Item analysis on the effects of study visit programme in cultivating students' soft skills: A case study

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Abstract

Experiential learning programme is an important platform in the process of cultivating student's self-development. The teaching approaches that apply experiential learning are widely implemented in higher education. The Faculty of Education in UTM has organised many of such experiential learning activities for students, however the effect of the programmes towards students' self-development is still under researched. Hence, it is still unable to fully identify their effects on cultivating students' soft skills through the process of organizing the programme and students' participations. Therefore, this study was conducted to identify the effects of experiential learning programme namely UNESA Study Visit Programme of the State University of Surabaya (UNESA) organized by the Faculty of Education UTM towards developing participants' soft skills. This case study involved 39 masters students currently majoring in Primary School Education at State University of Surabaya. The data were collected through a questionnaire involving 20 items which consist of 7 soft skills constructs. Item analysis using the Rasch Measurement Model shows that the most dominant effect is from the aspect of critical thinking and problem solving skills (logit = -1.335). Meanwhile, the positive effect is also reflected in the aspects of Professional Ethics and Moral (logit = -0.495), Communication Skills (logit = -0.410), Lifelong Learning and Information Management (logit = -0.058), Leadership Skills (logit = 0.080) and Team working Skills (logit = 0.435). Lastly, the effect on Entrepreneurship Skills is weaker with logit value = 1.440. The findings show that experiential learning programmes do provide positive effect to students and should be conducted more widely in education.

Keywords: *Experiential Learning, Soft Skills, Logit*

1. Introduction

According In any educational systems, the intended goals are not only revolve around developing individuals solely from the cognitive aspect (knowledge) but also including the development in other aspects, such as affection (emotional), psychomotor (physical), social and spiritual aspect. In other words, the intellectual development of students needs to be in line with their needs for emotional and spiritual developments. Educational system that focused too much on cognitive and psychomotor skills but lacking in affective and social development will result in developing unbalanced and unholistic human capital [1].

In the context of higher education, graduates should not only excel in academic achievement but also able to master soft skills such as effective communication, leadership and teamwork [2]. Hence, the current academic planning should consider integrating elements of communication skills, teamwork, and critical thinking skills in teaching and learning courses [3]. Based on the soft skills development model in Malaysian higher learning institutions, the development of students' soft skills can be implemented through enrichment programmes, teaching and learning activities and also experiential learning through living in the campus [4].

2. Background of study

Outdoor activities are a form of experiential learning that used as a medium for soft skills cultivation among students at higher learning institutions. The implementation of experiential learning enquire students acquire knowledge actively through their own experience and reflections in the learning process [5]. In parallel with that, experiential learning seeks to increase the interest and motivation of students in learning a subject [6]. Furthermore, Prentice and Robinon[6] also stressed that the implementation of such learning will assess students' logical and critical thinking ability while working towards finding solutions during the challenge.

The development of students' soft skills is a key agenda at Universiti Teknologi Malaysia (UTM). This can be seen through UTM's efforts in promoting experiential learning activities organized by the General Course and Co-curriculum Centres (CGCC) aimed at strengthening soft skills among students. In line with that, the Faculty of Education, UTM is an active faculty hosting experiential learning programmes in order to strengthen students' soft skills. The implementation of such programmes is carried out every semester by both undergraduate and postgraduate students [7]. On top of this, the Faculty of Education also plays a role in organizing experiential learning programmes for both local and international students who wish to participate in experiential learning programmes at the Faculty of Education. Examples of such programmes are Students Internship Programme of Universitas Ham-

zanwadi, Students Study Visit Programme of Universitas Ahmad Dahlan and Academic Visit Universitas Sawerigading Makassar.

This article intends to examine the effect of one of the experiential learning programmes namely the Study Visit of Students of the State University of Surabaya (UNESA) by the Faculty of Education UTM on cultivating participants' soft skills. This was a 9 day programme involving 39 Masters students majoring in Primary School Education. During the 9 days, a total of 12 training sessions have been conducted. The training sessions involved delivery of curriculum-related theories, delivery strategies and assessment methods of primary school education and hands-on activities that require participants to convey and present the knowledge they have learned in the classroom. All participants are currently in their 3rd semester and their participation in this programme is to fulfil their programme compulsory course which is the course on Field Experience Practice (PPL).

The PPL programme is a form of experiential learning programme that intend to increase students' competency through the practice of transferring the knowledge learned during lectures into the real learning context [8]. The PPL programme is conducted to ensure students understood the duties and responsibilities as educators in the teaching process; increase self-competence in aspects of pedagogy, personality, social, and professional competency; understanding school situation, curriculum, lesson planning, and assessment methods as well as the preparation of becoming a professional educator [8]. In summary, this PPL programme emphasizes cultivating students' soft skills in becoming a competent educator. The Faculty of Education UTM has organized many experiential learning activities at both local and international levels. However, reports on the organisation of the programme which include planning, implementation, evaluation, role played by students, and the effects of programmes on students' development is still under documented. Hence, it is unable to identify effects of the programmes in cultivating students' soft skills. Therefore, this study is conducted to fill the research gap in identifying the effects of experiential learning programme in cultivating participants' soft skills through the UNESA Study Visit Programme organized by the Faculty of Education, UTM.

3. Research objectives

This study aims to:

i. Identify the effects of the UNESA Study Visit Programme in cultivating students' soft skills.

ii. Identify the most dominant construct of soft skills that has affected students' after their participation in the UNESA Study Visit Programme.

4. Research methodology

In this study, a total of 39 postgraduate students (undertaking Master in Primary School Education) were involved as the participants. 84.6% of students were female and 15.4% were male. All of them are in their third semester of study. The participants completed the self-developed questionnaire consists of 7 main constructs of soft skills which measure through 20 items on the last day of their study visit programme. All items are rated on a 5-point scale, from "Strongly Disagree" (1) to "Strongly Agree" (5). All the collected data were analyzed by applying Rasch Measurement Model to identify the logit measure for each item. The mean logit value was then used to establish the ranking of the items. The psychometric properties of the items have also been tested and proved to be valid and reliable (refer Table 1).

Table 1: Analysis of Psychometric Properties

No.	Aspect	Value	Implication
1.	Item Reliability Coefficient	0.74	Fair and exceed minimum condition 0.67 [9]
2.	Person Reliability Coefficient	0.87	Good and exceed minimum condition 0.67 [9]
3.	Unexplained Variance for 1st Contrast	9.4%	Good and lower the cut off point <15% [9] -The degree of items measuring other than latent variable which intended to be measure is very weak -The items are really measure what to be measured
4.	Item Polarity	0.37-0.73	All the measuring items are aligned (positive value) in the same direction on the latent variable (soft skills)

5.   Results

Based on the calculated mean logit for each constructs, the types of soft skills were ranked. The lower mean logit value implies that the particular soft skill has greater effect on students and vice versa.

Table 2: Logit Value for Each Constructs

Rank	Soft Skills	Items	Logit
1	Critical Thinking and Problem Solving Skills	PS1,PS2,PS3,PS4	-1.335
2	Professional Ethics and Moral	PE1,PE2	-0.495
3	Communication Skills	C1,C2	-0.410
4	Lifelong Learning and Information Management	LLL1,LLL2,LLL3,LLL4, LLL5,LLL6	-0.058
5	Leadership Skills	L1,L2	0.080
6	Team Working Skills	TW1,TW2	0.435
7	Entrepreneurship Skills	E1,E2	1.440

Table 2 shown that the construct of Critical Thinking and Problem Solving Skills has the lowest mean logit value (-1.335) and was ranked highest of its effect on students participated in the UNESA Study Visit Programme. This implies that this type of soft skill was the most dominant skill in affecting students. Meanwhile, the construct of Professional Ethics and Moral (logit=-0.495) and Communication skills (logit=-0.410) was ranked number two and number three respectively. Another construct which also has negative logit value was the construct of Lifelong Learning and Information Management (logit=-0.058). Constructs which have negative logit values indicate that those soft skills have great effect on students participated in the UNESA Study Visit Programme. Whereas, both Leadership Skills (logit=0.080) and Team Working Skills (logit=0.435) constructs have positive logit values which imply that the effect of these soft skills on students were less than the soft skills which have negative logit values. However, the positive logit values for these two constructs were very low and near to zero which indicates positive effect of the Leadership and Team Working Skills on students. Lastly, the logit value for Entrepreneurship Skills was more than one (logit=1.440) which implies that the effect of this soft skills on students was weaker than other soft skills.

The position of item logit in the person-item map as presented in Figure 1 shows the distribution of the measure for each construct. It is clear that the item measuring Problem Solving Skills posits at lower place as compared to other six constructs.
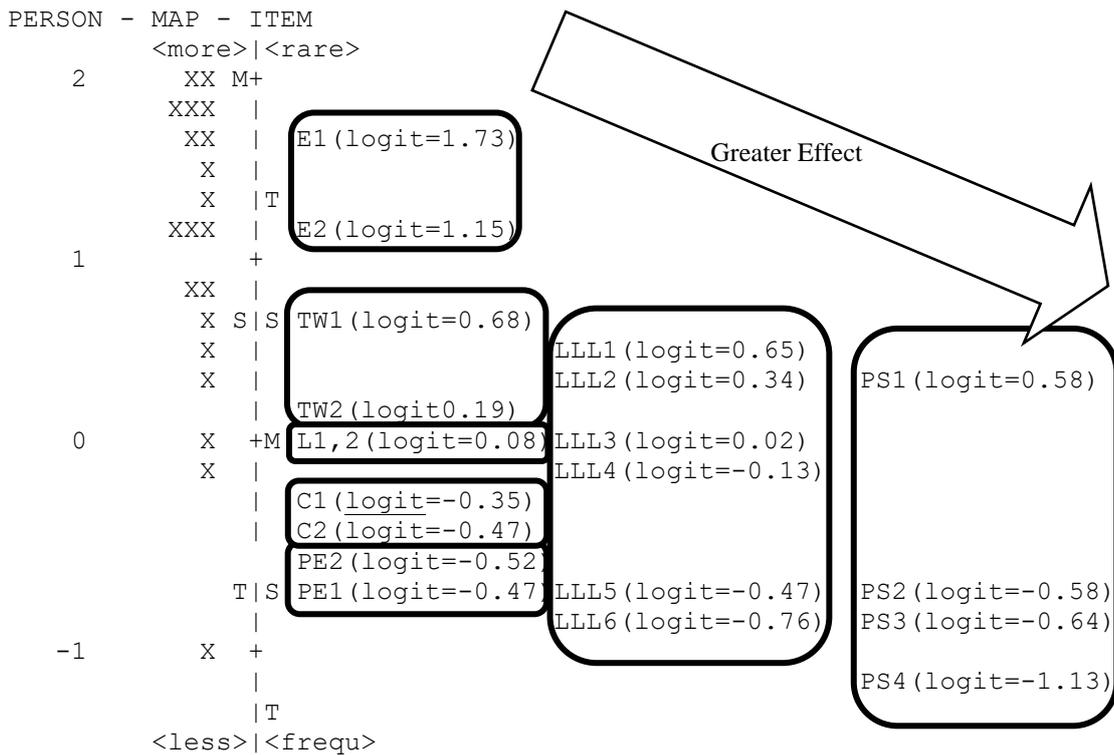
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    2      XX M+
         XXX  |
          XX  |     E1(logit=1.73)
           X  |
           X  |T
         XXX  |     E2(logit=1.15)
    1        +
          XX  |
           X S|S  TW1(logit=0.68)
           X  |          LLL1(logit=0.65)
           X  |          LLL2(logit=0.34)       PS1(logit=0.58)
              |   TW2(logit0.19)
    0      X +M  L1,2(logit=0.08) LLL3(logit=0.02)
           X  |          LLL4(logit=-0.13)
              |   C1(logit=-0.35)
              |   C2(logit=-0.47)
              |   PE2(logit=-0.52
         T|S  PE1(logit=-0.47) LLL5(logit=-0.47)  PS2(logit=-0.58)
              |          LLL6(logit=-0.76)         PS3(logit=-0.64)
   -1      X  +
              |                                    PS4(logit=-1.13)
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Greater Effect

Fig. 1: Hierarchy of Constructs

6. Discussion

The findings show that critical thinking and problem solving skills are two of the most dominant soft skills that have successfully affected students after the programme. This finding is in line with Ng's [7] finding which identified that the involvement of students in experiential learning through service-learning has a positive effect on problem-solving skills. Similarly, Eyler and Giles [10] also viewed problem solving skills as one of the positive learning outcomes through experiential learning programmes. According to Morris et al. [11], a more effective learning outcome of experiential learning programme is where students are able to think critically in facing and solving complex and challenging problems. Through participating in experiential learning programmes, students have the opportunity to analyze information from a variety of perspectives especially on their understanding of the social structures and challenges appeared in the community before they arrived in solving a problem [12].

This study also shows that students' participation in the experiential learning UNESA Study Visit Programme has increased their professional ethics and morality. This outcome is also parallel with the finding of previous study which indicates that university students' involvement in experiential learning improved their understanding of work ethics [13]. According to Noor Syafafwati Mamat [13], work ethics include honesty, punctuality and adaptability in the new environment. In addition, the effect of professional ethics and morality can be seen through students' adaptability in a new environment. This study required the master degree postgraduate students to adapt to the new environment as the programme was conducted in Malaysia. Ngai [14] in his study showed that experiential learning programme has helped to develop student's personality to become a responsible citizen and an agent of social change in the community through respecting others' culture.

Another positive effect of this experiential learning UNESA Study Visit Programme can also be seen on students' communication skills. According to Rahman [15], one of the effects of students' involvement in experiential learning is through learning to communicate effectively and at the same time contributing thoughts and ideas during activities. Students have the opportunity to sharpen and develop their own talents and potentials through communication in the process of programme planning and execution. This is achieved as students need to think critically in identifying problems at the same time communicating with fellow participants, faculty and universities [16].

Furthermore, another positive effect on lifelong learning and information management is due to the selection of the programme location. The programme was run between the Faculty of Education and primacy schools in the community which very much related to the primary school education course taken by the participants. The experiential learning programme is an outdoor educational activity that provides students with learning experiences. This programme is an extension of the teaching and learning process in the classroom [17] in order to further enhance the understanding of the content of the courses being followed [18]. Additionally, it also has a positive effect on the students' experience in their studies [6]. Besides that the involvement of students in the experiential learning programme has increased their awareness and understanding of the culture of a particular community [19] and civic awareness [20] which are regarded as part of the lifelong learning elements.

The positive effect of students' engagement in experiential learning in terms of leadership and teamwork is parallel to Ng's findings [7]. Students experienced increased in leadership, tolerance and self-esteem after participating in an experiential learning programme [13]. The experiential learning programme has helped to built students' life skills to function as a leader in a dynamic and challenging world of globalisation [21]. In addition, students felt the increase in teamwork and were excited to engage in community-based activities [13]. Past studies have shown that among the benefits the students gained from participating in experiential learning programmes involved increase in social development [10] including teamwork skills [7].

Experiential learning programme has the potential to achieve positive effect on improving entrepreneurship skills[16]. However, the finding shows that the effect of students' engagement in the UNESA Study Visit Programme over student entrepreneurial skills is weak compared to other aspects of soft skills. This situa-

tion may be due to lack of entrepreneurial and negotiation elements at initial planning of the programme and also throughout the running of the programme.

7. Conclusion

In today's competitive world, students from higher educational institutions should be prepared to compete in the job market by possessing sufficient knowledge, skills and soft skills. According to Ho [22], most employers tend to recruit employees with a variety of additional skills other than skills obtained in their field of training during the recruitment process. However, reports have shown that employers are facing difficulties in finding suitable workers due to the lack of soft skills among most applicants. Therefore, students should master soft skills through participation of experiential learning programmes in co-curriculum activities during university time. By participating in the experiential learning programme, students not only find the knowledge or theories they have learned in the lecture hall are relevance but also applicable in daily life. Students' cognitive, psychomotor, affective and social development can be further enhanced by participating in experiential learning programmes. This is also supported by Reaves et al [23] where they concluded that a way to enhance students' intellectual and social ability in order to compete in the current dynamic world is through their involvements in experiential learning. A culture of lifelong learning can be shaped through forming of literate society. As a result, students as future leaders should improve their soft skills through involvement in experiential learning programmes which has proven to cast positive effects on many aspects [24]. Implementation of experiential learning programmes should also be further encouraged by universities together with the faculties in order to strengthen the self-development of students.

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