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Becoming Socially Responsible: The Implementation of Project-Oriented Problem-Based Learning

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Abstract

Project-oriented problem-based learning (POPBL) is an alternative approach to innovative teaching and is widely implemented in the classroom. However, little information is gathered pertaining to its implementation in psychology-related subjects. The present study is guided by two objectives: 1) to examine students' perception of this type of approach, and (2) to determine whether students' perception improves after the implementation of POPBL. 103 participants aged between 18-24 years old ($M = 21.91$, $SD = 2.14$) participated in this study. A measure, named the Students' Learning Experience Scale (SLES) was constructed to determine participants' perception of their learning in five aspects: (1) acquired knowledge, (2) soft skills, (3) contribution and engagement, (4) sustainability; and (5) assessments. The results from the present study suggested that the POPBL was indeed highly acceptable and favored by all students. A paired t-test was also conducted to evaluate the effectiveness of the approach on students' scores on the SLES. The results show that there was a significant difference in the scores for students' perception of the course before ($M = 4.15$, $SD = .45$) and after ($M = 4.41$, $SD = .40$); $t(87) = (-4.05)$. $p = .000$. These findings were further discussed with respect to the current literature on teaching and learning approaches, and the significant implications in developing effective pedagogic strategies.

Key words: Project oriented problem-based learning, Psychology, Teaching and learning.

Introduction

The emphasis in psychology is on human behaviours and mental processes that go beyond individual-focused. It integrates various aspects at the social, cultural, economic, political and environmental levels to promote positive change. This integration at the individual and systemic levels requires that psychology students to have attributes refer to as the "*psychologically literate citizen*" (Cranney, Botwood, & Morris, 2012; Mair, Taylor & Hulme, 2013) where they are able to respond to the call for social responsibility (McGovern, Corey, Cranney, Dizon, Holmes, Kuebli et al., 2010). An awareness about social responsibility allows students to be more rounded in their view of knowledge, that the understanding of psychology should not only benefit them, but also the local and global communities in general (Mair, Taylor, & Hume, 2013).

The vision of a psychologically literate citizen sets an important basis for understanding the value of an education in psychology that fosters social development and engagement. The centrality of this is the linkage between the curriculum and application of knowledge to the real world. This involves educational initiatives that are geared towards incorporating some sorts of applied learning experiences as a means to enhance students' academic learning and personal development (e.g., Halpern, 2010; McGovern et al., 2010; Reich & Nelson, 2010). Psychology teachers too, apart from imparting knowledge, have an obligation to prepare students to adapt and survive in their current and future world (Cranney & Dunn, 2011). Many past studies have indicated the importance of internship, service learning or field experience in the curriculum (Norcross, Hailstorks, Aiken, Pfund, Stamm & Christidis, 2016). This is supported in other studies which demonstrated that students' success is highly correlated with frequent experiential learning (Pawlow & Mainz, 2017; Stoloff, Curtis, Rodgers, Brewster, & McCarthy, 2012). As such, the educators are expected to develop the competencies on various instructional methods and use of technology in and out of their classrooms to enrich students' knowledge and skills in a more engaging outcome-based educational method.

In addition, students who choose to major in psychology are frequently motivated by the opportunity to make a difference, and therefore are more likely than other undergraduates to engage in voluntary work (HESA, 2012). According to Bromnick and Horowitz (2013), students often enter psychology programs because they are interested and

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wanted to help. The desire to help, coupled with psychological understanding, can contribute to the ability of students to positively contribute to the world in which they live (Cranney & Dunn, 2011), and in turn becoming socially responsible.

The focus on improving student outcomes also necessitates the improvement in the quality of teaching workforce. This means that the educators are instrumental in creating effective teaching and learning environments. Ideally, all psychology teachers, lecturers, or educators should not only strive to impart knowledge alone, but encourage their students to apply this knowledge into the real setting. The students should be encouraged to acquire certain set of skills, values, and innate qualities that will propel them within the field. This necessitates the lecturers to tap on these various qualities as a way to prepare the students to the real world. This also means that academics need to shift their conventional teaching and learning process toward a more engaging outcome-based educational method.

One alternative learning method and a widely used method of teaching such as the project-oriented problem-based learning (POPBL) can help achieve this (Pucher & Lehner, 2011). Central to the POPBL approach is the idea that learning is most effective when students put theory into practice (Harmer, 2014). POPBL provide opportunities for students to apply knowledge and at the same time gather information. POPBL can be characterized as a teaching and learning model with well-constructed problems that emphasizes student-centered instruction by assigning projects to small groups of students (Li & Faghri, 2015). The POPBL sets the platform for students to engage themselves in real-life problems facing the communities, while at the same time working for possible solutions. POPBL is also a tool used to provide opportunities for students to apply their knowledge and skills to solving novel, real-world problems. Through POPBL too, students are taught to be more aware of the social contexts which allows for understanding of different problems and challenges that the community (global or local) experience. The approach of POPBL is based on Jean Piaget's cognitive theory, John Dewey's and Lewin's experiential learning, and Vygotsky's social cognitive theory. These theories share the same goal in learning- students will learn better when they experience their own learning. The most effective experience being "minds on and hands-on" which also requires social interaction. POPBL provide more meaningful learning as a result of being motivated. By learning in the context, it is easier for students to transfer and relate the knowledge in other related context. This paper will discuss the implementation of POPBL in a psychology course and determine the students' experience of this type of approach to learning in the classroom. Specifically, the objectives are two-folds:

- 1) To determine students' overall perception of the course when POPBL is included, and
- 2) To examine whether there is a significant difference before and after implementing POPBL.

POPBL: Introduction, Features, and Process

The POPBL is originated from the Aalborg University Denmark (Hussain & Rosenorn, 2008). The three important features that define POPBL are (1) problem, (2) project, and (3) teamwork. POPBL is student-centered rather than subject-oriented, focusing more on the learning process (Yasin & Rahman, 2011). The POPBL focuses on project. This project-based which has goal and action for change, can motivate and gain commitment among students who are involved in the project (Yasin & Rahman, 2011). The project is related to a question or problem usually being selected by the students. A good problem is characterized as being authentic or realistic, constructive and integrated, suitable in complexity, promote self-directed and lifelong learning, and stimulate critical thinking and metacognitive skills (Khairiyah, Syed, Zamry, & Nor-Farida, 2010).

The key features in the POPBL include learning by doing, real world problems, role of the tutor as a guide, team work, and an end product (Harmer, 2014). The student role changes from learning by listening to learning by doing. They are engaged in real life experiences and activities. This links the students to real world issues which will sustain their interest and motivation (Bell, 2010). By participating in real life activities, students are able to efficiently integrate knowledge learnt from classrooms into their understanding (Hoffmann, & Ritchie, 1997).

In a POPBL project, a teacher will act as a facilitator, mentor or supervisor. Stauffacher et al. (2006: 255) explain: "the teacher's role changes from a distributor of knowledge to a process manager, helping students in their learning process by initiating reflection processes and supporting them, if necessary, on substantive matters". Usually, the learning takes place between students in the group while the instructor was essentially a supervisor and moderator (Frank, Lavy & Elata, 2003).

POPBL is usually conducted in a group. Students are expected to collaborate with other people, group or organization outside their classroom. The basic principles of POPBL are student-centered, problem-oriented, focus more on learning process in finding solution, project based which composed of goals and action for change, as well as promotion of soft skills (i.e., communication, problem solving, team work, decision making). POPBL emphasizes learning activities that are long term, interdisciplinary and student-centered. Students are expected to apply their knowledge of psychology and

their associated skills and attributes to problem solving and interacting with the everyday world around them (Stevens & Gielen, 2007).

Implementation of POPBL in Different Subjects/Courses

POPBL is a widely employed method of teaching across diverse educational institutions (Lehmann et al., 2008; Kolmos, 2009). This includes the implementation of POPBL in the technology field (Nielsen, Alminde, Bisgaard, Laursen, & Bhandari, 2006), programming course (Ibrahim & Halim, 2013), engineering (Li & Faghri, 2015; Mohamed, Mat Jubadi, & Wan Zaki, 2011; Rios et al., 2010; Yusoff, Keng & Mohamad, 2011), architectural field (Sharif, Fared, & Maarof (2012) and computer science (Pucher & Lehner, 2011). This model is often implemented in the technical subjects, such as engineering and computing (Pucher & Lehner, 2011) aims at applying technical knowledge while at the same time acquiring practical skills and integrating sustainable designs in engineering as well as in programming (Chandrasekaran, Stojcevski, Littlefair & Joordens, 2013).

Several studies reported positive outcomes of POPBL (i.e., Ibrahim & Halim, 2013; Rios et al., 2010). Rios et al. (2010) reported that the methodology provides three main advantages: (1) it facilitates training in technical, personal, and contextual competences; (2) real problems in the professional sphere are dealt with; and (3) collaborative learning is facilitated through the integration of teaching and research. In addition, Ibrahim and Halim (2013) implemented POPBL in an introductory course in their university and found that POPBL is very much applicable to be implemented even for freshmen in the computing field. The results have shown that students are highly motivated and satisfied with POPBL implementation towards improving their soft-skills (communication between teammates and planning) as well as their technical skills (analysing real-world problem, designing the structured solutions and developing the products). Pucher and Lehner (2011) were in support of POPBL as most teachers they interviewed agreed with the implementation of POPBL in the field of computer science. The advantages of this type of method in teaching include the ability of students in applying their technical knowledge, getting involved into team processes and understanding some cases even so called soft factors in project management. This study indicates that 95% of the students reported that they really liked the POPBL lessons.

However, a number of studies have also indicated the complex picture of POPBL. For example, Harmer (2014) noted that the defining of POPBL is often problematic because the broadness of the term and therefore it usually means different things in different countries. Furthermore, it is closely related to and sometimes used interchangeably with problem based learning (PBL). Incorporating POPBL into the teaching can also turn chaotic in the perception of the students (Pucher & Lehner, 2011). Yasin and Rahman (2011) implemented POPBL in Life Sciences subject in Education course. In this study, the researchers acknowledged that most of the students are used to the traditional method of learning. When they gave feedback on the implementation of POPBL, many of them reported feeling lost at the very beginning of the class. They also failed to see the connectedness between the contents lectured. Some of the students reported that the tasks given were overwhelming.

In summary, POPBL has been implemented in certain disciplines, particularly the technical courses. However, very few studies actually implement POPBL in the human sciences field. Therefore, this study discusses the implementation of POPBL in a psychology course. The purpose of this paper is to describe the implementation of POPBL in a psychology course and to determine its effectiveness.

Teaching Psychology

There are many learning domains to be achieved in the undergraduate psychology curriculum (Altman, 1996; APA 2013). For example, the APA Guidelines for the Undergraduate Psychology Major 2.0 (APA, 2013; hereinafter referred to as APA Guidelines 2.0) identified five learning goals: (a) knowledge-base in psychology, (b) scientific inquiry and critical thinking, (c) ethical and social responsibility in a diverse world, (d) communication, and (e) professional development.

In addition, Altman (1996) proposes a conceptual model of educational domains. In this model, he proposes three specific domains that all students should obtain: (a) foundational knowledge (i.e., the core content and methods of psychology), (b) professional knowledge (i.e., knowledge of the practice of psychology), and (c) socially responsive knowledge. The purposes of socially responsive knowledge include, “first to educate students in the problems of society; second, have them experience and understand first-hand social issues in their community; and third, give students the experience and skills to act on social problems” (Altman, 1996). In other words, Altman calls for a curriculum to be linked to the community needs, and engage students in direct, academically based problem solving on any social issues. In fact, socially responsive knowledge depends heavily on both foundational and professional knowledge. All three domains (i.e., social, foundational, and professional knowledge) are intertwined and codependent with each other. A

graduate who achieves all of these three domains embodies the psychologically literate citizen. Therefore, having a curriculum that supports all three would ensure the undergraduates are equipped with knowledge that would allow them to be better citizens in the future.

On the other hand, McGovern and colleagues (2010) introduced the concept of psychological literate citizen which encapsulates the common graduate attributes or capabilities that students should acquire while undertaking a major in psychology. Psychological literacy means, among others, having a basic knowledge of the critical subject matter of psychology, taking a creative and amiable skeptic approach to problem solving, and applying psychological principles to personal, social and organizational issues in work, relationships and the broader community. From some perspectives, psychological literacy becomes the most important outcome of undergraduate education in the discipline. It connects skills and knowledge from multiple domains, and applies theory to practice in various settings.

Although psychology educators internationally have been working toward helping students to acquire these common attributes, it has been only recently that educators have explicitly delineated attributes and learning outcomes and have sought to develop appropriate teaching and assessment strategies, which also include whole-program approach (Cranney & Dunn, 2011). To achieve this, teaching psychology means educators should be able to provide opportunities for students to engage in real world that can allow them to develop a set of skills which include critical thinking, communication, negotiation, cooperation, decision making, and problem solving skills. Psychology educators may need to adapt the curriculum to facilitate transfer of knowledge and skills to situations beyond the classroom. An educator therefore should:

- i) recognise and teach the applications of psychology, its relevance to the real world and the transferability of skills, rather than always teaching it in a theoretical context (Dunn et al., 2011; Mair et al., 2013). This also involves incorporating different strategies in teaching such as the use of POPBL;
- ii) constructively align (Biggs, 1996) the courses to explicitly include psychological literacy in the learning outcomes, teaching, and the assessments (Dunn et al., 2011; Trapp, 2010); and
- iii) model psychological literacy in our own professional lives, through our interactions with colleagues and students, using psychology to inform our teaching practices, solve problems and ensure inclusivity (Bernstein, 2011; Cranney & Dunn, 2011).

The Context of the Study

The Course: Psychology of Human Relations

Psychology of Human Relations was offered at the Department of Psychology, *Kulliyah* of Islamic Revealed knowledge and Human Sciences, International Islamic University Malaysia. This course is generally offered to third year students at the university, though other students from different levels of study would also take this course.

The objectives of this course include to (1) introduce basic concepts of human relations in various settings; (2) introduce generic skills in interpersonal contexts; (3) illustrate ways to improve interpersonal skills via skill-building suggestions, exercises, and cases; and (4) highlight the Islamic view of interpersonal interactions and human relations. This course aims to familiarize students with theories and skills of human relations at the interpersonal and organizational levels. It stresses the role of psychosocial and cultural factors in effective communication which serves as the basis for human relations. It includes topics such as interpersonal communication, understanding individual differences, developing teamwork skills, group decision making, resolving conflicts, leadership, positive political skills, motivating others, as well as customer satisfaction.

In addition, the learning outcomes of this course are to (1) play various roles based on psychological principles of human relation; (2) display human relation skills according to prescribed step-by-step criteria; and (3) demonstrate self-awareness, sensitivity toward others and personal responsibility while interacting with others.

The Project: Course Design (Implementation of POPBL)

The POPBL approach was implemented in this course to train students to synthesize knowledge from various methods of learning, while at the same time enhance their knowledge through application of that knowledge in the real world. Various skills such as collaboration, communication, and other interpersonal skills cannot be learnt only in classrooms. Instead, through project, students will be better prepared for lifelong learning, and for the real challenges they will face in the future. The rationale for incorporating POPBL in a psychology course takes two forms. The first is for the students to acquire knowledge and skills from lecturers in the classroom, and secondly, for the students to engage with the outside community. The project for this course entails action plan, conducting a program, in-class presentation, and report

writing. The students worked in a team of five to six members. Specifically, the project includes the following six stages:

- 1) Identifying a problem or an issue in the community. In teams, the students would predetermine the issues they are interested to work on. These issues can be in the form of disciplinary problems in schools, lack of motivations among certain groups, safety issues, and recycling. The students were told that problems should be real. It may be any happenings that occur around campus or in the society. The localities may be diverse, but it is a problem that the teams know they can help to solve.
- 2) Gathering information stage. At this stage, team must identify the facts, as well as generate goals/objectives. To achieve this, they may carry out a need analysis. Since their knowledge about the issue is limited, they are required to conduct a need analysis and secure help from many people who may be expert in the field. A number of questions guide the team's choice: Why the problem? What is the importance? Can we find solution to it? Who is the target group? How do we carry out the project (workshop or training)?
In the team, the students will propose a workshop or training program with the purpose of empowering the targeted groups. This proposed strategy must be justified. The teams are asked to refer to the course outline to guide them in planning for their programs.
- 3) The Product. Based on Stage 1 and 2, the team would propose an issue, and design a module that can assist the target participants. For example, in one project, the team created a motivation program to help develop students' motivation in school. In another project, the students developed a module to assist females achieve confidence and resilience in a rehabilitation centre.
- 4) Planning and scheduling. In this stage, the team worked together to plan the project, and schedule their time. The lecturer provided the key dates or timeline for submissions of the proposal, presentations (pre and post), and written reports.
- 5) Applying stage. This stage refers to the implementation of the modules/programs in various schools, NGOs, and organizations.
- 6) Monitoring, assessment and evaluation. Assessment and evaluation are in the form of the (i) team presentation and (ii) written reports. There were two presentations that all teams were required to do (i) pre-program presentation and (ii) post program presentation. There were also two written reports that students were required to complete: team and individual reports.

Methodology

The present study attempts to determine students' perception of the project after participating in the project-oriented problem-based learning. The following section detailed the findings of the study, divided into two parts:

- 1) Students' perception of the course after the implementation of POPBL using descriptive analysis and also students' written comments of the course; and
- 2) Students' perception of before and after the implementation of POPBL determined through a paired sample t-test.

Sample

103 participants participated in this study. They were 81 female (78.6%) and 22 male students (21.4%), with the mean age of 21.91 (SD = 2.14). Their levels of study comprised of Year 1 (32%), Year 2 (28%), Year 3 (34%), and Year 4 (6%). This study was conducted in the year between 2016-2017.

Measure

Students' Learning Experience Scale (SLES). A measure was developed to determine students' perception of their experience in the course. The developed scale consisted of 19 items specifically constructed to measure the students' perception of the project that they engaged in during the semester, particularly after having experienced project-oriented problem-based learning approach. The scale was named as Students' Learning Experience Scale (SLES). All the items were selected based on literature on effective teaching and learning. The item was scored on a five-point likert scale ranging from 1 = 'strongly disagree', 2 = 'somewhat disagree', 3 = 'neither disagree nor agree', 4 = 'agree', and 5 = 'strongly agree', with higher scores indicating positive perception of the project. The subscales include learner's knowledge (6 items), perceived enhancement of soft skills (5 items), perceived contribution and engagement with community (4 items), sustainability of project in the future semester (2 items), and perceived workload of assessment (2 items). The reliability of the scale is 0.93. In addition to this, one open-ended question was included to allow the participants to include written perceptions pertaining to the course. The following Table 1 presents the related criteria for all categories. This questionnaire was administered to the students in the final weeks of the semester (Week 13 and 14). The questionnaire was administered online through Google doc.

Table 1
Categories and Criteria of the Students' Learning Experience Scale (SLES)

| Categories | Criteria |
|---|---|
| 1. Learner's Knowledge | <ol style="list-style-type: none"> 1. Encourage me to integrate concepts and skills from other disciplines. 2. Help me to develop a deeper understanding of the course. 3. Was effective in developing my understanding. 4. Allow me to apply learning in the classroom to the community. 5. Increase awareness of community issues. 6. This project challenged me intellectually. |
| 2. Perceived enhancement of soft skills | <ol style="list-style-type: none"> 1. Enhance problem-solving ability. 2. Improve oral communication skills. 3. Make use of scholarly reviews and primary sources. 4. Enhance ability to present and defend an argument. 5. Provided peer and group interactions useful to me in completing the task. |
| 3. Perceived contribution and engagement with community | <ol style="list-style-type: none"> 1. I feel that my participation activity has helped the organisation achieve its desired outcomes. 2. I feel that my participation activity has made, or is likely to make, a real contribution to the organisation. 3. I feel that my participation activity has made, or is likely to make, a real contribution to the community. 4. I feel that my participation activity has better equipped me to make a real contribution to the community in relation to social and legal issues. |
| 4. Project sustainability in future semester | <ol style="list-style-type: none"> 1. I am very satisfied with the assignment that I did in this course. 2. This type of project should be continued in the next semester. |
| 5. Perceived workload of assessment | <ol style="list-style-type: none"> 1. The assessments of the project (presentations and report writings) were appropriate for my level. 2. This project taken much of my time from other courses |

Results

Students' Perception of the Course

There are five main categories of students' perceptions being measured, namely learner's knowledge, perceived enhancement of soft skills, perceived contribution and engagement with community, sustainability of project in the future semester, and perceived workload of assessment.

In terms of learner's knowledge, majority of students agreed that the project allowed them to develop a deeper understanding of the course (79.7%) and was effective in developing understanding (81.6%). The project allows for application of learning in the classrooms to the community (94.7%), and in turn, increased their awareness of community issues (92%). In addition to this, the project encouraged them to integrate concept and skills from other disciplines besides the contents learnt from this course (82.5%). This is shown in Table 2.

Table 2
Frequency Distribution of Learner's Knowledge

| Categories | Criteria | Agree (%) | Disagree (%) |
|----------------------------|--|-----------|--------------|
| <i>Learner's Knowledge</i> | 1. Encourage me to integrate concepts and skills from other disciplines. | 82.5 | 17.5 |
| | 2. Help me to develop a deeper understanding of the course. | 79.7 | 20.3 |
| | 3. Was effective in developing my understanding. | 81.6 | 18.4 |
| | 4. Allow me to apply learning in the classroom to the community. | 94.7 | 5.3 |
| | 5. Increase awareness of community issues. | 92.0 | 8.0 |
| | 6. This project challenged me intellectually. | 86.5 | 13.5 |

One of the objectives of incorporating POPBL into the course was to encourage the improvement or enhancement of students' soft skills. As shown in Table 3, students agreed that the project enhanced their problem solving ability (96%), communication skills (94%), and interactions with peer and groups (95%). In terms of their contribution to the community; they believed their project did make a difference. 92% of them agreed that their program did make a contribution to the organisations they had chosen, while 87% felt their program did contribute to the community. 87% of the students also felt that similar project (including the assessments) should be retained in future semester. 83% of the participants felt very satisfied with the project they did in the course.

Table 3
Frequency Distribution of perceived enhancement of soft skills

| Categories | Criteria | Agree (%) | Disagree (%) |
|---|--|-----------|--------------|
| <i>Perceived enhancement of soft skills</i> | 1. Enhance problem-solving ability. | 96 | 4 |
| | 2. Improve oral communication skills. | 94 | 6 |
| | 3. Make use of scholarly reviews and primary sources. | 81 | 19 |
| | 4. Enhance ability to present and defend an argument. | 83 | 17 |
| | 5. Provided peer and group interactions useful to me in completing the task. | 95 | 5 |

The students' overall comments also suggested that majority were acceptable to this kind of teaching and learning method. However, one of the issues is with the members' willingness to "give all" or difficulties to get other members to work along with each other, as mentioned in the following:

Generally speaking, the modules / activities as well as the assignment given were very interesting and helpful in preparing us to be a positive changing agent in the community. The in-class activities (role-play, etc) is really good as we can get the feedback of our 'performance' and 'learning input' immediately through the discussion conducted afterwards. The thing that make me felt quite disappointed or rather is that I believe that I can do better with more encouraging and supportive group members. However, it is such a great experience working with those kinds of various personality for that is the reality that we are going to be faced after this. The best lesson learnt is that we sometimes need to agree to disagree for we cannot change others' but our own selves.

In addition, there is also an issue of sustainability, with many expressing their willingness to continue with the project. They also expressed concern that this program or project will be a one-off project, as mentioned below:

The venue for the project should be same and continuous every semester. So that it will not be one off program to the organization and it will create a good relationship between the organization and IIUM.

I will be very satisfied with the project if I managed to expand and continue the project up until now. It was a very good and beneficial project for the specific target group and for the community as well

Students' perception before and after the implementation of POPBL

A paired t-test was conducted to compare students' perception of the course before and after the implementation of POPBL. Only 88 students completed the pre and post test questionnaires. Therefore, the analysis comprised of this number ($n = 88$) The results show that there was a significant difference in the scores for students' perception of the course before (Time 1) ($M = 4.15$, $SD = .45$) and after (Time 2) ($M = 4.41$, $SD = .40$); $t(87) = (-4.05)$, $p = .000$ after the implementation of POPBL. This is detailed in Table 4.

Table 4
Results of paired t-tests comparing students perception before and after the implementation of POPBL

| Before (Time 1) | | After (Time 2) | | 95% CI for Mean Difference | t | df |
|-----------------|-----|----------------|-----|----------------------------------|---------|----|
| M | SD | M | SD | | | |
| 4.15 | .45 | 4.41 | .40 | -.38, -.13 | - 4.05* | 87 |

* $p < .001$

Discussion

Various approaches to teaching and learning have been used in education to provide meaningful learning to students. There are two core objectives in students' learning: (1) to provide students with the basic knowledge of the discipline; and (2) to enable the students to apply that knowledge in the community. Project-oriented problem based learning is one teaching pedagogy method that incorporates both learning by knowing and doing. It is a student oriented learning approach that focuses on students' personal skills and lifelong learning abilities. In order to educate psychologically literate students, they need to be exposed to real life problems experience by different people and groups, and practice applying their knowledge and skills for solutions, and to make a difference. This is achievable through the incorporation of POPBL in a coursework.

The present study examined students' perception regarding the implementation of POPBL in their course. Their perceptions were based on five categories (i) knowledge; (ii) soft skills; (iii) contribution to community; (iv) program sustainability; and (v) course workload. In terms of learner's knowledge, all participants agreed that the project allowed for the application of the learning to the community. It also increased their awareness of community issues. Many other studies have shown this (Moesby et al., 2006).

Majority of the participants also agreed that the course enhanced their problem solving and communications skills in and outside the classrooms as well as between their peer groups. This result is similar in other studies such as McLoone, Lawlor, and Meehan (2014) who showed that the approach improved students' communication, presentation, and general teamwork skills. Ibrahim and Halim (2013) as well as Mohamed, Mat Jubadi, and Wan Zaki (2011) show that POPBL exposed students to more problem solving skills in real world problems.

The participants also felt that the project did contribute to the organizations that they worked with, and felt that their project did contribute to the community. Majority of the participants agreed that the project should be retained in the future semester. This is similar to another study conducted by McLoone et al. (2014) who found that both staff and students responded favorably to the POPBL approach among first year engineering students. The respondents' feedback was very positive as POPBL motivated them to learn. In terms of workload, majority of the students believed that the amount of assessments for the project were appropriate.

Conclusion

This paper presents the implementation and evaluation of a POPBL in a psychology course. Overall, the students responded positively to the learning experience associated with the approach. They found the experience allowed them to apply what they learnt in classrooms to the real world, increased their awareness of community issues around them, and improved their soft skills. Future work on POPBL in a psychology course should focus on the before and after experience of POPBL. In addition, POPBL should also be multidisciplinary, involving other subject matter or discipline in combination with a psychology course in order to enrich students' learning. Apart from survey questionnaire, qualitative interview such as focus group discussion should be employed to gauge students' perception of the approach.

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