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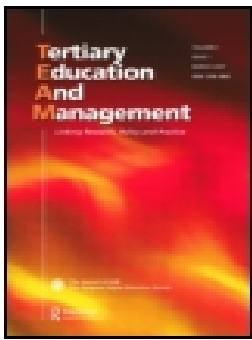


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Entrepreneurship education in Malaysian universities

Syed Zamberi Ahmad^{a*} and Robert Frederick Buchanan^b

^a*Management Department, College of Business Administration, Abu Dhabi University, Abu Dhabi, United Arab Emirates;* ^b*Department of Management, Eberly College of Business and Information Technology, Indiana University of Pennsylvania, Pennsylvania, USA*

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Entrepreneurship education in the strongly emerging market of Malaysia was examined throughout the country's 20 public universities. A broad based interview process amongst multiple stakeholders profiled educational policies as well as revealing shortcomings in practice. Observers noted that students showed a preference for salaried jobs after graduation rather than setting up their own businesses, despite participation in entrepreneurship classes and programmes. Policymakers indicated that curricula had deficiencies despite their hype. Passive lectures were far more common than more interactive methods. It is suggested that if Malaysian universities are to promote entrepreneurship education in an effective way, they must address these issues.

Keywords: universities; entrepreneurship education; entrepreneurship development; emerging markets; Malaysia

Introduction

Entrepreneurship education has become a topic of considerable interest in Malaysia in recent years, with literature stimulating discussion of local markets, emerging economies in general, and the Association of Southeast Asian Nations competitiveness opportunities (Ahmad, 2013; Ahmad, Ismail, & Buchanan, 2014; Bagheri & Lope-Pihie, 2013). Many changes in Malaysian society have increased the importance of entrepreneurship: e.g. the Asian financial crisis 1996/1997, the world economic recession 2010/2011, slow growth of the industrial sector, fluctuation in international trade cycles, competitive globalised economy and divergent business environment. The economic value of supporting the development of entrepreneurship has been seen by policy makers as making a real and sustainable investment in the future prosperity of the country.

In addition to social and policy discussions, entrepreneurship has also found its way to universities. The Malaysian Government has made entrepreneurship courses compulsory for all public university students in the hope of fostering entrepreneurs from among the graduates (Yusoff, Zainol, & Ibrahim, 2014). This plan was conceived by public and private universities, the Ministry of Entrepreneurship and Cooperative Development, and the Ministry of Higher Education (MoHE). It hopes to encourage graduates to become entrepreneurs as this workforce cannot be entirely absorbed in formal salary wage employment (Jaafar & Abdul-Aziz, 2008). A basic assumption is that entrepreneurship skills can be learned and over time will translate directly to an increase in the number of viable and sustainable business enterprises (Fayolle, 2013; Karimi,

*Corresponding author. Email: syed.ahmad@adu.ac.ae

Biemans, Lans, Aazami, & Mulder, 2014; Koch, 2005; Kuratko, 2005; Matlay, 2005, 2006, 2009; Solomon, Duffy, & Tarabishy, 2002).

Many universities and higher education institutions in Malaysia started to introduce courses related to entrepreneurship or majors in entrepreneurship since the mid-1990s, with the motive of preparing graduates to be self-employed (Ahmad, 2013). Universities are seen to provide entrepreneurship education as an interventional tool in building sustainable enterprising societies, and equipping them with necessary entrepreneurial skills and competences to compete in a highly globalised marketplace (Cheng, Chan, & Mahmood, 2009). According to a tracer study of 2010 graduates, the number who chose to be self-employed was still rather low compared to other employment sectors. Only 5.5% or 4841 graduates from a total of 87,886 were involved in setting up new business ventures (MoHE, 2010).

Entrepreneurship education is a phenomenon of developed markets, originating in the US and Europe. Malaysia appears to be aware of the challenge of accelerating entrepreneurship education if it is to achieve goals of becoming a developed nation in the next decade, as articulated in the government's 'Vision 2020', through restructuring the Malaysian educational system (Lee, 1999; MoHE, 2007). This type of education has been lauded for its contribution in reviving economies and speeding economic growth through creation of employment and provision of goods and services to a wide range of populations (Solomon et al., 2002; Van Stel, Carree, & Thurik, 2005). However, opinions vary on what really needs to be in place for successful courses in entrepreneurship, particularly those being offered alongside existing courses. Certainly entrepreneurship programmes need to be comprehensive and in-depth to be effective (Souitaris, Zerbinati, & Al-Laham, 2007). This raises the question of how effective are entrepreneurship courses offered at universities?

The purpose of this paper is to review entrepreneurship education in Malaysian public universities. We endeavour to identify any disconnect between espoused intentions and enacted conditions observed by a variety of internal players. This paper, though an exploratory field study, is aimed at bridging a knowledge gap in the existing literature. It discusses universities' role in fostering, integrating and promoting Malaysian entrepreneurship education. We summarise the strategies to present entrepreneurship education as a subject for undergraduate and postgraduate students, its nature and how universities are addressing their entrepreneurship agenda. Furthermore, the study was planned to form a basis for further research on the role of universities in integrating entrepreneurship education and sustaining an enterprising mind-set.

A review of entrepreneurship education

Entrepreneurship education can be viewed broadly in terms of the skills that can be taught in an educational system and the characteristics that can be engendered in individuals that will enable them to create new and innovative plans (Gabrielsson & Politis, 2012; Klapper, 2004; Lundström & Stevenson, 2001). Entrepreneurship education can provide students with an understanding of business – its purposes, its structure, its inter-relationship with other segments of society. Recent studies show that entrepreneurship education does play a significant role in cultivating entrepreneurial spirit among university graduates (Duval-Couetil, Gotch, & Yi, 2014; Iacobucci, Iacopini, Micozzi, & Orsini, 2011; Li, Zhang, & Matlay, 2003; Mason, 2011; Matlay & Carey, 2007). Research seems to suggest that individuals exposed to entrepreneurship courses and programmes have a higher tendency and more favourable view of starting their own

businesses at some point in their career (Carter & Collinson, 1999; Mohan-Neill, 2001). In similar vein, Kolvereid and Moen (1997) argued that entrepreneurship graduates have stronger entrepreneurial intentions than other graduates. Early exposure to entrepreneurship education might be useful to foster an entrepreneurial culture among students, and this exposure is expected to bring benefit when the country needs more job providers rather than just job seekers.

The contribution of entrepreneurship education towards economic growth provides evidence of the rising awareness of its importance (Carland & Carland, 2004; Hall, Daneke, & Lenox, 2010). The number and variety of entrepreneurship programmes offered – both to undergraduate and postgraduates – has expanded significantly in Europe, Asia, North America, Australia and New Zealand (Gartner & Vesper, 1994). Entrepreneurship courses have become the catalyst for the development of entrepreneurial studies, at both the domestic and the international level (Collins, Hannon, & Smith, 2004; Varblane & Mets, 2010). Westhead and Matlay (2006) highlight the benefit of entrepreneurship education in facilitating the transition for students from higher education into either self-employment or employment. With specific regard to the latter, the value of entrepreneurship education as a key enhancer of one's employability skills, regardless of their discipline area, now appears to be widely accepted (Henry & Treanor, 2010; Matlay & Carey, 2007).

Various teaching and working methods have been introduced to entrepreneurship education (Fayolle, 2008; Jones & Iredale, 2010; Neck & Greene, 2011). According to Solomon (2007), the most popular teaching methods in two and four year colleges and universities in USA include creation of business plans followed by class discussion, as well as guest speakers. Sherman, Sebor, and Digman (2008) and Wilson, Kickul, and Marlino (2007) recommend that interaction with entrepreneurs, either as guest speakers or through interviews, as well as business plan preparation and self-employment plans, provide good previews of entrepreneurship.

The study design

This project is based on a large study of Malaysian public universities in relation to entrepreneurship, its promotion, and incorporating the strategy to embed entrepreneurship education as a subject at undergraduate and postgraduate level. The empirical data were collected via focus group discussion and by conducting semi-structured interviews with key officials in all 20 publicly funded higher learning institutions in Malaysia (see Table 1). There were several different materials used in the study: literature, a range of relevant documents (such as universities' study handbooks, curriculum development manuals, university/departmental bulletins, working papers and universities' strategy documents), and interviews conducted at the universities.

The materials were collected in four ways:

- (1) requests from the universities via the contact persons that were named for the study by the universities themselves;
- (2) focus group discussions;
- (3) talking to experts in the field (semi-structured interviews); and
- (4) search of the related information from internet web-pages of the higher learning institutions.

Table 1. Summary of interviews and focus group discussion.

Phases	Respondents	Descriptions
Phase 1: Development of interview protocols	Entrepreneurship lecturers (5) Industrial experts (3)	Candid comments from lecturers in three different universities; met with industrial experts from several agencies with stakeholder perspectives on entrepreneurship education
Phase 2: Semi-structured interviews	Top management (19) Industrial experts (9)	This group includes Directors, Deans/ Head of schools, Heads of department, Heads of programmes, Directors of entrepreneurship centre and those responsible for the institutions This group includes officials in the Ministry of Higher Education, government agencies related to entrepreneurial development in Malaysia
Phase 3: Focus group discussion	Universities lecturers/trainers (those involved in entrepreneurship development) (35)	This group includes lecturers/trainers from the university, and those involved directly in entrepreneurship/ enterprise 7 zones – 35 respondents in total – average discussion between one to one-and-half hours. Discussion focusing on entrepreneurship education development in Malaysia public universities [Zone A – University of Malaya – centre zone] [Zone B – University Pertahanan Nasional Malaysia – centre zone] [Zone C – University Malaysia Kelantan – East Coast zone] [Zone D – University Utara Malaysia – Northern zone] [Zone E – University Sains Malaysia – Northern zone] [Zone F – Universiti Teknologi Malaysia – Southern zone] [Zone G – Universiti Malaysia Sarawak – Borneo zone]
Phase 4: Follow-up findings	Top management (3) Universities lecturers (those involves in entrepreneurship development) (5)	To verify the findings/results

Prior to the focus group interviews, researchers asked interviewees to furnish strategy and other related documents that might be relevant to the study. Such materials were utilised during the interviews as well as in the subsequent analysis. Through the universities web-page, general information was collected on universities.

The following specific objectives were addressed:

- identification of challenges facing the universities in the process of offering entrepreneurship courses alongside other universities subjects;

- assessment of the state of development of entrepreneurship education in Malaysian universities;
- investigation of how entrepreneurship education is nurtured/cultured in Malaysian universities; and
- recommending the way forward for improving entrepreneurship education in Malaysian universities.

Since entrepreneurship education is seen here as a socially constructed phenomenon (Bouchikhi, 1993), the research undertaken is interpretive in nature (Gephart, 2004), capitalising on the semi-structured interviews and focus group discussion.

Semi-structured interview

These were intended to extract personal opinions concerning entrepreneurship development (Hoepfl, 1997; Souitaris et al., 2007). The questions covered the respondents' views regarding the implementation of entrepreneurship education in Malaysian higher education. They were asked about practices and their views on these (Bryman & Cassell, 2006). Interviews were recorded (with the permission of the respondents) and subsequently transcribed into written format, thus bringing the researcher 'close to the data' (Denscombe, 2003). The data were analysed using a qualitative-phenomenological approach.

Focus group discussion

The purpose of the focus groups was to learn about the participants' perceptions and experiences of the different aspects of entrepreneurship education within each university. The aim was, therefore, less about measurement and more about gaining in-depth knowledge about certain topic areas (Kreuger, 1988). Participants were recruited by the researcher using purposive sampling, comprising entrepreneurship/small business management lecturers and trainers in entrepreneurship development. The focus group sample represents a fairly broad selection of entrepreneurship experts. Purposive sampling has been identified as appropriate when a researcher wants to identify particular types of cases for in-depth investigation (Neuman, 2003). The study of information-rich cases yields insights and in-depth understanding, rather than narrow empirical conclusions. According to Patton (2002), qualitative inquiry typically focuses in-depth on relatively small samples, selected purposefully, whereas quantitative methods focus on larger samples selected randomly:

The logic and power of purposeful sampling lie in selecting information rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry. (p. 264)

Selected participants were emailed an invitation to the focus group. Each participant was offered a 150 Malaysia Ringgit (35 dollars) mall gift certificate as an incentive. Of 57 participants who were invited as focus group members, 35 attended the sessions. The themes of the interviews were given to the participants in advance. After explaining the research purpose and questions, participants were asked to discuss and write down their experiences and opinions related to entrepreneurship education in their respective universities. The interviews were thematic by nature, and broadly concerned about

entrepreneurship education as a phenomenon in their respective universities. It was agreed that the discussions would attempt to cover positive as well as negative points of entrepreneurship education development, and end by making recommendations.

The average duration of each focus group session varied between 60 and 90 min. A confidentiality statement was signed by all, accompanied by assurances of anonymity. This allowed participants to be candid about their perceptions without fear of being publicly identified or judged. Meetings were tape recorded. After completion of each session the tape recordings were transcribed and researchers began the process of analysis to list emergent themes. These then formed the basis for categorisation of the comments made in each session. The document was then distributed to the group for comments, feedback and verification.

Universities and entrepreneurship

The Malaysian government established at least one university in each of its 13 states, as well as in three federal territories on the island of Borneo. Altogether there are 20 public universities, mostly established since the 1990s, receiving more than 60% of their annual funding from the government. They are governed as self-managed institutions. Being such a young system, many of them are primarily engaged in teaching as their research cultures have not developed quickly. They tend to suffer from a shortage of faculty members with doctoral qualifications and a dearth of research funding.

There are two Islamic-based universities, one is science-based, two are technology and engineering-based, one is a business and management-based university, one is defence-based, and thirteen are multi-faculty universities. Out of those, five are research-based universities, namely: Universiti Malaya, Universiti Kebangsaan Malaysia, Universiti Putra Malaysia, Universiti Sains Malaysia and Universiti Teknologi Malaysia. The National Defence University is Universiti Pertahanan Nasional Malaysia. Most of the public universities in Malaysia were created by executive order under provisions of the Universities and University Colleges Act 1971. In the multi-faculty universities the curricula are varied in character. However, all of the universities offer business studies or management programmes.

As can be seen in Table 2, Malaysian universities are acting actively with issues related to entrepreneurship education. Some universities are involved with various entrepreneurial activities by establishing Centres of Enterprising and Small Business Development, while others are operating in more modest ways. Ostensibly these centres have a key role in providing practical guidance and support for graduates, and in promoting entrepreneurial culture by encouraging new sustainable enterprise development.

Entrepreneurship is very much present in Malaysian public universities, and its role is growing. Although many Malaysian universities may lack strong articulated entrepreneurship strategies, entrepreneurship is recognised as an important strategic issue and is becoming a national agenda.

Multi-faculty universities

The thirteen multi-faculty universities provide education across the whole range of disciplines. Entrepreneurship studies are perceived as something for universities specialising in business, management and economics:

Table 2. List of Malaysian public universities with entrepreneurship programmes.

University name in Malay (acronym) (year founded)	Entrepreneurial courses/programmes offered
Universiti Sains Islam Malaysia (USIM) (1969)	Entrepreneurial studies at Masters and PhD level are offered by Economic and Business Faculty.
Universiti Malaysia Pahang (UMP) (2002)	Entrepreneurial studies are offered as a foundation programme and as an elective for the following programmes: (1) Entrepreneurship and Business are core courses for the Bachelor Degree in Chemical Engineering (Biotechnology) (2) Entrepreneurship and Business are core for the Bachelor Degree in Mechanical Engineering (3) Cyber Entrepreneurship is a core course in the Diploma of Computer Technology (Software Engineering) (4) Entrepreneurship is an elective for the Bachelor of Electrical Engineering (Electronic)
Universiti Teknikal Malaysia Melaka (UTeM) (2000)	Entrepreneurial skills are offered as a core subject from 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. Entrepreneurship is also a core subject in a Bachelor of Technopreneurship offered by Faculty of Technology Management and Technopreneurship. Entrepreneurship is also offered for the Master of Science (M.Sc) in Entrepreneurship. For the Doctoral degree, entrepreneurship is one of the research areas. Established Business Start-up Unit
Universiti Tun Hussein Onn Malaysia (UTHM) (2000)	Entrepreneurship as a subject is a core course for the following faculties: (1) Business and entrepreneurship is a core subject in the diploma programme offered by the Faculty of General Engineering and Environment (2) Basic Business and Entrepreneurship is a core subject for the diploma offered by the Mechanical Engineering and Manufacturing Faculty
Universiti Islam Antarabangsa Malaysia (UIAM) (1983)	The subject of entrepreneurship is an elective for the Bachelor's degree programme in Business Administration offered by the Economics and Management Science Faculty. Entrepreneurship Development Centre is in operation
Universiti Kebangsaan Malaysia (UKM) (1970)	Entrepreneurship is an elective subject for the Bachelor's degree course in Business Administration offered by Economics and Business Faculty. Entrepreneurship is a minor programme for the Bachelor's degree course in Administrative Management offered by the Education Faculty. Information Technology and Entrepreneurship is a compulsory subject in Bachelor of Science in Information Technology. It is also one of the research areas in the Education Faculty for mathematics and doctoral candidates

(Continued)

Table 2. (Continued).

University name in Malay (acronym) (year founded)	Entrepreneurial courses/programmes offered
Universiti Malaya (UM) (1905)	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 Business Administration offered by Policy and Business Strategy Department, Business and Accountancy Faculty. Entrepreneurship is a research area for a doctoral programme and is offered by the Policy and Business Strategy Department, and Business and Accountancy Faculty
Universiti Malaysia Sabah (UMS) (1994)	Entrepreneurship is a core subject for the Bachelor's 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
Universiti Malaysia Sarawak (UNIMAS) (1992)	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
Universiti Pendidikan Sultan Idris (UPSI) (1997)	Entrepreneurship is one of the core subjects for the Bachelor of Education (Entrepreneurial Studies) with credit offered by the Business and Economic Faculty
Universiti Putra Malaysia (UPM) (1971)	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. Small Business Development Centre
Universiti Sains Malaysia (USM) (1969)	Entrepreneurship is a minor subject in the Bachelor of Management course offered by the Centre of Management Studies. Institute of Postgraduate Studies offers Master of Arts in Management and Doctoral programmes, and entrepreneurship, small business and international entrepreneurship are part of the subject being studied. Established Centre for Policy Research
Universiti Teknologi MARA (UiTM) (1999)	Entrepreneurship is a core subject in all diploma courses except for the Business Studies Diploma. Malaysian Entrepreneurship Development Centre
Universiti Teknologi Malaysia (UTM) (1972)	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. M.Sc. (Information Technology – Entrepreneurship) offered by the Faculty of Computer Science & Information System and MBA (Techno–Entrepreneurship) is offered by International Business School

(Continued)

Table 2. (Continued).

University name in Malay (acronym) (year founded)	Entrepreneurial courses/programmes offered
Universiti Utara Malaysia (UUM) (1984)	Basic entrepreneurship is a core subject in the university. Entrepreneurship is a core subject for all programmes in the School of Business Management. It is also a core subject for Bachelor of Tourism Management with honours and the Bachelor of Educational Management. Bachelor of Entrepreneurship is also offered. The university has an established Entrepreneurial Development Institute and Student Enterprise Programme
Universiti Malaysia Terengganu (UMT) (1999)	Entrepreneurship is one of the elective subjects for Bachelor of Management (Marketing) with credit offered by the Faculty of Management and Economics. Established Centre for Entrepreneurship Development and Cooperative
Universiti Sultan Zainal Abidin (UniSZA) (2005)	Basic entrepreneurship is a core subject in the university. Established Centre for Entrepreneurship
Universiti Malaysia Perlis (UniMAP) (2001)	Entrepreneurship is one of the core subjects for the Bachelor of Entrepreneurship Engineering with credit offered by the Business and Economic Faculty. Centre for Business Innovations and Technopreneurship
Universiti Pertahanan Nasional Malaysia (UPNM) (2006)	Acculturation of Entrepreneurship is a core subject in the university offered by the Centre for General Study and Languages
Universiti Malaysia Kelantan (UMK) (2006)	Acclaimed as the Entrepreneurial university. Entrepreneurship is a core subject for the Bachelor's degree of Entrepreneurship (Commerce, Tourism, Hospitality and Health Entrepreneurship) with credit offered by the Faculty of Entrepreneurship and Business. The faculty also offered nine postgraduate programmes by research mode in Entrepreneurship areas (i.e. Master of Entrepreneurship in Management, Finance, Commerce, Accounting, Retailing, Tourism, Hospitality, and Health Entrepreneurship) and also Ph.D in Entrepreneurship. Established Entrepreneurship Networking

Sources: Author survey and Othman, Mohd Ariffin, Mohd Jani, and Zainal (2008).

Entrepreneurship training is given to the first year students, and those who perform well in the subject can continue with the subject until they graduate.

In the university, an entrepreneurship course is offered only for one semester as a single course. Therefore the effectiveness of short period to create enterprising culture is doubtful.

It is a crucial agenda for the universities to groom their students as entrepreneurs, engineers and scientists with entrepreneurial spirit.

Universities of technology and engineering

There are two universities of technology and engineering-based in Malaysia. Teaching and research on entrepreneurship education is still not fully integrated into non-business programmes. However, entrepreneurship has been incorporated into some engineering programmes.

Students of technology and engineering have narrow business perspectives, less flexibility to expand to other working areas, and foresee themselves as only job seekers rather job creators.

Universities should take further steps in promoting and fostering entrepreneurship to non-business students.

One of the barriers to include entrepreneurship subject in technical and engineering curriculum is the accreditation issues from the professional bodies. It is always unfinished discussion.

Islamic universities

There are two universities in Malaysia specialised in Islamic studies. While there is increasing recognition of the strategic importance of entrepreneurship, the universities only offering single courses in entrepreneurship.

Although Islam encourages its followers to venture into business, entrepreneurship education is something new to Islamic students at the university levels. More exposure is required.

The university focuses on training students in entrepreneurial awareness, builds up the necessary business skills, knowledge structure and improves the overall quality of students.

Business and management university

One university in Malaysia specialises in management and business studies. The university offers enterprise education and entrepreneurship development in most of its curriculum. Entrepreneurial activities are strongly present in many other ways: i.e. entrepreneurship centre, student entrepreneurship programme, centre for student entrepreneurship development, business advisory service, and small business ventures among students. However, in spite of a rather visible role, entrepreneurship as a subject does not reach all students and is not incorporated with other disciplines. Moreover, the message does not seem to resonate well enough to inspire ongoing action:

This university has been entrepreneurial since inception. However, graduates would prefer to work with others rather than setting-up their own business.

Even though we offered entrepreneurship as major programmes, the success rates of students in becoming self-employed are rather low.

As a business and management university, the institution has provided sufficient platform for students to actively involve in entrepreneurial activities during studies. However, obviously students would prefer to search for salaried job after graduation due to several personal reasons.

University graduates are facing some major difficulties for entrepreneurship, including weak entrepreneurship capacity, difficult entrepreneurship financing and high entrepreneurship cost.

National Defence University

The National Defence University's relation to entrepreneurship is distant: entrepreneurship is not much present in the university's activities, teaching and research, but this is understandable:

Our main domain as Defence University is rather unique – producing intellectual leaders of character committed towards selfless service to the nation. The call for promoting entrepreneurship is still at beginning. However, we still need to produce leaders with entrepreneurial mind.

General findings

In analysing the syllabi procured from internal documents, the teaching methods for entrepreneurship appear theoretical in nature, too examination-oriented, and lack emphasis on the practical side of entrepreneurship and enterprise development. There was a low emphasis on using interactive methods such as case studies, business simulations, invited guest speakers, invited government agencies that relate to entrepreneurial development, and interaction with successful entrepreneurs.

A 2008 survey of entrepreneurship education in two private and two public schools in Malaysia noted that educational institutions globally are moving toward a more knowledge sharing ecology, where class discussions and guest speakers are popular, but the conventional teaching methods of requiring students to create business plans still exist as foundations for teaching entrepreneurship and small business management. The most commonly used method/mode of delivery in teaching entrepreneurship in the selected institutions was lectures (84.4%). More interactive methods, such as case studies (11.5%), invited guest speakers (6.3%) and interaction with successful entrepreneurs (8.3%) were less employed (Cheng et al., 2009). This reflects the mind-set of educators who still rely on passive delivery modes and fail to value the effectiveness of bringing real-life experiences into the classroom through guest speakers. This reluctance reflects conservative attitudes toward assessment/evaluation methods. The ineffectiveness of entrepreneurship education in Malaysian universities in matching students' skill expectations with their skill acquisition should be addressed.

We found that all Malaysian public universities offered at least some basic introduction to entrepreneurship as a general subject or as part of business management curricula. This is generally supplemented by entrepreneurship programmes and specialisms. Some of these universities claimed to be providing designated entrepreneurship education at both undergraduate and postgraduate levels. Entrepreneurship education should not be confined to business students exclusively, but should be widened for students in all disciplines.

Overall, the study suggests that entrepreneurship is in many ways still a rather unclear phenomenon in Malaysian universities. University stakeholders' views on entrepreneurship education are fairly positive, but it is not seen as one of their key areas of expertise. It may be surmised that, while entrepreneurship is important, indeed vital, it is still not well developed in the national agenda. Entrepreneurship is connected to recognition of small business opportunities, start-up of new business ventures, or running of an enterprise. It would be worthwhile to widen concepts of entrepreneurship to embrace critical thinking skills that apply to productivity both in salaried employment and in an individual's life in general.

Summary observations

Entrepreneurship education still finds itself in a period of rapid development and change. Entrepreneurship education is available in every Malaysian university, only its quantity, methods and forms are varied. Institutional expertise, resources and financial

support appear to be the key issues. Some universities offer entrepreneurship or small business management as a subject, and single courses on entrepreneurship-related issues are also common. Numerous entrepreneurship centres can be found at Malaysian universities; however, explicit planning on how to make these centres sustainable is lacking. The MoHE recently aimed to instil elements of basic entrepreneurial culture among students in institutions of higher learning by introducing a Basic Course in Entrepreneurial Culture Module, although there is no measure that directly links entrepreneurship education teaching to entrepreneurial outcomes. Looking at the content of the courses, they were dedicated to the basic aspects of entrepreneurship: how to venture into business and how to develop a business plan. It is a compulsory subject for all first year undergraduates in public and private institutions of higher education in Malaysia.

According to Iacobucci and Micozzi (2012), in Asian countries in general, the design of business school curricula has followed the traditional model, based on functional expertise (strategy, human resource management, marketing, finance, etc.). This curriculum design is a part of the national agenda and policy, with the goal to develop entrepreneurial spirit and improved competitiveness amongst universities graduates. There are emerging discussions and debates about how to develop entrepreneurship programmes to be more interesting and inspiring to university staff and students. One key might be a clear adjustment in desire and attitude among students to become entrepreneurs. Studies on entrepreneurship education in Malaysia (Ahmad et al., 2014; Cheng et al., 2009; Ismail, Abdullah, & Othman, 2010) conclude that the current practice is ineffective in matching students' skill expectations with their skill acquisition, and that a new approach is needed. Entrepreneurship needs to be seen and identified as a real and feasible career of choice among other employment options. Only if it is occurring is it worthwhile to focus resources on advocating graduates to pursue entrepreneurial endeavours. It is clear, for example, based on the documents reviewed, that teaching and learning methods need updating with more creative and innovative styles.

Our study indicates that most Malaysian universities offer courses in entrepreneurship and/or small business management, but few offer a specialisation in entrepreneurship. As shown in Table 3, entrepreneurship can be studied as a major programme or concentrations in just five of the 20 Malaysian universities reviewed (in two multi-faculty universities, two technology-based universities and one business and management-university). Interestingly, the comparatively recent establishment of these universities is between the years 2000 and 2006, except for the Universiti Utara Malaysia from 1984. Table 4 illustrates the nature of this provision in these five universities. The other universities offer different curricular structures related to entrepreneurship. Some universities that do not offer entrepreneurship as a major have it in the curriculum as a minor. Often it is also integrated into other courses. Thus, the structure of entrepreneurship education curriculum can be characterised as more comprehensive than specialised.

Discussion

According to the focus group discussion and semi-structured interviews, universities recognised several future challenges in fostering entrepreneurship development in Malaysia. These challenges are mainly in institutional-industrial linkages, present teaching and assessment methodologies, financial support and on-going curriculum reform. On the whole, the study shows that there is an increased commitment by universities to promoting entrepreneurship education. Malaysian universities are starting to recognise

Table 3. Entrepreneurship education in Malaysian universities.

University	Entrepreneurship as a major programme (undergraduate or postgraduate)	Entrepreneurship studies (part, separate courses or integrated into other courses)	Entrepreneurship through a mutual cooperation agreement	Entrepreneurship as general module subject
<i>Multi-faculty universities</i>				
Universiti Malaya		X	X	X
Universiti Kebangsaan Malaysia		X	X	X
Universiti Putra Malaysia		X	X	X
Universiti Malaysia Kelantan	X	X	X	X
Universiti Malaysia Pahang		X	X	X
Universiti Malaysia Perlis	X	X	X	X
Universiti Malaysia Terengganu		X	X	X
Universiti Sultan Zainal Abidin		X	X	X
Universiti Tun Hussein Onn Malaysia		X	X	X
Universiti Pendidikan Sultan Idris		X	X	X
Universiti Teknologi Mara		X	X	X
Universiti Malaysia Sabah		X	X	X
Universiti Malaysia Sarawak		X	X	X
<i>University of science</i>				
Universiti Sains Malaysia		X	X	X
<i>Universities of technology and engineering</i>				
Universiti Teknologi Malaysia	X	X	X	X
Universiti Teknikal Malaysia Melaka	X		X	X
<i>Defence university</i>				
Universiti Pertahanan Nasional Malaysia			X	X
<i>Islamic Universities</i>				
Universiti Islam Antarabangsa Malaysia		X	X	X
Universiti Sains Islam Malaysia			X	X
<i>Business and management university</i>				
Universiti Utara Malaysia	X	X	X	X

Source: Authors' survey.

Table 4. Entrepreneurship as major programme (for undergraduate and postgraduate) in five Malaysian universities.

University	Description of major programme
Universiti Malaysia Kelantan (UMK)	The programmes are offered by the Faculty of Entrepreneurship and Business. There are: Bachelor of Entrepreneurship (Commerce) with Honours Bachelor of Entrepreneurship (Tourism) with Honours Bachelor of Entrepreneurship (Hospitality) with Honours Bachelor of Entrepreneurship (Health Entrepreneurship) with Honours Bachelor of Entrepreneurship (Retailing) with Honours Master of Entrepreneurship (Management) Master of Entrepreneurship (Finance) Master of Entrepreneurship (Commerce) Master of Entrepreneurship (Accounting) Master of Entrepreneurship (Retailing) Master of Entrepreneurship (Tourism) Master of Entrepreneurship (Hospitality) Master of Entrepreneurship (Health Entrepreneurship) Ph.D (Entrepreneurship area/focus)
Universiti Malaysia Perlis (UniMAP)	The programme is offered by the Learning Centre of Business Innovation and Technopreneurship Bachelor of Business (Entrepreneurship Engineering) with Honours
Universiti Teknologi Malaysia (UTM)	Faculty of Computer Science & Information System and also International Business School of UTM offers entrepreneurship programme under: Master of Science (Information Technology – Entrepreneurship) Master of Business Administration (Techno-Entrepreneurship) Ph.D (Entrepreneurship area)
Universiti Teknikal Malaysia Melaka (UTeM)	Faculty of Technology Management and Technopreneurship offers entrepreneurship programme under: Bachelor of Technopreneurship with Honours Centre for Graduate Studies offers: Master of Science (M.Sc) in Entrepreneurship (by Research) Ph.D (Entrepreneurship area/focus)
Universiti Utara Malaysia (UUM)	The entrepreneurship programmes are offered under the College of Business, School of Business Management: Bachelor of Entrepreneurship with Honours Master of Science by Research (Entrepreneurship and Innovation) Master of Science by Research (Franchising) Master of Science by Research (Small Business Management) Master of Science by Research (Entrepreneurial Financing) Master of Science by Research (Retailing) Ph.D (Entrepreneurship focus)

Source: Author's survey.

that entrepreneurship is an important subject area to focus on, and that a strong programme in entrepreneurship is essential to an institution's credibility.

The aim of this paper was to analyse the recent trends and present situation for fostering entrepreneurship education in Malaysian universities. Entrepreneurship education has been generally recognised as a major conduit for sustainable products and processes, and new ventures are being held up as a panacea for many social and

environmental concerns. Best practices might call for university entrepreneurship education programmes that engage students to a high degree in learning theoretical aspects of new venture creation and practical aspects of entrepreneurial activities through leading university entrepreneurship projects, activities, seminars, workshops and short courses (Bagheri & Lope-Pihie, 2013).

Because of the nature of entrepreneurship, top down policies may facilitate enterprise, but are less able to promote the individual readiness, skills, knowledge and attitudes that characterise successful enterprise. Conventional approaches in teaching and testing seem inappropriate for preparing students to be self-employed. Such teaching methods are different from the start-up reality faced by nascent entrepreneurs. Therefore we suggest trying to develop new courses and using more non-traditional modes of delivery that require more interaction and participation from students. There appears to be, however, a gap between policy and practice (Matlay, 2005). The connection between aims and results in the content of entrepreneurship education should be very clear. Entrepreneurship education should raise the awareness of students about entrepreneurship as a possible career options, as well as provide specific business skills and knowledge on starting and running business ventures.

Concerns that were repeatedly articulated concerning how few young graduates become entrepreneurs after completion of university studies should be investigated. The objectives of fostering and integrating entrepreneurship education in Malaysian universities should be revisited in such a way as to maximise graduates' acquisition of skills and competencies needed to initiate and sustain new ventures, rather than merely focusing on the functional understanding of entrepreneurship.

Based on the results of this study, the following recommendations are made:

- Malaysian universities need to evaluate whether their present course offerings are effective. The introductory entrepreneurship courses provide only a basic overview. The lack of diversity among most entrepreneurship courses offered indicates that Malaysian universities generally only provide students with minimal information and enterprise/entrepreneurial training. There needs to be an evaluation of whether these courses help accomplish objectives that are a high priority imperative in government policy.
- The objectives of entrepreneurship courses could be revised and revisited to better meet individual needs. Entrepreneurship should enhance the attitude of graduates towards self-employment, risk taking, creative thinking as well as skills needed to manage and run newly created sustainable business ventures, rather than just teach students about the functions and roles of entrepreneurship.
- Universities should consider partnering with relevant parties, such as related government agencies, in developing entrepreneurial skills and treating entrepreneurship as a highly worthwhile endeavour for college graduates.
- There need to be more clearly identifiable and celebrated role models. Role models have a positive effect on the development of entrepreneurship in a society (Anderson, 1995).
- Partnerships with local communities, entrepreneurial agencies and small business owners can also help higher education learning institutions. These linkages can enhance the development of entrepreneurial activities.

Concluding remarks and limitations of the study

This research was exploratory. Even though the findings are relevant to a wide range of situations, the results cannot be extrapolated to the entire Malaysian higher education landscape. We have studied public institutions here, and not the private purveyors of transnational education in Malaysia. Vocational training institutions were also not an area of interest in this study. An additional limitation relates to the absence of data available on long-term career outcomes from student exposure to entrepreneurship education. Such data collection would be an entirely different study that is beyond the scope of the current project. Future research might establish and measure key success factors that influence Malaysian students' entrepreneurial careers. Thus, there is substantial opportunity for future researchers to further study the entrepreneurial inclination of university students in order to determine the impact of entrepreneurship education on the attitude of graduates towards self-employment in Malaysia context.

Disclosure statement

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