Abstract

How ready our future graduates are, depends on how higher educational institutions best prepare them for the challenges of the future workplace, and the community at large. With an ever-increasing number of new graduates entering the workforce, it becomes almost impossible for every graduate to find employment unless they are equipped with entrepreneurial skills that will elevate their capacity to become self-employed. With this in mind, the Entrepreneurship Accelerator Project (EAP), a tailor-made capstone module was designed for final year students in a private university, with the aim of producing work-ready graduates with entrepreneurial skills. This study will assess how effective the EAP programme is, in developing students’ entrepreneurial skills and in preparing them to seize business opportunities, take risks, think strategically, and acquire other future work-ready skills set. The study is based on Schumpeter’s entrepreneurial theory of innovation, Kolb’s Experiential Theory of Learning and Dewey’s educational theory of constructivism. The students’ learning experience was assessed through qualitative content analysis of their reflective portfolios. The results demonstrate the positive impact that the module had on students’ learning experience and skills development. The module was found to be an innovative and effective tool that enriched students’ educational experience, increasing the relevance and practicality of the theories and concepts they learned in the classroom by contextualizing subject matter through real-world applications in tackling business opportunities. The team-based pedagogy setting of this capstone module equipped students with a multitude of work-ready skills, and enhanced their innovative and self-directed capabilities, preparing them for the future workplace.

Keywords: Entrepreneurship education; Skills development, Team-based pedagogy, Transformative higher education.
1. Introduction

Entrepreneurship education has been described “as gaining abilities that enable the future workforce to develop, be part of and adapt to the changing society” [1]. Despite being one of the fastest growing education fields globally, the literature still lacks consensus on what should be taught and how it should be taught [2]. This study intends to narrow the gap in the literature on how best entrepreneurship in education should be implemented, in order to enhance the undergraduates’ learning experience and their entrepreneurial and other skills. Higher Education institutions have begun re-designing their curriculum to incorporate entrepreneurship into the curriculum, in an effort to develop future-ready entrepreneurial graduates. With sustainability being a central issue for nation building, future graduates must be equipped with the relevant skills when entering the workforce. There are “concerns about the impact on the employability of recent graduates and the potential mismatches between their skills and the competencies required by the job structure” [3]. The skills mismatch is a major reason for the existence of unemployment among fresh graduates. “Employers are not even sure, which university produces the better graduates since there now exists a large number of the qualitatively diverse set of graduates for recruitment” [4]. Many of these graduates are ill-equipped, as they do not possess the necessary skills required in a highly challenging and competitive job market. In such a challenging situation, equipping the future graduates with entrepreneurial skills will definitely add value to their career options. Lackeus [5] aptly mentioned, “The main goal of most entrepreneurial education is to develop some level of entrepreneurial competencies.” Entrepreneurship is a major source of jobs creation and economic development [6, 7].

Entrepreneurship education is not a new phenomenon in some Malaysian universities, but many of these entrepreneurship projects are planned and organised in an ad hoc manner, without a comprehensive strategy. The vast literature on entrepreneurship education in the more developed countries has shown evidence of its significant ability to develop holistic graduates. With the current workplace being so challenging and competitive, universities need to equip their graduates with the much-needed skills set that will ensure their long-term employability. Entrepreneurial skills should be a core skill that all graduates must be equipped with, to ensure that, at the very least; they can become an entrepreneur by starting their own business if they are not employed upon graduating. Realising this, the Ministry of Education in Malaysia (MOE) placed entrepreneurship as a crucial tenet of the higher education curriculum. Studies that have looked at pedagogical methods of engaging external mentors [8], or allowing students to participate in industry-engaged environments [9], have concluded that these pedagogical methods have enhanced skills development and contributed towards deeper learning among undergraduates. There is a need to be more mindful and selective about the choice of methodology in the area of entrepreneurial education.

This study contributes to the body of knowledge in the following ways, (i) the unique delivery mode is well thought through and adds value to entrepreneurship education pedagogy literature; (ii) most studies on the effectiveness of entrepreneurship education were quantitative in nature, however this study utilises a qualitative approach; and finally (iii) this study contributes to policy making, in terms of providing some insights into the pedagogical approach that could be employed when infusing entrepreneurship in education for undergraduates.
2. Literature Review

In the competitive landscape of higher education, today’s educators are compelled to pick up new skills and utilise transformational teaching and learning techniques that are deemed suitable for the current times. Entrepreneurship education is one such transformational teaching and learning tool that hinges upon the tenets of experiential learning. The EAP Project is a team-based, collaborative, experiential learning project undertaken by groups of students, with academics serving as advisors/facilitators while members of the Industry Advisory Panel being the invited judges and advisors. Developing entrepreneurial skills among our graduates is considered one of the milestones of success in our attempt to develop holistic, entrepreneurial, and balanced graduates. This is further reiterated by the Ministry of Education Malaysia [10], which states that:

Such holistic, entrepreneurial, and balanced graduates are a natural extension of the goal of the Malaysian basic education system to develop values-driven Malaysians [10].

Entrepreneurship in education has been found to have improved students’ innovativeness, critical analysis, problem-solving, as well as enhanced the spirit of initiative and independence amongst them [11]. The Quality Assurance Agency for Higher Education in the United Kingdom in defining entrepreneurship education has focused more on the specific context of setting up a venture and becoming self-employed [12]. Entrepreneurship encompasses the following traits: personal development, creativity, self-reliance, initiative taking, action orientation, i.e. becoming entrepreneurial [12].

Most studies have found a positive and significant link between entrepreneurship and economic development. In the recent studies by Sautet [13] and Adusei [14], a strong relationship was found between the number of recent start-ups, self-employment rate, and the economic development. Since entrepreneurship promotes economic activities through the creation of new products and services, this will inevitably lead to higher levels of competition and economic development. Entrepreneurship involves the creation of new and innovative ideas, which in turn enhances competitiveness and transforms businesses, which leads to higher economic growth [14]. Baumol [15] suggested that policymakers create policies that foster entrepreneurship due to its significant role in alleviating unemployment and economic recession.

The theoretical framework of the study is based on Schumpeter’s entrepreneurial theory of innovation, Kolb’s experiential learning theory and Dewey’s educational theory of constructivism. The entrepreneur or innovator is placed in a key position in the process of development, as it is the entrepreneur who initiates development in a society and carries it forward [16]. Kolb [17] experiential learning theory defines learning as “the process whereby knowledge is created through the transformation of experience”. According to Dewey [18], educational theory of constructivism posits that learning is an active process that involves the mental construction of knowledge, which is unique to every individual, no matter how they are taught. The learner is considered an active agent in the learning process as he/she acquires knowledge, which aligns with the constructivist view of learning.
In line with the above, this study is in the right direction as it addresses the students’ development needs in a collaborative entrepreneurship education setting.

2.1. Entrepreneurial pedagogy

Entrepreneurship has over the recent years, been gaining importance with educational institutions realizing its value for students, and therefore incorporating it as a taught course. However, delivery of entrepreneurial content differs widely from that of traditional university courses. Studies have identified various approaches that are currently in practice, ranging from traditional pedagogy to pedagogies that are more diverse. The traditional pedagogy is more didactic and is content driven, whereby knowledge sharing and creating awareness are the key learning outcomes [19].

A second level pedagogy approach targets higher order thinking, engaging students in entrepreneurial-related tasks, which enable them to acquire key competencies. The outcome is to equip students with skill sets for future entrepreneurial endeavours [20], rather than starting their own business while in the university. The third level pedagogy approach encourages students to apply their knowledge by running an actual business [21], and the final approach involves embedding the entrepreneurial element within the curriculum, to develop entrepreneurial competencies among non-business courses [22].

2.2. Entrepreneurship accelerator project

The EAP project is a final year capstone module, where undergraduates are provided with the opportunity to synthesize and apply the knowledge gained from the whole programme. This module adopts a combination of the second [20] and third [21] entrepreneurial pedagogy approaches as explained in the previous section. The key objective of this module is to equip students with an understanding of the processes involved in planning and decision making within an entrepreneurial setting. As second approach by Pittaway, and Edwards [20], this goal is aligned with the outcomes to equipped students with entrepreneurial competencies for their future endeavors, which aligns with the module’s expectations. Students who express a keen interest in proceeding with their business plans are encouraged to test their business models and if they so wish, to run their own businesses.

A range of ancillary support (Table 1) such as networking opportunities, access to coaches and growth programmes where students can engage in an entrepreneurial ecosystem, are made available. The instructional approach adopted by this module was driven by the need to support the students in preparing their business plan and industry pitch. The EAP module runs for a period of 14 weeks, and the objective and learning outcomes were designed to cultivate an entrepreneurial mindset, in which, students needed to be self-directed and intrinsically motivated. As shown in Table 1, students were provided with minimal guidance through a limited number of compulsory engagement activities that they needed to attend and gain certain lessons that would assist them in completing their business proposal.

The workshops were complemented by academic mentoring and panel supervision, allowing for contact that is more frequent. Students who successfully complete this course are expected to have acquired both entrepreneurial and
business skills that would allow them to either pursue an entrepreneurial pathway or apply these skills in their future workplace.

Table 1. Engagement activities.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency</th>
<th>Purpose</th>
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<tbody>
<tr>
<td>Panel Supervision</td>
<td>At least five throughout the course.</td>
<td>Students share their business plan with the panel of supervisors and fellow students to gain feedback and improve on their idea as well as practice their pitching skills.</td>
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<tr>
<td>Consultation Meeting</td>
<td>At least five throughout the course.</td>
<td>Students confirm their scope of presentation, report their progress, share and seek guidance if there are any difficulties or concerns.</td>
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<tr>
<td>(Academic Mentors)</td>
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<tr>
<td>Workshops</td>
<td>At least four throughout the course.</td>
<td>Themes of the workshops are mainly focused on ideation, marketing strategies, financial reporting, and pitching. The workshops were generally conducted by entrepreneurs, investors, and industry professionals, to ensure students gained real-life exposure and a better understanding of the business environment.</td>
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3. Research Approach and Design

This study is qualitative in nature, involving an inductive process with a view of providing an interpretive understanding of the contextually-bound social phenomena [23-25] within the context of entrepreneurship in education. Merriam [26] believed, “the product of a qualitative study is richly descriptive” (p.8). The research approach of this study utilised a descriptive study involving the collection and investigation of 32 students’ reflective journals of their learning experience in undertaking the EAP project. The reflective journals were the main source of data for this study, as these journals provided detailed information on the students’ perceptions of the effectiveness of the EAP project in enhancing their learning experience and competencies. Consent was obtained from the students and they were informed that their reflective journals were a part of the study.

The qualitative data was organized using an Excel database, and data analysis was carried out using a process of analytic induction to generate themes and codes. The study was guided by Glaser and Strauss [27], in which, is the constant comparative method set out by considering open, axial, and selective coding strategies [28]. First, the coding categories for occurring themes were identified through the reading of the reflective journals and the field notes. The reflective journals were read through individually to develop a system of categorization. In order to develop an appropriate categorization, it took several rounds of individual categorization followed by intensive discussions with two other lecturers until a consensus on an appropriate categorization model was reached. The data was analysed based on the student’s experience in undertaking the EAP project. In the final analysis and report, general themes and findings are discussed in the results section. This study, therefore, seeks to capture the students’ experiences and to document the developmental process they go through in the EAP Project module.
4. Results and Discussion

The students’ feedback based on their reflective journals was analysed to examine the effectiveness of undertaking the EAP project on their learning experience. A pattern of commonalities was based on the broad-based, thematic analysis of the students’ reflective journals. The pattern of commonalities gave rise to a total of six emerging constructs, which comprise of Knowledge Acquisition, Soft Skills, Holistic Learning Experience, Team Work, Subject Contextualisation, and Diversity.

4.1. Construct I - Knowledge acquisition

Knowledge acquisition is where individuals create meaning from knowledge in context. Knowledge is acquired through the process of extracting, structuring and organizing knowledge from one source, usually human experts. The findings clearly indicate the effectiveness of entrepreneurship in education in bringing together the pool of knowledge that each team member had. The viewpoint is remarked by the students in the following excerpts, who mentions:

“Therefore, from my experience working on EAP, I have gained new academic knowledge on the process of planning a business idea.”

“There is this innovative program, I faced good and bad experience but I gained a wide range of skills and knowledge without realizing it.”

The students’ reflections demonstrate the effectiveness of integrating entrepreneurship into the curriculum, as it enhanced the students’ knowledge acquisition and application of real-world business set-ups, consistent with the findings of the majority of scholars who found entrepreneurship education to have a positive impact on the students of business major [29, 30]. This aligns with Dewey’s constructivist view of learning where the learner is an active agent in the process of knowledge acquisition.

4.2. Construct II - Attainment of soft skills

Soft skills include among others, communication skills, social skills, mastery of the English language and thinking skills [31]. This study revealed that the attainment of soft skills was deemed most important to the students, as it recorded the highest number of feedback. The EAP project provided the students with an experiential learning platform that allowed them to discuss and present ideas through an interactive exchange. This is reflected in the following excerpt:

“This module requires a lot of team discussions and presentations of business idea leading up to the day that we will pitch to the industry; hence an extensive use of communication skill. … I am able to communicate appropriately in various settings and modes.”

Several students also revealed how they gained digital literacy skills in setting up mobile apps, either as their main business idea, or to help them in their day to day activities, as reflected the excerpt below:

“I also learned how to create mobile apps through a website named Creator Ionic. The program helped me and my team member to build mobile apps in an efficient way.”
Thinking and problem-solving skills was another set of skills that the students perceived they gained from their EAP experience, as reflected by a student:

“This module has definitely given me a clearer picture on being a startup. The many very detailed elements that needed to be focused and research on. Relating to the third TGC, thinking and problem-solving skills; having the ability to think critically and out of the box is must crucial, and is something I should work on as well.”

Based on the students’ feedback, infusing entrepreneurship into curriculum had a positive impact on the attainment of soft skills.

4.3. Construct III - Holistic learning experience

A holistic learning experience takes place when the various dimensions of the learning experiences are addressed [32]. The students’ learning experience is deemed wholesome when it encompasses a variety of the educational activities from the inception to the elaboration, construction and transition phases of a holistic learning experience. The importance of this construct was evident as it recorded the second highest number of feedback, reflecting its importance to the students. The overall feedback students wrote on their learning experience was very positive, using words such as exciting, liberating, enjoyed, phenomenal, lifestyle, state of mind, active participation; to describe their overall learning experience. The EAP project was perceived as a platform to develop students’ entrepreneurship competency and prepare them for the future working environment. The EAP project provided a platform for the students to start new business ventures and in the process gave them the opportunity to “feel” what it was like to assume the role of an entrepreneur. This was well-reflected in this excerpt of a student’s reflection:

“Entrepreneurship Accelerator Project is a platform to prepare us for the entrepreneurship competency and working environment. The process of planning and starting up a business requires business knowledge, personal attributes, and professional skills. Even though this entrepreneurial business is just part of the capstone module, however, planning a start-up is undoubtedly exciting and liberating. Entrepreneurship requires both lifestyle and a state of mind to survive in the business life cycle. As a business owner, I felt that I was becoming more than just a person.”

The EAP project had connected academia to the industry by integrating entrepreneurship into education as reflected by a student:

“The EAP looked to be preparing us for becoming entrepreneurs in a controlled environment, equipping us with all the skills necessary for when we eventually go out and work in the real world”.

The EAP project had allowed students to utilise their past experience and apply their theoretical knowledge into their present business model as reflected by another student:

“EAP has thought me a whole new practical aspect of starting up a business. .... Whatever I had learned in my course since semester 1 had not come to waste as I applied most of my marketing theories such as the product life cycle theory as adopting a new product to market is contemplated with unknowns, uncertainties, and frequently unknowable risks”. 
Evidence of such findings was also discovered in several studies on entrepreneurship in education [1, 33]. The students obtained a wholesome learning experience, which encompassed a diverse set of learning engagement, resources, and skills, reinforcing problem-based learning and student-centered pedagogy, a key thrust of the University’s Teaching and Learning framework. This aligns with Kolb’s experiential learning theory whereby the students’ learning experience was multi-dimensional and holistic, as it was based on the pedagogical approach of experiential learning in which, knowledge was created through the transformation of experience.

4.4. Construct IV: Teamwork

Teamwork is the ability to create synergy by combining the skills of individual team members [34]. This is considered crucial in entrepreneurial ventures where complex tasks are divided according to competencies, skills, and expertise. Teamwork appeared to be yet another important outcome of undertaking the EAP project, whereby team dynamics played a major role. The EAP team-based learning activity involved understanding team dynamics and mobilising the power of teams, aside from assuming leadership. The following excerpts capture the essence of the overall students’ learning experience:

“At the end of the day, working with my team on this project was definitely an amazing experience. Even if I had the chance, would not trade for another team but instead, keep making ourselves as a team better.”

“Knowing that teamwork was significant, I decided to hold weekly meetings to keep each of the members updated. We could decide our tasks, allocating the work to each member and setting deadlines. That was when we gradually came to a consensus and the teamwork was getting stronger.”

Overall, the students found that infusing entrepreneurship into the curriculum gave them a sense of belonging, as their teamwork skills improved. The students reflected how the EAP project provided them with a collaborative learning landscape, allowing increased peer interaction as well as the interaction between the students, faculty, and industry partners, in a highly engaging manner.

4.5. Construct V - diversity

Different individuals have different kinds of knowledge and learning processes and this diversity is crucial in entrepreneurial education. Diversity was one of the emerging constructs derived from the thematic analysis of the students’ reflective journals of their learning experiences. While the EAP project created opportunities for teamwork, what made it a rich learning experience was the diversity in the team dynamics as the teams were comprised of students from different business disciplines such Accounting, Finance, Economics, Business Administration, Marketing, and Management. This was clearly reflected in the following excerpts in their reflective journals:

“…. This diversity of majors amongst the team definitely provided us with the knowledge to elevate the team’s performance, because we were able to leverage on each individual’s capabilities, as opposed to relying on external help”.

“My teammates and I are a team of various backgrounds of studies. We took this diversity as an advantage for us to plan out and execute the business with a
pool of knowledge presented by everyone, applying and practicing that we have learned throughout our years in Taylor’s university”.

The perceptions of the students on the advantage of having diversity in their teams will serve them well in their future years, as they explore the ever challenging and diverse labor market of the twenty-first century.

4.6. Construct VI - Subject contextualisation

Subject contextualization is “the ability of the lecturer to identify and use various representations of the subject matter or content to relate it to real-world scenarios and to concretely apply principles and concepts in a specific context that is of interest to the students” [35]. The embedded approach of teaching “through” entrepreneurship was perceived to have enhanced the contextualisation of the subject matter as the final year students found that they could relate the theories and concepts they learned in the classrooms to the real world entrepreneurial start up projects that they undertook. The overall feedback was succinctly captured in the following excerpts:

“I have gained abundance of knowledge from this module and was able to bring the concepts out of the textbook into real life practices. I am able to put the theories into practices as this EAP requires a thorough understanding of the roots follow by how we may counter the problems and what methods must we use to deliver the solutions to our target markets”.

“Whatever I had learned in my course since semester 1 had not come to waste as I applied most of my marketing theories such as the product life cycle theory as adopting a new product to market is contemplated with unknowns, uncertainties, and frequently unknowable risks”.

“It was great to put my theories into practice but it was a struggle to find the right estimates to use such as conversion and growth rates as these figures have always been given to me when learning”.

Based on findings by Neck and Greene [36], these students’ feedback is consistent with the findings, in which, students would need to apply the theoretical concepts they learned in the classrooms to the real-world business ventures that they created. Students tried to make sense of all the information they received, thereby “constructing” their own meaning from this information. These findings support Dewey’s constructivist view of learning that involves the mental construction of knowledge, which is unique to every individual, no matter how they are taught.

5. Conclusion

The study does have some limitations, especially with respect to the content analysis technique employed in analysing the data, which has room for further improvement. Future studies can include the use of a mixed methods study, which involves both qualitative and quantitative methods. Despite this, the findings provide clear evidence of the effectiveness of entrepreneurial education in stimulating team-based learning in a business venture set-up.

The six emerging constructs of learning that emerged based on the final year students’ reflective journals, justifies the argument that embedding
entrepreneurship into the curriculum is indeed an effective learning and teaching tool. The students perceived the EAP project to have enhanced their learning experience and skills. It is, therefore, this study’s recommendation that higher education providers further push the entrepreneurship education agenda in order to create a more learner-centered environment for lessons to take place. The EAP project was well planned and coordinated, giving students ample opportunities to have dialogues and discussions with the industry partners and their academic supervisors in a self-directed student-centered learning environment. Consistent with the study by Rasiah [4], who concluded that “When an activity is carefully planned and organized (where the learning outcomes are clearly explained), engaging students from the very beginning (student-centred in nature), students of diverse backgrounds will become actively involved and take responsibility for their own learning”; emphasizing the need for careful planning and reflection on the part of the educators, this carefully planned project has had a positive impact on students’ learning experience as reflected in their journals. This study is hoped to give new momentum to entrepreneurship in higher education.

References


