

Designing and Developing a Sport Entrepreneurship Course: An Educational Design-based Study

Abstract

There is an evident gap in the studies that provide a systematic process of designing sport entrepreneurship courses. This study employed an educational design-based approach to design a sport entrepreneurship course. The ‘Theory of Planned Behaviour’ and Gagné’s ‘nine events of instructions’ were used as the theoretical foundation and teaching strategy guidelines of the course. The study included three main phases, namely needs analysis, course design, and reflection. Needs assessment phase resulted to the design of outline for an introductory sport entrepreneurship course. The completed design was instructed to sport students in a public university in Malaysia. The post-test results showed significant increase in students’ entrepreneurial intention. The classroom observations showed more attention must be paid to opportunity recognition topic and cultural contexts for an introductory entrepreneurship course. In addition, using the nine events of instruction as the basis for teaching strategy provided a clear structure and solid framework for the teaching and learning process and classroom experience.

Keywords

Sport Entrepreneurship, Entrepreneurship Education, Entrepreneurship Pedagogy, Nine events of instruction, Theory of Planned Behaviour, Design-based Research

1. Introduction

Entrepreneurship has been regarded as a major engine for economic growth and job creation (Si et al 2019), and in the knowledge-based economy, it has turned into one of the leading key players of sustainable economic development (Omri 2018). The role of entrepreneurship has also been highlighted in resolving various economic and social issues that today’s societies are grappling with; one notable example of which is increasing graduate unemployment (Liñán and Chen 2009; Muscio and Ramaciotti 2019). Studies report a high percentage of graduates are either unemployed or were unable to pursue a career in industries relevant to their field (Awang-Hashim et al. 2015; Silva et al. 2018).

The importance and benefits of entrepreneurship has spurred governments and higher education institutions around the globe to attempt to develop and promote entrepreneurial mind-set and competencies among students, in order to generate more innovative, entrepreneurial and employable graduates (Bienkowska et al. 2016; Kakouris

2015). Sport graduates face the same challenge, as the rate of graduates unable to find employment in the industry is high (Minten and Forsyth 2014).

The progress and expansion of the sport industry on one hand and the critical role of entrepreneurship in economic development and job creation on the other hand, emphasize the increasing importance of sport entrepreneurship. Despite the significant growth of sport programs in universities, the number of graduate entrepreneurs has been far fewer than the potential of sport industry suggests (Minten and Forsyth 2014; Tsitskari et al. 2017). Improving entrepreneurship education (EE) capable of providing effective support and training to nascent entrepreneurs in the field of sport to enable future businesses flourish is amongst the ways through which the universities can address this problem (Jones and Jones 2014; Teixeira and Forte 2017).

The main objective of this study was to address the limited attention paid to EE in sport in the literature by designing a sport entrepreneurship course for students of sport programs. In order to achieve this objective, this study employed an educational design-based approach to develop an effective sport entrepreneurship course for sport students.

2. Literature Review

Researchers have been paying increasing attention to entrepreneurship as a growing choice in career path because of its critical role in furthering socioeconomic development in both developing and developed countries (Pihie and Bagheri 2013). One form of entrepreneurship that has received significant attention from governments as well as researchers in recent years is graduate self-employment. The potential of university graduates to become entrepreneurs is notably high (Campanella et al. 2013; Herrmann et al. 2008), therefore this area offers rich opportunities for entrepreneurship studies.

2.1 Entrepreneurship Education

The influential role of universities has been highlighted in the new economies (Leal Filho et al. 2019). Numerous researches have focused on university graduates and their capacity towards promoting entrepreneurship (Autio et al. 2001; Krueger et al. 2000; Liñán and Chen 2009). Knight (1991), as an early advocate of EE, suggested vocational courses have some beneficial aspects for emerging entrepreneurs. The confidence in the influence of EE on potential graduate entrepreneurs was shared by other researchers as well (Matlay 2006). Reynolds (1997), found that education in general and EE has a positive impact on the tendency towards self-employment. Campanella et al. (2013) asserted that universities should provide specific training programs and activities that nurture an enterprise culture that leads

students with potential to become successful entrepreneurs; essentially promoting an entrepreneurial environment. Increasingly, universities attempt to offer the necessary knowledge and skills to their students to start businesses or develop entrepreneurial attitudes (Bergmann et al. 2016).

Taking the growing popularity of entrepreneurship and startups in different industry sectors into account, the expansion of EE to non-business disciplines appear to be reasonable. Gradually, more programs are being designed to offer EE to non-business students (Roberts et al. 2014). However, to infuse entrepreneurial skills among non-business students, EE should be more specific, and discipline based (Jungnickel et al. 2009). Scholars highlight the need and importance of EE for non-business students, who have an idea but lack the knowledge and skills to develop it into a business (Jones and Jones 2014; Teixeira and Forte 2009). The need for contextualisation of EE in non-business disciplines has been underlined in the literature (Shepherd and Patzelt 2017).

Within the literature, some studies address EE in non-business disciplines. Refai and Klapper (2016) investigated the state of the art of EE in pharmacy education, Brizek and Poorani (2006) suggested a need for EE in hospitality and tourism programs, Roberts (2012) studied the impact of EE on Art and Design students, and Vodă and Florea (2019) explored the impact of personality traits and EE on engineering students. They argued that business insight must be integrated in curriculum design in non-business faculties with the aim to develop essential skills needed for developing and enhancing creativity (Jones and Jones 2014; Roberts et al. 2014). Despite these attempts, the literature on impacts and issues of effective delivery of EE in other disciplines is limited.

2.2 Sport Entrepreneurship Education

The significant growth and dramatic expansion of various aspects of the sport industry, such as media, marketing and sponsorship, tourism, and live and fantasy events, in recent years (Kolyperas et al. 2019), in addition to its contribution to economic development (Kang et al. 2015) highlight the potential of the industry to promote development through practical means (Reis et al. 2016; Tsitskari et al. 2017). The mutual engagement of sport industry with a range of small and large businesses from various sectors such as media, data analytics, athletes and fan experiences, as well as goods and services, offers countless opportunities for entrepreneurial activities in different segments.

Sport entrepreneurship education in many regards is like general EE, and aims to provide students with the skills to recognize opportunity in the sport industry, and further enables them to develop sport ventures or contribute to the development of existing organizations. Another focus of sport entrepreneurship education is to encourage

students to apply their acquired skills to various contexts in sport, including new or existing ventures, charities, non-profit organisations, the public sector, and social enterprises (Nová 2015).

Another important aspect of EE in any discipline is the topics and teaching methods. Delivery of entrepreneurship courses varies in terms of approach among academics (Fayolle 2013). A combination of various approaches has been applied so far, including courses, guest lectures, case studies, internships, student entrepreneurial projects, providing resources to start a business and business competition; yet, when discussing effectiveness, these approaches have not been clearly investigated (Rideout and Gray 2013) and best-working approaches are still unknown (Refai and Klapper 2016).

Furthermore, Anthony Borgese (2010) attempted to do a comparison between sport entrepreneurship instructors and practicing entrepreneurs in what they regard as important skills to teach students to successfully run sport-oriented businesses. This comparison is of great value for students as well as educators to evaluate the current material taught in sport entrepreneurship courses. Anthony Borgese (2010) found that a larger percentage of sport management and entrepreneurship instructors, value digital skills and strategic management more than sport entrepreneurs do. Instead, sport entrepreneurs gave more weight to financial management topics compared to sport entrepreneurship instructors. Humphreys and Maxcy (2007) found that sport economics received small attention in sport management curricula because of two possible reasons; either sport faculties are not qualified in this regard or this topic does not hold equal value to other topics from their perspective. As entrepreneurship, like economics, is a relatively new area in sport management programs, similar prediction can be made to justify the seemingly lower attention dedicated towards sport entrepreneurship courses.

The literature reflects a significant lack of research in sport entrepreneurship, education and pedagogy. In one of the few attempts done to study sport entrepreneurship, Borgese (2007a) investigated business graduates to see if EE could produce sport entrepreneurs. Although the result of his investigation was not statistically significant, it showed that sport entrepreneurs could be successfully educated to create viable sport-related firms. Further, Borgese (2007b) stated that the most significant content for EE include communication and interpersonal skills, finance, marketing management, and business foundations (Jones and Jones 2014).

2.3 Entrepreneurial Intentions and Theory of Planned Behaviour

Considering entrepreneurship as a process, which involves prior thinking, opportunity recognition, cognitive planning for starting and developing a venture, it is characterized as a planned, deliberate and actual behaviour (Lortie and

Castogiovanni 2015); thus, it can be predicted by a type of behavioural intention (Shapero 1984). Since according to behavioural psychologists, intention is the best predictor of behaviour (Ajzen 1991; Linan and Chen 2009) understanding the influencing factors behind students' intentions toward starting a business is an essential step in developing effective programs and policies to boost entrepreneurial behaviours. This link between Entrepreneurial Intention (EI) and entrepreneurial behaviour has been confirmed through two comprehensive meta-analysis conducted by Sheeran (2002), and Schlaegel and Koenig (2014).

In order to gain practical understanding of planned behaviour, intention-based models were frequently used (Krueger et al. 2000). Entrepreneurial behaviour, as mentioned earlier, is an example of such behaviours; one that is intentional and a result of cognitive planning. Having gone through the literature, there are three intention-based models that could help to understand and predict the development of EI of entrepreneurs or those who intend to be self-employed, namely (1) Entrepreneurial Event Model (EEM), introduced by Shapero and Sokol (1982), (2) model of implementing entrepreneurial ideas by Bird (1988), and (3) Theory of Planned Behaviour (TPB) by Ajzen (1991). In general, the applicability of TPB and EEM to the field of entrepreneurship has been supported by empirical evidence (Krueger et al. 2000), however Bird's model still needs to be validated by entrepreneurship literature (Fayolle and Linan 2014).

Among all the theories and models in EIs, TPB is probably the most influential intention-based model in the literature (Fayolle and Gailly 2015; Krueger et al. 2000; Lortie and Castogiovanni 2015). Ajzen (1991) asserts that individuals' behaviour is predicted by their intentions toward that specific behaviour. He explained that human intentions were the best predictor of one's behaviours and depend on three conceptual factors, namely Attitude toward Behaviour (ATB), Subject Norms (SNs), and Perceived Behavioural Control (PBC) (Fig. 1). Attitudes is described as a collection of someone's feeling and belief about an object; and the more positive feelings a person has towards an object, the more positive attitude he/she will have towards that (Bohner and Dickel 2011). Ajzen (1991) describes SNs as the social factors which are related to the perceived social pressure to perform certain behaviour or not to do that. PBC refers to an individual's perception of the ease or the difficulty to perform a particular behaviour or action (Ajzen 1991).

[Please insert Fig. 1 near here]

Fig. 1. Theory of Planned Behaviour (Ajzen 1991).

TPB was first introduced to the field of EI by Krueger and Carsrud (1993). They referred to study by Katz and Gartner (1988) on emerging organizations and assert that since intentionality is an important characteristic of emerging ventures, exploring the pre-organisational phenomena and the decision to start an entrepreneurial venture was significant. Entrepreneurship scholars have studied TPB in their fields of study for more than two decades. Garcia-Rodriguez et al. (2015) stated that in the context of entrepreneurship, ATB (or as Linan and Chen (2009) called it attitude toward start-up) is associated with the extent to which someone has a positive or negative valuation of becoming an entrepreneur. Studies showed significant relationship between SNs and EI (e.g., Aragon-Sanchez et al. 2017; Kolvereid and Isaksen 2006; Pejic Bach et al. 2018), whereas some works, such as Autio et al. (2001), Krueger et al. (2000) and Linan and Chen (2009), didn't find any significant correlation between these constructs. However, it is reasonable to expect a positive relation between SNs and EI, to the extent that the decision of becoming an entrepreneur integrates the opinions of 'reference people' (Garcia-Rodriguez et al. 2015). Moreover, EI experts believe the concept of PBC is very similar to what Bandura (1982) explained as self-efficacy. They assert that the higher the perception of ability to perform entrepreneurial activities, the higher the likelihood of EI and more chance to turn into entrepreneurial behaviour (Garcia-Rodriguez et al. 2015; Krueger et al. 2000).

Many entrepreneurship scholars have emphasized the usefulness of TPB in EE programs and pointed out the influence of its three constructs on the effectiveness of EE (Maresch et al. 2016; Rauch and Hulsink 2015). The review of literature reflects that previous studies have only focused on entrepreneurial attitudes, intentions and behaviours of students, but not the course itself. The extant literature, particularly in sport, lacks studies that highlight the characteristics of EE courses. Such characteristics like instructional design, pedagogical objectives and approaches, contents and skills that should be considered for designing and developing a course for students from specific disciplines.

By designing and developing a sport entrepreneurship course around the TPB model, EI concept and Gagné's nine events of instructions as its theoretical foundation and guideline for the teaching strategy, this study aimed to address the gap in EE literature on the characteristics and details of sport entrepreneurship courses.

3. Methods

To design a sport entrepreneurship course, an interdisciplinary educational design-based approach, which was the combination of Design-Based Research (DBR) and educational experiment, was employed. As van den Akker et al. (2006) asserted, DBR is pragmatic, both in theory and practice, as it aims to solve real world problems and/or develop

theories. In addition, Educational Design-based Research (EDBR) is a form of linking different scientific disciplines in the educational context (McKenney and Reeves 2018) in order to develop new practices or artefacts that can potentially influence the learning and teaching experience in real world settings (Barab and Squire 2004). As Skinner et al. (2014) pointed out, sport management research is generally a combination of both basic and applied approach.

Most studies use one or more existing theories to frame the research inquiry; what is different about the EDBR is that although it is a theory-oriented approach (Cobb et al. 2003), in this kind of research scientific understanding is exploited to shape the design of the solution. In this study, the theoretical foundation of the sport entrepreneurship course was based on TPB. As explained in the previous section, TPB is one of the most employed theories in EE, which provides a great opportunity for instructors to develop students' knowledge, skills, intention and attitudes towards entrepreneurship.

As shown in Fig. 2, there are three core phases in an EDBR, namely exploration/analysis, construction/design and reflection/evaluation, which were implemented in the first phase of this study. In the first phase, to perform a comprehensive needs assessment, after an extensive literature review on entrepreneurship literature, a series of semi-structure elite (expert) interviews were conducted. The results of needs analysis were incorporated to the course design in the second phase, using the four constructs of TPB (i.e., attitude towards entrepreneurship, subjective norms, perceived entrepreneurial behaviour and EI). In this phase, in addition to the course outline, the teaching strategy was developed using Gagné's (1985) nine events of instruction to enhance the learning outcomes. These events include: (1) gaining learners' attention, (2) informing the instruction objectives to the learners, (3) stimulating retrieval of learners' prior relevant knowledge and/or skills, (4) presenting stimulus/instructional material, (5) providing more guidance for learners, (6) eliciting performance/response, (7) providing feedback for the learners, (8) performance evaluation and finally (9) enhancing the generalizability of the provided knowledge/skills (i.e. ability to retain and transfer). The final draft of the course design was tested in a pilot intervention, and after necessary modification based on the pilot findings, the final design of a sport entrepreneurship course was prepared. The details and results of these steps are presented in the section 4.

[Please insert Fig. 2 near here]

Fig. 2. Generic Model for Conducting EDBR (McKenney and Reeves 2018).

The second phase was to conduct the completed design. Having considered the study limitations, and more the practicality of uncontrolled setting, the intervention phase of this study included a quasi-experimental pre-test/post-test control group design. Since the primary objective of this EDBR was to design a standard and effective sport entrepreneurship course, it was important to conduct the intervention phase in a real situation, without controlling any factor that could potentially make the condition unrealistic. The designed course was instructed to the entire third year students of Sport Management (undergraduate) at the Centre for Sport and Exercise Sciences, University of Malaya, including 15 males and 11 females, aged between 20 and 26 years. Prior to conducting the course as the intervention, this educational experiment was approved by the University Malaya Research Ethics Committee (approval number: UM.TNC2/RC/H&E/UMREC-85).

To assess the possible change in EI status of participants after the course, the Entrepreneurial Intention Questionnaire (EIQ v3.2), which is one of the most famous and commonly used questionnaires that incorporates TPB and EI, was employed. EIQ was originally designed and developed based on TPB's four constructs (i.e. ATB, SN, PBC and EI) by Liñán et al. (2011b). It includes 20 items, which measured by 7-point likert-type scale, ranged from 0 (total disagreement) to 7 (total agreement). Since this study was an educational intervention, lecturers' idea about self-employment decision was added to SN items, therefore, the questionnaire used had a total of 21 items.

Due to the contextual differences (mainly social and cultural), the original questionnaire was translated to Malay language (Bahasa Melayu), based on Brislin (1976) protocols. Following the convenient sampling method, to check the reliability of the questionnaire, it was distributed between 43 students in the University of Malaya. Cronbach's coefficient alpha test was performed and the results for all 21 items of the questionnaire ranged between 0.72 and 0.91. Hence, these constructs significantly contributed to the internal consistency of the questionnaire, and it seemed reliable to use the translated version in this study. The pre-test and post-test data of the experimental group was obtained at the first and the last session of the course, and the same questionnaire was administered among the control group consisted of 26 second-year students of the same program on the same dates. To investigate the effect of the intervention on students' EI, independent samples t-test was conducted.

4. Procedures

The design phase is usually depicted as the phase in which the solution to the problem is drafted (van den Akker et al. 2006). In this sense, drafting involves taking design ideas and applying them to building the solution. The outcome of this stage is the intervention design and/or material (McKenney and Reeves 2018). It should be highlighted that the

process of designing an educational experiment is a creative and dynamic procedure. Therefore, any instructional designer can create a unique plan for solving the identified problem (Gagné et al. 2005).

4.1 Analysis and Exploration

According to McKenney and Reeves (2018), in this phase the researcher seeks in-house expertise and reviews the literature to obtain theoretical insight to help comprehension of the problem, its context and other related topics. To improve the understanding of the educational problem, needs of the stakeholders, and the target context, collaboration with practitioners is sought in this phase as well. In this study, the process of exploration started from an extensive literature review over different topics around EE and entrepreneurship education programs (EEPs). The highlights of this phase show that EEPs are classified into three main categories, namely teaching *about*, *in* and *for* entrepreneurship, aiming to achieve one or combination of these objectives: (a) participants' awareness about entrepreneurship and self-employment; (b) entrepreneurial knowledge and skills required for starting a business; (c) enhancing entrepreneurial dynamism. To do that, EEPs include different contents: (1) 'know-why' or why entrepreneurs act and behave entrepreneurially (attitudes, values and motivations); (2) 'know-how' or the entrepreneurial skills; (3) 'know-who' or who should entrepreneurs know throughout the entrepreneurship process; (4) 'know-when' or when to do it, and (5) 'know-what' or what activities need to be done (knowledge).

In addition, important soft skills such as learning to live with uncertainty, decision making skills, ability to maintain the life–work balance, developing empathy and leveraging failure should also be included in the course. The content is usually selected based on the target audience; therefore, regional factors are important to consider. As important as the contents, teaching methods for EE needs careful consideration. These methods include the proper use of different suitable approaches, including the classic educator-oriented, action learning (student-centred), new venture simulations, the development of real startup, experiential learning, video role plays, skill-based courses, technology-based simulations and mentoring. To infuse entrepreneurial skills among non-business students, EE should be more specific, and discipline based. One of the best pedagogical practices for teaching entrepreneurship to non-business programs is using relevant case studies, idea generation games and mentoring with practicing entrepreneurs. In this study, two major assignments were included in the course design: (a) finding a problem in sport industry and providing a business idea to solve it (individually); (b) preparing a business plan and pitch it in the class (group assignment). In addition to these assignments, case studies from sport startups were included to the course design.

In the next step, to acquire more practical insights, a needs assessment was carried out from three groups of stakeholders who were involved with the sport industry in different ways, including 22 sport entrepreneurs (16 males,

6 females), 2 sport authorities (both males) and 16 sport programs lecturers (10 males, 6 females). The fourth group was 11 sport program alumni, including 7 males and 4 females, who had graduated from the same centre. All participants were Malaysian, aged between 28 to 77. The main purpose of this phase was to determine to what extent entrepreneurship is an option for sport graduates, if there is a need for a separate sport entrepreneurship course, and if so, what different topics should be covered.

The results of the needs assessment indicated to existence of available opportunities for self-employment in the sport industry for fresh graduates and a strong belief that sport entrepreneurship course is needed in the curricula. The most emphasized topics to be included in such courses were business skills, followed by managerial knowledge and general understanding of the local market. In addition, topics such as business plan, fundraising, marketing and finance management, promotional skills and industry knowledge were mentioned as well. Some of the interviewees suggested that more emphasis should be given to ‘idea evaluation skills’, since many young and inexperienced entrepreneurs fail because they build their businesses on wrong ideas or unreliable bases. The needs assessment also revealed that there should be a focus on starting a small business rather than a typical business course in a course specifically designed for sport students. The cultural differences between the three major ethnic groups in Malaysia was also brought up in this phase, and it was emphasized that careful attention should be paid to contextual factors. In addition, both sport authorities who participated in the needs assessment, the then General Secretary of the Olympic Council of Malaysia and a middle manager from the Ministry of Youth and Sports Malaysia, both suggested inclusion of government initiatives, such as different loans offered to startups and fresh graduates, in the teaching material.

In the next step, in order to prepare the structure of the course outline, the basic elements of the course were summarized by answering to questions adapted from Gagné et al. (2005). Table 1 presents these questions and provided answers.

[Please insert Table 1 near here]

Eventually, based on the collected information and the outcomes of the needs assessment, we designed the first draft of the course outline.

4.2 Design and Construction

In this phase, to form the course outline and teaching strategy the outcomes of analysis and exploration phase were grounded based on four constructs of TPB. To do so, a set of questions were adapted from Gagné et al. (2005), and

following TPB, the relevant answers and instructions were provided (Table 2). The result became the final draft of the sport entrepreneurship course outline.

[Please insert Table 2 near here]

Subsequently, a detailed outline was designed for every session of the course. Upon completion of the draft, it was sent to four entrepreneurship education instructors for it to be assessed. All evaluators approved the course outline and found the order of the topics logical; they also provided few suggestions. After some modifications, the new version of the course design was presented to three local sport entrepreneurs to get more practical insights, and they approved the design with recommendations on adjusting the course to a local context. The course outline was designed in line with course objectives, for 7 two-hour sessions. Eventually, the final draft of the course outline, as presented in Table 3, was designed.

[Please insert Table 3 near here]

Furthermore, along with the course outline, the teaching strategy was also drafted, mainly based on Gagné's (1985) nine events of instruction. These nine points, utilized as the general guideline for all sessions during resultant implementation, are presented in Table 4.

[Please insert Table 4 near here]

4.3 Evaluation and Reflection

The evaluation of the completed design might be carried out in the form of testing conducted on or by implementing an intervention. Evaluation may scrutinize different aspects of an intervention including feasibility, soundness, viability, and broader institutionalization. Once the empirical findings are drawn, their results and critical reflection will be used to accept, modify, or even re-design the frameworks, principles or the resultant prototype. The evaluation phase of this study consisted of two cycles; one, through a pilot implementation of the intervention, and the other one, during and after the main intervention. Before implementing the main intervention, the final draft of designed course

outline and the teaching strategy were evaluated through a pilot implementation of the intervention, on a smaller scale, to evaluate the final design of the intervention before conducting the main educational experiment (McKenney and Reeves 2018). According to McKenney and Reeves (2018), implementing the intervention on smaller scales (depending on the size of the study, for few participants, few classes, few institutes etc.) is a practical way to evaluate the final design of the intervention before conducting the main educational experiment. Upon completion of the pilot intervention, the course outline and teaching strategy were modified based on the obtained feedback. This section first explains the pilot intervention and then the main intervention of this EDBR.

4.3.1 Pilot Intervention

The pilot intervention was conducted in Centre for Sport and Exercise Sciences, University of Malaya. 5 sport management students volunteered to participate in the pilot intervention. The objective of this pilot was to observe the students' reactions and feedback about the topics and delivery method. Their feedback indicated that the designed outline was overly advanced in some parts. According to our observation, the limited knowledge and skills of the participants about business and self-employment made them confused, distracted and stressed; the learning process was affected negatively. Therefore, the technical parts of topics related to startups, and some of entrepreneurial skills such as pricing, finance and accounting for small businesses were simplified (some deleted) in the final version of the course outline.

4.3.2 Main Intervention

The main intervention of this study was enacted through an educational experiment. The intervention setting included an educational experiment, i.e. teaching sport entrepreneurship based on the outline designed in the previous phase. As part of the formative evaluation plan of the intervention, at the end of the third session students were asked to write their feedback about the course and their classroom experience. The most noticeable positive feedback was that 15 students had found the delivery method simple, clear and understandable. The most repeated feedback was that participants perceived the contents to be practical.

In addition, two summative evaluations were carried out. First, during the third session, a classroom assignment was conducted, which aimed to evaluate the effectiveness of creativity and idea generation topics. Students were asked to identify a problem they see in their daily life or in the sport industry with a solution that could be a product or service relevant to the industry. Almost all the students applied what they had learned in their answers, with some creative ideas being applied in the responses. The second summative assessment was on evaluation of a

business idea. In the sixth session, students were divided to groups of 3-4 and each group was assigned a sport business idea to evaluate its feasibility.

4.3.3 Quantitative Assessment on Students' EI

The pre/post-test data of TPB constructs and the results of independent samples t-tests of both experimental and control groups are summarised in the Table 5. As the results indicate, although all four constructs were increased in the experimental group after the course, these changes were only statistically significant in EIs and ATB of students. The students' EIs in the experimental group who attended in the course ($M=5.7$, $SD=0.73$) was significantly different than of those in the control group ($M=4.7$, $SD=0.91$) who were not exposed to the intervention, since $t(50)=-4.1$ and $p \leq 0.001$. The effect size for this analysis ($d=1.09$) was identified to exceed Cohen's (1988, p.22) convention for a large effect, which is $d=0.80$. The graph in Fig. 3 illustrates the changes of EIs at the baseline and after implementation of the course.

[Please insert Table 5 near here]

[Please insert Fig. 3 near here]

Fig. 3. Students' EIs before and after the Course in Experimental and Control Group

5. Discussion

To fill the gap in the literature for studies on the systematic process of designing entrepreneurship courses, especially for sport programs, this study, which employed educational design-based approach to design and conduct a sport entrepreneurship course, was undertaken. The course outline was designed based on the literature review and the needs assessment outcomes. The outcomes of the needs assessment indicated that this course should be a general introduction of entrepreneurship and the basic knowledge about entrepreneurship in the sport industry, with a focus on the local context; this approach is recommended by several experts (e.g., Fayolle et al. 2006; Liñán 2004; Lindh and Thorgren 2016). TPB shaped the theoretical foundation of the course design, and the teaching strategy was prepared following Gagné's (1985) nine events of instruction. The design process included one cycle of iteration, after it was implemented as a pilot intervention. The completed design formed the final course outline, which was consisted of seven sessions.

One notable observation from the needs assessment phase and classroom experiences was the importance of considering cultural aspects for teaching entrepreneurship, which has been highlighted by several scholars (e.g.,

Giacomin et al. 2011; Liñán et al. 2013; Moriano et al. 2012). Lim and Envick (2013), who conducted a cross-cultural research between university students of several countries, including 99 Malaysians, to study the role of various cultural dimensions on entrepreneurial orientations, stated that ‘identifying the role culture plays is essential to develop successful EE practices to reflect on the unique cultural strengths and weaknesses of each national culture’. One cultural attribute we encountered during the needs assessment phase was the tendency towards governmental jobs among some alumni that was similarly pointed out by some of the course participants.

Students’ feedback and classroom observations revealed that the topic of *opportunity recognition* is crucial for an introductory sport entrepreneurship course, which based on the needs assessment results was designed with ‘awareness towards entrepreneurship and self-employment’ objective. According to EE experts (e.g., Ardichvili et al. 2003; Shane and Venkataraman 2000) opportunity recognition is the core of entrepreneurship and it is among the most important skills an entrepreneur should possess.

In general, what could be concluded from students’ feedback was that using Gagné’s nine events of instruction provided a clear structure and solid framework for the instruction and helped to facilitate the learning process. Studies show, incorporating these nine events of instruction into the teaching strategy, especially in the face-to-face learning environments, enhances the students’ learning experience and provides a structure for the class or training settings (e.g., Miner et al. 2015; Wong and Kaur 2018).

In addition to the design outcome and students’ feedback, as presented in the Table 5, the post-test results showed EIs of students who attended in the course increased significantly with a large statistical effect ($d=1.09$). Having gone through the literature, there are studies that show the same effect of EE on EI in different fields such as business studies, social science and engineering (e.g., Fayolle et al. 2006; Liñán et al. 2011a; Maresch et al. 2016; Rauch & Hulsink 2015). However, there are studies, such as Oosterbeek et al. (2010), Chen et al., (2015) and Fayolle and Gailly (2015) that found no significant improvement in students’ EIs after exposure to an EEP. One possible reason explained by EE researchers was that many students who attend in EEPs will understand about the difficulties and challenges of self-employment and come to this conclusion that they are not suitable for an entrepreneurial adventure (Chen et al., 2015; Oosterbeek et al., 2010). Moreover, Fayolle and Gailly (2015) stated that it might be the shortness of the EEP (their intervention was implemented in a three-day workshop) that did not make significant impact on students’ EIs.

5.1 Limitations and Future Research

This study was an EDBR, in which the completed design was conducted in a real-world situation, and outside laboratories or controlled condition, and the number of participants was relatively small and non-randomized, hence, the generalisability of the results should be done with caution. It should be stated that EDBRs, are rarely, if ever, designed and conducted in the perfect possible way (Anderson and Shattuck 2012), thus, there will always be room for improvement, both in terms of design and implementation.

In this study TPB was used as the theoretical foundation of the course. More studies, especially with different course objectives and longer duration, are needed to investigate the effectiveness of this model as the main theoretical foundation of an entrepreneurship course for non-business students. Moreover, different course outlines and teaching strategies could be designed and implemented, in order to have better understanding of the effectiveness of different types of EEPs. It would be valuable, practical and insightful if more longitudinal studies are carried out, in the form of EDBR or action research, and investigate students' entrepreneurial behaviour during and after their studies.

5.2 Conclusion

In the current study, we designed and developed a sport entrepreneurship course, in which we took TPB as the foundation of the course design. Having employed an educational design-based approach, the final course outline consisted of four general topics including introduction to entrepreneurship (definition, categories, etc.), entrepreneurial behaviour and attributes (creativity and innovation, and idea generation methods), entrepreneurial skills (such as idea development and implementation), and common knowledge (such as social entrepreneurship in the sport industry).

Needless to emphasize, producing graduate entrepreneurs, or at least entrepreneurial graduates, is a difficult objective to achieve; what is really needed is more practical studies aimed to solve real-world problems conducted under real world situations. This study could, hopefully, open a new window for more research on systematic process of designing entrepreneurship course, especially for other non-business programs.

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