurs who will act the catalyst for the transformation of the country to a high income and innovation-led economy as a developed nation by 2020
3) To produce academics and researchers with entrepreneurial mindset and capabilities

In order to achieve the above objectives, the ministry has outlined six strategic thrust as shown below.

- Establishing an Entrepreneurship Centre in every IHL
- Preparing a well-planned and holistic entrepreneurship education and entrepreneurial development
- Strengthening development and entrepreneurial enhancement program
- Providing a reliable and effective assessment mechanism
- Providing a conducive environment and eco-system for entrepreneurship development
- Increasing the competency of academics
Currently, a few efforts and initiatives have been introduced by MOHE to promote the development of entrepreneurship education in Malaysia IHLs include: (Syahira Hamidon, 2012).

1. Recognition of entrepreneurship as one of the eight cores under credited c0-curriculum module
2. The implementation of awareness and enculturation programmes such as entrepreneurship week, seminars, lab, boot-camp and carnival
3. The implementation of various entrepreneurship and business idea competition
4. The implementation of social entrepreneurship programmes and activities
5. The establishment of student cooperative in every public universities, and
6. Strategic collaboration between ministry of education and other relevant agencies

Curriculum development:

The curriculum in Malaysian polytechnics is centralised, under the charge and supervision of Curriculum Development Division (CDED), in the Ministry’s. The function of the division is to develop, manage, monitor, revise and replace with a new curriculum after a certain period of time. In terms of number of entrepreneurship subjects, there are three modules being offered in the polytechnics namely PB201, PB504, DPM2012 and DPM 5053 as shown in Table 2.

Table 2: The Entrepreneurship Subject Offered in Malaysia Polytechnics

<table>
<thead>
<tr>
<th>Module</th>
<th>Content</th>
<th>Objective</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB201 Entrepreneurship</td>
<td>entrepreneurship history, entrepreneurship concept and definition, entrepreneurs and business people, and entrepreneurship as a career option</td>
<td>Understand the concept of entrepreneurship: identify the role and contribution of entrepreneurship in helping self-development, family and society and providing the Business Plan</td>
<td>Compulsory for all students</td>
</tr>
</tbody>
</table>
| DPM2012 Entrepreneurship Effective Jun 2014 | Introduction To Entrepreneurship, Entrepreneurial Issues, Inculcating Entrepreneurial Culture, Generation of Entrepreneurial Idea and Opportunities, Basic Management, Basic Marketing, Financial Management, Business Proprietary Establishment and Procedures and Business Plan | • Create awareness about entrepreneurship and the important of entrepreneurship to the nation  
• Enhance the motivation and self-confidence to produce a creative and innovative entrepreneur  
• Generate ideas and identifies the opportunity and risk in business  
• Knowledge and entrepreneurial skills needed to start a business  
• Identify and mobilisation of the resources needed to create the entrepreneurship activity | Compulsory for all students |
| PB504 Entrepreneurship Development | Introduction To Entrepreneurship, Entrepreneurial Issues, Inculcating Entrepreneurial Culture, Generation of Entrepreneurial Idea and Opportunities, Basic Management, Basic Marketing, Financial Management, Business Proprietary Establishment and Procedures and Business Plan | Understand the concept of entrepreneurship: identify the role and contribution of entrepreneurship in helping self-development, family and society and providing the Business Plan | Elective |

The issue regarding to the matter above is the best practice of teaching entrepreneurship.

Department of Polytechnic Education should apply consulting-based learning in conducting entrepreneurship courses to students. This would help them to equip themselves with knowledge and skills required in entrepreneurial activities, so that the students will be more confident and take control over the situational factors(Mazura & Norasmah, 2014)

Malaysian Polytechnic Entrepreneurship Centre (MPEC):

The establishment of Malaysian Polytechnic Entrepreneurship Centre (MPEC) on 2010 is the starting point of the entrepreneurship development centre in Malaysian Polytechnic. It’s aim to:

1. To develop human capital with attribute of thinking and entrepreneurs values
2. To develop entrepreneurs skill and knowledge among students in era of world economic globalization as well as environmental issues.
3. To increase number of entrepreneurs among polytechnic graduates

**Entrepreneurship Programmes in Premier Polytechnic:**

Politeknik Sultan Salahuddin Abdul Aziz Shah come a pioneer in implementing the initiative outlined by the ministry. In tandem to achieve their key performance indicator, the polytechnic has executed programmes as shown in Table 3 and 4 below;

Table 3: Entrepreneurship Program 2012.

<table>
<thead>
<tr>
<th>NO</th>
<th>ACTIVITIES/PROGRAMMES</th>
<th>NO OF PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E-Commerce</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Basic Entrepreneurship Course</td>
<td>28</td>
</tr>
<tr>
<td>3</td>
<td>K3G</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Entrepreneurship Cultured Program 1 (Entrepreneurship as a career of choice)</td>
<td>656</td>
</tr>
<tr>
<td>5</td>
<td>Entrepreneurship Cultured Program 2 (Entrepreneurship as a career of choice)</td>
<td>720</td>
</tr>
<tr>
<td>6</td>
<td>Entrepreneurship Cultured Program (Technical Entrepreneurs Seminar)</td>
<td>374</td>
</tr>
<tr>
<td>7</td>
<td>Entrepreneurship Cultured Program 3 (Entrepreneurship as a career of choice)</td>
<td>720</td>
</tr>
<tr>
<td>8</td>
<td>Business Plan Seminar</td>
<td>25</td>
</tr>
<tr>
<td>9</td>
<td>Vision Entrepreneurs Program</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>Polytechnic Entrepreneurship Carnival 2012</td>
<td>58</td>
</tr>
<tr>
<td>11</td>
<td>Entrepreneurship Sales &amp; Marketing (Innoconf2012)</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>2655</td>
</tr>
</tbody>
</table>

Table 4: Entrepreneurship Program 2013.

<table>
<thead>
<tr>
<th>NO</th>
<th>ACTIVITIES/PROGRAMMES</th>
<th>NO OF PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Business Week</td>
<td>464</td>
</tr>
<tr>
<td>2</td>
<td>Car Washing Incubator</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>Electrical Department entrepreneurship carnival</td>
<td>207</td>
</tr>
<tr>
<td>4</td>
<td>Rock Melon Harvesting &amp; Sales Program</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>Business Plan Seminar</td>
<td>200</td>
</tr>
<tr>
<td>6</td>
<td>Polytechnic Malaysia Entrepreneurship Carnival</td>
<td>19</td>
</tr>
<tr>
<td>7</td>
<td>UKM Entrepreneurship Symposium</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td>Polytechnic Malaysia Entrepreneurship Program Carnival (K3PM) 2013</td>
<td>21</td>
</tr>
<tr>
<td>9</td>
<td>Entrepreneurship Carnival &amp; Graduate Career (K3G)</td>
<td>12</td>
</tr>
<tr>
<td>10</td>
<td>Polytechnic Malaysia Entrepreneurship Cultured: Entrepreneurship is my Choice!</td>
<td>587</td>
</tr>
<tr>
<td>11</td>
<td>Exposes Program to Insurance Entrepreneurship Program by MCIS ZURICH</td>
<td>161</td>
</tr>
<tr>
<td>12</td>
<td>Agropreneurs Development Symposium 2013 (SIPUT)</td>
<td>16</td>
</tr>
<tr>
<td>13</td>
<td>Entrepreneurship Forum on Junior Chamber International (JCI P. Jaya)</td>
<td>30</td>
</tr>
<tr>
<td>14</td>
<td>Technopreneurs Carnival</td>
<td>54</td>
</tr>
<tr>
<td>15</td>
<td>Technical Entrepreneur Development Course – Basic Entrepreneurship</td>
<td>30</td>
</tr>
<tr>
<td>16</td>
<td>Technical Entrepreneur Development Course – Bike Maintenance</td>
<td>30</td>
</tr>
<tr>
<td>17</td>
<td>Entrepreneurship Cultured Transformation Seminar: An opportunity</td>
<td>789</td>
</tr>
<tr>
<td>18</td>
<td>Landscape Entrepreneurship Course</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>2724</td>
</tr>
</tbody>
</table>

**Conclusion:**

A primary objective of this paper was to explore the effectiveness of the entrepreneurship curriculum delivered in Malaysian polytechnics in promoting students’ entrepreneurial tendencies. Firstly, it is strongly related to the nature of the curriculum which is too theoretical to grasp. Some students also found that the curriculums offered are outdated and obsolete to be relevant. Secondly, the activities and programmes implemented in the polytechnics failed to develop an entrepreneurship attitude, mind and culture. The results presented clearly suggest that Malaysia polytechnic entrepreneurship curriculum is not attractive enough to promote entrepreneurship as alternative to dependent work.

**Implications for academic institutions and future researchers:**

Entrepreneurial research and education are increasingly evolving and as such the area requires continuous study. This research identified areas of concern that future researchers can embark on. First, as the study only addressed student’s activity involvement in their respective institutions, there is a need to conduct a survey of the entire higher learning institutions system in Malaysia to ensure that entrepreneurship is really being taught accordingly and meet the purpose of its establishment. Second, there is a need to follow-up and find out how the graduates from the higher learning institutions have practiced their entrepreneurship skills and capabilities in the working or life environments. Thirdly, there is a need to assess and improve the relevancy of the teaching materials and pedagogical approaches being used in comparison to the practical skills being pursued by the
entrepreneurs. Malaysia higher learning institutions should consider partnering with local communities and businesses in developing entrepreneurial skills and initiatives to supplement the effort of other stakeholder.

Limitations of the study:
This research was exploratory and even though the findings are relevant to a wide range of situations, it would be inappropriate to generalise it to other education systems. A more rigorous study is needed to establish the weight of these findings as far as integrating EE on an existing system is concerned.

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