

The Impact of integrating design-thinking approach into university entrepreneurship education on students' entrepreneurial mindset

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Introduction

Over the last decades, entrepreneurship education has been spreading everywhere; it has been introduced in universities at the under/post graduate programmes, schools, and vocational training centres. Not only this but institutions are clearly moving in rapid progression to meet this arising interest by creating co-circular elements to include as well co-working spaces and incubators, for the importance of entrepreneurship graduates in contributing to the economic growth and development of their countries (Hattab, 2014). Moreover, it is believed that the entrepreneurial skills, like the ability to take initiatives, think critically, solve problems and communicate effectively are increasingly viewed as essential for career services. One factor contributing to the interest is the possibility that such cognitive skills can be attained through education and training.

However, one of common pitfalls in entrepreneurship courses was to ignore the pre-ideation stage and the actual problem-solving activity (i.e. opportunity creation/development). Moreover, entrepreneurship education adopted the causation approach and thus entrepreneurship has been taught from a business administration perspective, students were taught “about” entrepreneurship and “for” entrepreneurship (Pittaway and Edwards, 2012), rather than “through” entrepreneurship (Linton and Klinton, 2019). They are taught how to develop a business plan as a planned practice with focus on prediction. Such a practice negated the complexity of entrepreneurship and perceived it as a linear process, which is not correct as creating an entrepreneurial opportunity and developing it for the market is a process that is highly complex, social and evolves gradually.

Moreover, researchers have found that basic entrepreneurship focusing on business plan have a negative impact on students’ intentions of starting entrepreneurial ventures (Carrier, 2005). On the contrary, courses that focus on developing skills and competencies show that students are more likely to start a venture (Nabi et al., 2017), in particular, those articulating creativity and innovative mindsets. To achieve this, Neck and Greene stress that entrepreneurship education should focus on how to act, anticipate and generate in an unknown future. A possible way is to use of design thinking approach (Stovange and Nislen, 2015).

Over the last years, design thinking has become an interesting tool for business management practitioners (Kortzfleisch, Zerwas and Mokanis, 2013) as it draws on “design causality” which allows of producing a scientific knowledge that is actionable and open to validation. Brown (2008) defines design thinking as “a discipline that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business strategy

can convert into customer value and market opportunity” (p. 86). It is a cross-disciplinary and user centered method for finding innovative solutions to problems (Daniel, 2016).

While design thinking and entrepreneurship seem to be a promising combination as a teaching approach in entrepreneurship education, , it has not yet been sufficiently recognized and discussed in the context of entrepreneurship education. Therefore, the purpose of this paper is to conceptualize entrepreneurship learning through a method-and-design-based approach through investigating the impact of design thinking approach on students’ entrepreneurial mindset and their intention to start businesses.

Methodology

This study aimed at assessing the impact of integrating the design thinking approach into the entrepreneurship modules on students’ entrepreneurial mindset. In order to fulfil this aim, the researcher chose a cohort at degree year two at the British University in Egypt who are studying entrepreneurship module. The module is offered over twelve weeks and takes the students through the entrepreneurial process. The students were divided into two classes (groups). One group is exposed to the “traditional entrepreneurship” course where they were asked to build business plan for a product/service of their choice. The other group was exposed to “design thinking” approach. Ultimately they had to submit a business plan (as this is the main assessment of the module), but it was based on a solution for a problem they had to identify during the pre-ideation stage (empathy and define).

a. Sample

Participants in the study consisted of students at the British University in Egypt at degree your two from Faculty of Business Studies. Students at this level start contemplating different occupational

decisions including starting their own businesses. Moreover, they fall in the age group that is the second most entrepreneurially active group (18-24) in Egypt (Hattab, 2012). Number of students, who represent the whole sample, was 240 students, divided into two groups, each was 120 students. The rationale behind this is to conduct a comparison between those who were exposed to the traditional entrepreneurship education and those who were exposed to the design thinking approach.

b. Data Collection Tool

Data was collected via paper and pencil close ended questionnaire, that was distributed to students at the end of the semester (at the end of the twelfth week). The questionnaire included one section only that was intended to measure the entrepreneurial mindset.

The entrepreneurial mindset was assessed using an instrument developed by Cheryl, et al (2016) based on the framework established by the Kern Entrepreneurial Engineering Network (KEEN). The assessment instrument consists of 37 questions, grouped under ten factors/themes, which are: Problem solving/logical thinking, Engaging stakeholders, Value creation (Risk Management), Gain entrepreneurial mindset, Ability to learn, Analyze market conditions, Managing complex tasks, Exposure to entrepreneurship, Ability to anticipate market/product developments, and, Intrinsic curiosity. In All items were belt as 5-point likert-type scale, renging from strongly agree to strongly disagree.

Findings

The data collected was analysed using SPSS, in particular the Unpaired t-test, as there are two groups of students. At a p-value =0.038 (<0.05), it can be said that the students who used design thinking (group one) showed higher levels of entrepreneurial mindset compared to students who

used the traditional way (group two). Further analysis shows that group one showed higher levels in terms of problem solving, value creation, ability to learn, and managing complex tasks, whereas group two showed higher levels in terms of engaging stakeholders and analysing market conditions. Both groups didn't show any differences in terms of intrinsic curiosity, exposure to entrepreneurship and ability to anticipate market/product developments.

Implications for Theory and Practice

It is widely established now that entrepreneurship is a complex process that lacks linearity of business thinking. Hence resorting to the traditional ways of teaching entrepreneurship through building business plans might not be the best tool to teach entrepreneurship.

The findings of this research have shown that design thinking has a higher impact on students' entrepreneurial mindset compared to the traditional way of teaching entrepreneurship. In Egypt, as many other countries, entrepreneurship education has been spreading across universities aiming at increasing the number of students (graduates to be) who are contemplating the option of starting their businesses, but the outcome is less than the expected. Since most of entrepreneurship courses focus on building businesses plans, thus a shift in the way entrepreneurship is offered at universities to incorporate design thinking might increase the likelihood of successful startups from university origins.

The previous research stream focused on entrepreneurship education, and despite the trials of different researchers to differentiate between teaching "about" entrepreneurship and "for" entrepreneurship, very few attempted education "through" entrepreneurship techniques. Hence this paper contributes to expanding the theoretical connection between entrepreneurial education and design thinking.

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