Using Problem-focused Approach to Nurture Creativity and Entrepreneurship among Students

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Abstract

This paper discusses the use of a problem-focused approach to nurture creativity and entrepreneurship among students in a school setting. The study sample consisted of three groups of students (age 16 years old) from three secondary schools in Malaysia. The participants consist of 25–35 students from each school (n=95). The data collection took place during three workshops, which were conducted using a problem-focused approach, with participants from each school. At the end of each workshop, participants were asked to fill in an electronic diary about their experience. The participants’ reflections after the first workshop were analysed to identify the use of a problem-focused approach in the development of students’ creativity and entrepreneurship. The findings were reduced into thematic categories representing the participants’ awareness of aspects of creativity, innovation, and entrepreneurship. The results of the study highlight the participants’ positive attitude towards the use of problem focused approach. As a whole, the participants reported that the activities in the workshop were beneficial and made them aware of the opportunity to innovate using the problems encountered in everyday life. The findings suggest that exposing students to a creative and entrepreneurship-friendly environment through the use of a problem-focused approach nurtures the development of students’ creativity and entrepreneurship.

Keywords: problem-focused approach; creativity; entrepreneurship; school students

1. Introduction

Entrepreneurship education is important to the development of human capital needed by society. Thus, we need
Entrepreneurship is inseparable from creativity and innovation. One of the main goals of education is to produce individuals who are able to contribute to themselves, their family, the community and the nation. Efforts to develop
quality human capital starts at school and educators need to plan a suitable curriculum to help achieve this goal. Most education systems in the world have recognized the importance of implementing aspects of creativity, innovation, and entrepreneurship in the teaching and learning process. Embedding entrepreneurship and innovation in the learning environment requires new models, frameworks, and paradigms (Lucky, 2011). Volkmann et al. (2009) stress the importance of rethinking the old systems and a fundamental ‘rebooting’ of the educational process. They claimed that an incremental change in education is not adequate in today’s rapidly changing society and asserted that we need schools, colleges, and universities that are entrepreneurial in their approach to preparing individuals for the future. Oganisjana (2010) introduced a holistic structural functional model of entrepreneurship that views the concept as a system and suggested that the most effective way to promote students’ entrepreneurship is to organise studies on the entrepreneurship process in which students learn by doing and reflecting on their experience. She claimed that it is possible to develop students’ entrepreneurial skills while learning in any discipline by leading them to solve real-life problems. This study focuses on how creative and entrepreneurial skills can be nurtured through a teaching approach that emphasizes the use of ‘real problems’ so that learning can be more authentic and meaningful to students, as suggested by the constructivist learning theory.

1.2. Problem-focused approach

The problem-focused approach in this study refers to the use of a ‘problem’ as a focal point to raise participants’ awareness of how everyday problems faced by individuals, family, and the community around them can be used as an opportunity for them to create and innovate. The first workshops were used to provide an opportunity for participants, in groups of 4-6, to examine various everyday problems that can be translated into an opportunity to invent in order to offer a solution to the identified problems. Activities in the problem-focused approach included individual activities wherein they were required to reflect on and identify the problems they encountered and determine how products are used to make life easier. They were also asked to identify the characteristic of the product they used. Consequently, each group was asked to develop a problem bank and suggest a solution through the invention of a new product or modification of an existing product.

2. Methodology

This study employed a qualitative approach involving three groups of students from three schools in Selangor, Malaysia. The participants consisted of 25-35 students from each school (n=95). The students were selected from multidisciplinary fields that include the sciences, accounting and commerce, arts, engineering drawing, and ICT. The distribution of students according to gender and schools is shown in Table 1. The groups in each school were formed in a way to include students from different disciplines in each group. The data collection involved three workshops with participants from each school. At the end of each workshop, participants were asked to fill in an electronic diary about their experience. The development of students’ entrepreneurship was analysed through their reflections with the aid of NVIVO 10. The participants’ reflections on the first workshop were used to fulfil the objective of this paper. The participants consisted of 25-35 students from each school (n=95). The students were selected from multidisciplinary fields that include the sciences, accounting and commerce, arts, engineering drawing, and ICT. The distribution of students according to gender and schools is shown in Table 1. The groups in each school were formed in a way to include students from different disciplines in each group. The data collection involved three workshops with participants from each school. At the end of each workshop, participants were asked to fill in an electronic diary about their experience. The development of students’ entrepreneurship was analysed through their reflections with the aid of NVIVO 10. The participants’ reflections on the first workshop were used to fulfil the objective of this paper.
### Table 1: Distribution of samples according to gender and types of school

| Schools              | Male | Female | Total |
|----------------------|------|--------|-------|
| School A (suburban)  | 17   | 19     | 36    |
| School B (urban)     | 20   | 14     | 34    |
| School C (rural)     | 5    | 20     | 25    |
| **Total**            | 42   | 53     | 95    |

3. **Findings and Discussion**

The participants’ reflections in the learning diaries after the first workshop provide information regarding their perspectives on the use of a problem-focused approach. In particular, for this paper, students’ reflections after the first workshop were used to explore their perception towards ‘problems’ in relation to the development of their creativity, innovation, and entrepreneurship. The results show that a majority of the participants concluded that problems encountered in everyday life can be used as a source of innovation. The participants also reported that the activities in the workshop helped them to generate ideas for creating a product or an invention. They acknowledged that identifying problems faced in everyday life can trigger an idea to create a product or offer solutions to solve the problem. Further analysis of the responses shows a change in students’ perceptions towards problems. One participant reported that before the workshop, they hated problems but now asserted that problems can lead to creativity and innovation. Other responses were:

‘…we shouldn’t be afraid of problems…’
‘…we shouldn’t run away from problems…’
‘…we should identify the problem … not avoiding the problems …’
‘…I learn to like “problems”…’

Overall, the participants showed a more positive attitude towards problems that they encountered in everyday life. Excerpts from the responses indicating students’ positive attitudes towards problems are as follows:

‘…problems can lead us to be more creative and innovative to find ideas to solve the problem…’
‘…with problem, I can be more creative and be more innovative…’
‘…Identifying problems encountered in everyday life can give ideas to invent…’

It can also be seen that the participants associated problems with creativity and innovation, such as:

‘…problem will move us to generate ideas to solve problems creatively…’
‘…if we analyse problems in everyday life we can get ideas and think creatively…’
‘…problems can produce creative and innovative ideas…’

The participants also acknowledged that through the activities in the workshop, they learned how to identify and solve problems that could be applied in their everyday life. Among the responses were

‘… I learn how to generate ideas’
‘… I learn many ways to generate ideas…’
‘… I used to think of only one solution before…but now I am aware that there are many ways to solve a problem…’

However, based on researchers’ observations, one of the main obstacles faced by students was that they tended to come up with problems that were not associated with the creation of products as a solution. This is a very important feature as the problem identified should lead to the creation of a product that can be used to solve the problem. Thus, the role of the facilitator is very important to guide students to focus on the right type of problems.

In terms of generating alternative ideas to solve problems at the beginning, they were influenced by stereotypical thinking. However, after exposure to the activities in the workshop, the majority of participants reported that they began to realise the importance of thinking outside the box. Some of the responses were as follows:

‘…We should think outside the box…’
…avoid being stereotype in generating ideas to solve a problem…’
…I learn how to think outside the box…’
…should think beyond expectation…’

As a whole, it can be concluded that four major themes emerged from the data, namely: (a) students’ awareness of the benefit of identifying problems faced in everyday life as a source of innovation, (b) positive attitude towards ‘problems’, (c) application of problem-solving skills in everyday life, and (c) the importance of thinking outside the box. These results support the use of a problem-focused approach in nurturing the development of students’ creativity and entrepreneurship. It is important that they be aware of the process and how it shapes their thinking and attitudes towards the practice of creativity and entrepreneurship in everyday life. The use of a problem-focused approach brings the learning process closer to the students’ real life as it starts with things that are close to them. One important feature is that it involves authentic learning, thus making the learning process more meaningful to students. This approach is in tandem with the constructivist learning theory, which proposes authentic learning, such as the use of real life problems, to make learning meaningful to students (Woolfolk, 2008). Schools should encourage more programs that use authentic learning and bring students activities closer to real life so that they can see the connection between what they are learning with challenges they faced in the real world.

4. Conclusion

This study provides evidence for the usability of a problem-focused approach to expose students to an entrepreneurship-friendly environment. One important characteristic of a problem-focused approach is that it provides a creative and entrepreneurship-friendly environment that can be used as a strategy to nurture creativity and entrepreneurship among students in a school setting. Using this approach, students are exposed to authentic learning using a ‘real-world’ problem. It is proposed that this strategy be used in school settings either in curriculum or co-curriculum activities to nurture an entrepreneurship-friendly culture among the students. The first step is to inculcate the right attitude and then equip students with the right skills so that they can explore entrepreneurial opportunities in the future.

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References

Lucky, E.O. 2011. Nurturing Entrepreneurship Development in the 21st Century: The Practical Approaches. International Journal of Humanities and Social Science. 1(9): 219-227
National Economic Advisory Council. (2010). New Economic Model for Malaysia Part 1. Putrajaya: Percetakan Nasional Malaysia Berhad.
Oganisjana, K. (2010). PhD thesis. The Development of Students’ Enterprise in Study Process” (Studentu uzpīnības veicināšana studiju procesā”). University of Latvia.
Van De Kuip, I., & Verheul, I. 2003. Early development of Entrepreneurial Qualities: The role of initial education. SCALES paper series.
Volkmann, C., Wilson, K.E., Marlotti, S., Rabuzzi, D., Vykarnam, S., & Sepulvuda, A. 2009. Educating the next wave of entrepreneurs: Unlocking entrepreneurial capabilities to meet the global challenges of the 21st Century. A report on the global Education Initiative. Switzerland: World Economic Forum
Woolfolk, A. 2008. Educational Psychology. 10th Edition. Boston: Allyn and Bacon