

## Cultivating Students' Communication Skills and Psychological Well-Being through Problem Based Learning (PBL)

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Problem Based Learning (PBL) can help developing students' judgment, creativity, critical thinking, and information integrating abilities. It involves student's core knowledge, cognitive skills and action skills. The purpose of this study is to examine if the method of PBL may improve students' communication skills as well as their psychological well-being. The study was conducted using action research methodology in an Accounting class. The study found that students are more active and highly participative during the deliverance of course content. Positive psychological well-being develops students' constructive attitude toward challenges faced with the use of PBL.

**Keywords:** Problem Based Learning (PBL), Communication skills, Psychological well-being, Education, Action research

### Problem-Based Learning (PBL)

Problem-based learning (PBL) is a concept of small group learning where it is a "student-centered" pedagogy in which students learn "from problems" (Barrows 1996; Kwan & Lee 2009). Chen & Sun (2006) stressed that PBL can help develop students' judgment, creativity, critical thinking, and information integrating abilities. It involves student's core knowledge, cognitive skills and action skills (Burch, 2001).

Trop & Sage (2002) and Hmelo & Evenson (2000) urged that the instructor should

build students' problem awareness, monitor and underpin student learning, and avoid giving immediate results. Students should be independent and have self-management and knowledge-seeking inner self and learn through group collaboration in PBL context.

Shepherd (1998) reports that problem-based learning can have a positive effect on students' acquisition of critical thinking skills. PBL can increase students learning performance, capabilities in handling given problems and help improve their lifelong independent learning skills (Gallagher,

Stepien, Sher, & Workman, 1995; Stepien, Gallagher, Workman, 1993; Becker, Wong & Ravitz, 1999).

### **Communication Skills**

Communication skills is generally defined as the way of communication that is highly structured used to express ideas. Zaid and Abraham (1994) stressed the need for the reconsideration of an emphasis on communication skills in the accounting education, a role which arises from the very nature of accounting as the processing and communication of information. A number of studies emphasize the view that both oral and written communication skills are recognized to be the two most essential skills (Clark, 1990; Deppe et al., 1991; Novin and Tucker, 1993; Nelson et al., 1996; Morgan, 1997; DeLange et al., 2006). An employer survey on satisfaction of new graduates showed that there were skill deficiencies in important areas, such as problem solving, creativity and flair, and oral business communications (ACNielsen Research Services, 2000). This was supported by Kavanagh & Drennan (2008) who discovered that students are becoming aware of employers' expectations in terms of communication, analytical, professional and teamwork skills. Accordingly, there is an urge to develop the communication skills among the students with sufficient practices. Tools such as workshops, seminars, courses in academic communications can be applied to enhance the skills.

### **Psychological Wellbeing**

Psychological wellbeing refers to positive mental states (i.e. satisfaction, happiness, sadness) (Salami, 2010; Ryff & Singer, 2013; Ryff & Keyes, 1995; Ryff, 1989). According to Turashvili and Japaridze (2012), students' well-being is a dynamic concept that includes subjective, social, and psychological dimensions as well as health-

related behaviors resulting from educational gatherings that both guide students in the search for significance and instruction in life and help them see their true potential. It is important for the students to be in a psychologically healthy condition in order to attain their life goals and gain academic success. Students' academic performance can be affected by stressful atmosphere that lead to psychological distress (Dwyer & Cummings, 2001). Students' learning, success and quality in education can be elevated by emotional intelligence, self-efficacy, and psychological well-being (happiness, life satisfaction and depression) (Salami, 2010).

The most important ingredients in psychological well-being are happy feelings brought on by something a person enjoys and feeling that life has purpose and meaning. The term "Hedonic" wellbeing refers to the subjective feelings of happiness and the term, "Eudaimonic" wellbeing refers to the purposeful aspect of psychological well-being (Ryff, 1989; Ryff & Keyes, 1995; Ryff & Singer, 2013). The psychologist, Ryff (1989), has developed a very clear model (see Table 1) that breaks down Eudaimonic wellbeing into six broad facets associated with optimal psychological functioning as follows: 1) self-acceptance; 2) positive relations; 3) autonomy; 4) environmental mastery; 5) purpose in life and 6) a sense of personal growth.

Table 1  
*The Ryff Scales of Psychological Well-Being*

|                                | High scorer   | Low scorer  |
|--------------------------------|---|---|
| Self-acceptance                | Possesses a positive attitude toward the self; acknowledges and accepts multiple aspects of self, including good and bad qualities; feels positive about past life.   | Feels dissatisfied with self; is disappointed with that has occurred with past life; is troubled about certain personal qualities; wishes to be different than what he or she is.   |
| Positive relations with others | Has warm, satisfying, trusting relationships with others; is concerned about the welfare of others; capable of strong empathy, affection, and intimacy; understands give and take of human relationships.   | Has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationships; not willing to make compromises to sustain important ties with others. |
| Autonomy                       | Is self-determining and independent; able to resist social pressures to think and act in certain ways; regulates behavior from within; evaluates self by personal standards.  | Is concerned about the expectations and evaluations of others; relies on judgment of others to make important decisions; conforms to social pressures to think and act in certain ways.   |
| Environmental mastery          | Has a sense of mastery and competence in managing the environment; controls complex array of external activities; makes effective use of surrounding opportunities; able to choose or create contexts suitable to personal needs and values.                                  | Has difficulty managing everyday affairs; feels unable to change or improve surrounding context; is unaware of surrounding opportunities; lacks sense of control over external world.   |
| Purpose in life                | Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living.   | Lacks a sense of meaning in life; has few goals or aims; lacks sense of direction; does not see purpose of past life; has no outlook or beliefs that give life meaning.   |
| Personal growth                | Has a feeling of continued development; sees self as growing and expanding; is open to new experiences; has sense of realizing his or her potential; sees improvement in self and behavior over time; is changing in ways that reflect more self-knowledge and effectiveness. | Has a sense of personal stagnation; lacks sense of improvement or expansion over time; feels bored and uninterested with life; unable to develop new attitudes or behaviors.  |

Source: Six domains of Psychological Well-Being (Ryff, 1989)

## **Gap of Study**

Communication skills and positive psychological well-being are important to students in providing them to become an excellent employee or entrepreneur because with the skills they are able to put themselves in the working environment and community. Positive psychological well-being of students develops students' constructive attitude toward challenges faced. Communication skills and positive psychological well-being are important to students in providing them to become an excellent decision maker (Deep, Salleh & Othman, 2019; Hansen, 2006; Herdini, Suyitno & Marwoto, 2019; Najah, Rohmah, & Susilo, 2019; Pratama, Cahyono & Aggraito, 2019; Üstün, 2006). Realizing the importance of communication skills and positive psychological well-being to accounting student and lack of literatures in these aspects, the researcher did a study to investigate how PBL approach can enhance communication skill and positive psychological well-being among accounting students.

## **Significance of Study**

This study is significant for the proper recognition of the improving accounting students' communication skill and psychological well-being. Students will obtain a clearer view and more hands-on problem-solving exercises with the guidance of their lecturers. This will further enhance students' knowledge of the importance of mastering the basic skills of their competencies so they will make an effort to do their best. This may lead to better enthusiasm and develop good study habit. This study may heighten their awareness in identifying the learning tasks that are well developed as well as the least. This may further be a motivating factor to adapt measures and new strategies for the improvement of students' skills.

## **Methodology**

This study employed action research. Action research is open ended where it does not begin with a fixed hypothesis. It begins with an idea that the practitioner developed. The research process is the developmental process of following through the idea, seeing how it goes, and continually checking whether it is in line with expectation of the practitioner. Action research is viewed as a type of self-evaluation. It is used widely in professional contexts such as appraisal, self-assessment and mentoring. The methodology of action research means that the practitioner has to evaluate what he/she is doing. The practitioner needs to check constantly that what he is doing really is working. This awareness of the need for self-evaluation shows one willingness to accept responsibility for his own thinking and actions.

The lecturer observation checklist and field notes were used by the lecturer/ researcher to obtain data throughout the intervention. This tool provides information of changes on how well his/her students understand and apply the skill strategies throughout the time.

There were 35 accounting students under studied. In this study, the lecturer is acting or behave as if she is 'the instructor' in the learning session. The instruments used to measure the communication skill are Participation Rubric and Ryff's Scales were used to understand about psychological well-being. In this study, the researcher's reflection and observation checklist were used to gather data throughout the intervention. This provides information of changes /improvement on how well the students develop participation, reaction and understanding.

Below were the cycles used in this study:

Cycle 1: The researcher built students' problem awareness, monitor and underpin student learning, and avoid giving immediate results. Students have to be independent, self-management and learn through group collaboration. Students were divided into five members per group. Each group of students was distributed with a case or problems. The students were given specific time to solve the case or problems during the class. Observations and field notes were taken by the researcher on each group to understand the situation during the discussions.

Cycle 2: The same activities and cycle as in the first phase were conducted. The researcher made improvements based on the reflections, observations and field notes based on the first cycle. The researcher approached the students directly during the group discussions more frequently.

**Observation and Reflection**

For every cycle students were asked to mention/write their feedbacks on their learning experience and how they think it helped them to understand their topics with the use of PBL approach. In this study, the researcher tested three elements from the Ryff's Scales; the Positive relations with others, Environmental mastery and Personal growth. Semi structured interviews were conducted with the students to explore more on their feelings

about the class and the effectiveness of that teaching session. The reflections were done by the lecturer on every cycles.

**Results and Discussion**

**The First Cycle**

In the first cycle, a memorandum was upload in e-learning platform earlier before the class begin. The memorandum stated all the details on the activities that the students needed to do. During the class session, the lecturer gave explanation on the activity based on the memorandum. Students were divided into five groups and they started appointing their committee members with assigned tasks. Observations and assessment rubrics were taken by the lecturer on each group to understand the situation during the discussions (Participation Rubric). The assessment on participation rubric (See Table 2) showed that in terms of participation, attention and group contribution traits, all group members participated fully in every discussion and decision, students always paid full attention when questions were asked and the whole group worked incredibly well together. However, in contribution traits only four groups contributed excellently to the group ideas while one group only achieve good level.

Table 2  
*Participation Rubric in First Session*

| <b>Traits/Marks</b>          | <b>N</b>    | <b>Poor</b> | <b>Fair</b> | <b>Good</b> | <b>Excellent</b> |
|------------------------------|-------------|-------------|-------------|-------------|------------------|
| <b>1 Participation</b>       | 5<br>(100%) | 0<br>(0%/)  | 0<br>(0%/)  | 0<br>(0%/)  | 5<br>(100%)      |
| <b>2 Contribution</b>        | 5<br>(100%) | 0<br>(0%/)  | 0<br>(0%/)  | 1<br>(20%/) | 4<br>(80%)       |
| <b>3 Attention</b>           | 5<br>(100%) | 0<br>(0%/)  | 0<br>(0%/)  | 0<br>(0%/)  | 5<br>(100%)      |
| <b>4 Group Collaboration</b> | 5<br>(100%) | 0<br>(0%/)  | 0<br>(0%/)  | 0<br>(0%/)  | 5<br>(100%)      |

Before the class ended, opinions and suggestions from students were gathered (See Table 3, Table 4 Table 5 and Table 6). The first question was asking on the students' contributions in PBL's session (See Table 3). 83% of students stressed that they were contributing in terms of

information and ideas, 18% said that they helped in gathering and recording information. 15% of student said they were ensuring that their group were in the right track and on the group progress while 6% stressed that they contributed in term of giving cooperation on all activities.

Table 3

*Perspective 1: Individual contributions in PBL*

| <b>Perspective 1: Contribution in the group (n=34)</b> |   |   |  |
|--|---|---|--|
| <b>Themes</b>  | <b>Number of interviewees who cited this view</b> | <b>Percentage of interviewees who cited this view</b> | <b>Evidence from data</b>  |
| Information and ideas                                  | 28  | 83%   | “As a researcher, I have to find about the information regarding the task”<br>“I have contributed in giving ideas, information and opinions” |
| Recording and presenting                               | 6   | 18%   | “I gather and record information”<br>“I prepare slides for presentation”<br>“I am presenting ideas to audience”                              |
| Guiding and task progress                              | 5   | 15%   | “Being a task leader, I ensure my group is in the right track”<br>“I contributed to task progress”   |
| Cooperation  | 2   | 6%  | “I have contributed in term of cooperation”  |

The second question was asked on the difficulties that the students faced in during PBL's session (See Table 4). Majority of student (71%) complaint on time constraint. They had difficulties in handling all the task in PBL within the given time. 29% of students said that they faced difficulties in finding useful information. 21% of students

stressed that they could not communicate well in the group. They were not used to PBL. Some said that they had hard time understanding the task requirements while others had difficulties in doing prompt presentation, adapting in group and allocating tasks among group members.

Table 4

*Perspective 2: Difficulties in PBL*

| <b>Perspective 2: Difficulties in PBL (n=34)</b> |   |   |  |
|--|---|---|--|
| <b>Themes</b>                                    | <b>Number of interviewees who cited this view</b> | <b>Percentage of interviewees who cited this view</b> | <b>Evidence from data</b>  |
| Time constraint                                  | 24  | 71%   | “It's hard to ensure the task finished at the time given”<br>“Time management due to time constrain” |

|                         |    |     |   |
|-------------------------|----|-----|---|
| Find useful information | 10 | 29% | “It’s hard to find information due to time limit”   |
| Communicate             | 7  | 21% | “It’s hard to find relevant information that are useful for the task”<br>“It’s hard to communicate since my tone could be sound rough”<br>“It’s hard to communicate with group members” |
| Understanding           | 3  | 9%  | “It’s hard to understand the requirement at the beginning”<br>“It’s hard to understand the task requirement”  |
| Presentation            | 2  | 6%  | “It’s hard to do instant presentation”  |
| Group adaptation        | 2  | 6%  | “It’s hard to adapt at first”<br>“It’s hard for me to get along with group members”   |
| Work segregation        | 2  | 6%  | “It’s hard to segregate work within group members”  |

The third question asked on the improvement that the students could change when they were in PBL’s session (See Table 5). 79% of student said that they needed to give full commitments and cooperation during discussion. They needed to fully support each other and contributed ideas on the given tasks. In terms of duties segregation, 44% suggested that they need effectively segregate duties among themselves and assign proper role. This would make everyone understand their responsibilities better. 38% stressed that PBL could be improved in term of time management. Allocation of time according

to assigned role or dividing time wisely is important because everyone need to perform within the time limit. 29% of students emphasized that they needed to focus on the task, be prepared of situation, comprehend the PBL’s instruction and plan layout, be prepared in term of knowledge and do more research in order to improve PBL. While the rest of students suggested that PBL session could be improved if they could find good and accurate information for the task, asked assistance from lecturer and brought candies and drinks for refreshment.

Table 5  
*Perspective 3: Improvements in PBL*

| <b>Perspective 3:Improvements in PBL (n=34)</b> |   |   |   |
|---|---|---|---|
| <b>Themes</b>                                   | <b>Number of interviewees who cited this view</b> | <b>Percentage of interviewees who cited this view</b> | <b>Evidence from data</b>   |
| Cooperation                                     | 27  | 79%   | “I need to give full commitments during discussion and help each other when needed”<br>“Ensure all group members performing their task accordingly”<br>“Discuss and brainstorming ideas with group members” |

|                     |    |     |  |
|---------------------|----|-----|--|
| Duties segregation  | 15 | 44% | “Give fully support by contributing ideas and to do the tasks that has been segregated”<br>“Make sure one person talks at a time”<br>“Effectively segregate duties”<br>“Assign proper role”<br>“Make everyone understand their responsibilities” |
| Time management     | 13 | 38% | “Allocate time according to role because of time limit”<br>“Dividing the time wisely”  |
| Focus and prepared  | 10 | 29% | “Focusing on the task”<br>“Be prepared of situation”<br>“Comprehend the PBL’s instruction and plan layout”<br>“Be prepared in term of knowledge”<br>“Do more research”<br>“Better planning”  |
| Useful information  | 2  | 6%  | “Finding good information and accurate for the task”   |
| Refreshment         | 1  | 3%  | “Bring candies and drinks to refresh”  |
| Lecturer assistance | 1  | 3%  | “Ask assistance from lecturer”   |

The fourth question asked on the benefits of PBL to the students (See Table 6). Most students (59%) said that they gained benefits of PBL in terms of increase knowledge and understanding and learn how to convert ideas and opinion to decision making. While others stressed that they learned communication skills, better communication with group mates, learned

how to work effectively, learned how to keep tract of the project and learned teamwork skills as teamwork is the best compared to working alone. The students were also benefited in terms of time management, planning, team formation, high self-esteem and tolerance. They were also able to understand on conducting a meeting session.

Table 6  
*Perspective 4: The benefits of PBL*

| <b>Perspective 4: The benefits of PBL (n=34)</b> |   |   |   |
|--|---|---|---|
| <b>Themes</b>                                    | <b>Number of interviewees who cited this view</b> | <b>Percentage of interviewees who cited this view</b> | <b>Evidence from data</b>   |
| Knowledge  | 20  | 59%   | “Increase knowledge”<br>“Learn how to convert ideas and opinion to decision making”<br>“More understanding” |
| Communication skills                             | 9   | 26%   | “I learn communication skills”<br>“Better communication with groupmates”                                    |
| Work effectively                                 | 9   | 26%   | “I learn how to work effectively”   |



|                 |   |     |   |
|-----------------|---|-----|---|
| Teamwork skills | 8 | 24% | “I learn how to keep tract of the project”<br>“I learn teamwork skills”<br>“Teamwork is the best compared to working alone” |
| Time management | 4 | 12% | “Learn how to manage time wisely with limited time given”<br>“Divide time properly”   |
| Planning        | 4 | 12% | “Learn to plan”<br>“We must understand the task before started”   |
| Team formation  | 3 | 9%  | “I learn how to determine and appointing team members / subcommittees”  |
| Self esteem     | 2 | 6%  | “Must be self-prepared of any situation”<br>“I learn to be more productive and function able”                               |
| Meeting         | 2 | 6%  | “Learn how to conduct a meeting in time given”  |
| Tolerance       | 1 | 3%  | “I learn how to tolerate”   |

### Reflection on the first session

In the first session, most of the students were not aware of PBL. They thought it is an ordinary discussions. However, when they were asked to form a committee as for instance, they needed to appoint a leader, several recorder, several researcher and so on, then they felt the difference. The first session discussion was not well organized. Eventhough they were asked to segregate the tasks, most of the were actually did everything. Most of them searched for the information in internet and books. There was no obvious segregation of duties. In the group disscussion, there were few students who not participated well. Thus, they had difficulties in handling all the task in PBL within the given time and finding useful information.

For improvement of PBL, the lecturer/researcher needs to emphasize to students to give full commitments and cooperation during discussion. They needed to fully support each other and contributed ideas on the given tasks. In terms of duties segregation, they need

effectively segregate duties among themselves and assign proper role which would make everyone understand their responsibilities better. They needed to improve in term of time management. to focus on the task and be prepared and comprehend the PBL’s instruction and plan layout.

### The Second Cycle

The second session had taken all necessary actions for improvement suggested by students in the first session. In the second session, a memorandum was upload in e-learning platform earlier before the class begin. The memorandum stated all the details on the activities that the students needed to do. During the class session, the lecturer gave explanation on the activity based on the memorandum. Students were devided into five groups and they started appointing their committee members with assigned tasks. Observations and assesment rubrics were be taken by the lecturer on each group to understand the situation during the discussions (Participation Rubric). The assesment on

participation rubric (See Table 7) showed that all traits such as participation, contribution, attention and group contribution traits for all groups are at excellent level. All group members

participated fully in every discussion and decision. Students always paid full attention when questions were asked and the whole group worked incredibly well together and contributed excellently to the group ideas.

Table 7  
*Participation Rubric in the Second Session*

| Trait/ Marks               | Participants | Poor      | Fair      | Good      | Excellent   |
|----------------------------|--------------|-----------|-----------|-----------|-------------|
| <b>Participation</b>       | 5<br>(100%)  | 0<br>(0%) | 0<br>(0%) | 0<br>(0%) | 5<br>(100%) |
| <b>Contribution</b>        | 5<br>(100%)  | 0<br>(0%) | 0<br>(0%) | 0<br>(0%) | 5<br>(100%) |
| <b>Attention</b>           | 5<br>(100%)  | 0<br>(0%) | 0<br>(0%) | 0<br>(0%) | 5<br>(100%) |
| <b>Group collaboration</b> | 5<br>(100%)  | 0<br>(0%) | 0<br>(0%) | 0<br>(0%) | 5<br>(100%) |

Before the class ended, opinions and suggestions from students were gathered (See Table 8, Table 9, Table 10 and Table 11). The first question was asking on the students' contributions in PBL's session (See Table 8). 86% of students stressed that they were contributing in terms of information and ideas. The searched for the tasks, contributed ideas and opinion and shared information. 44% said that they helped in recording the information and presenting the tasks. They gathered and

recorded the information, prepared slides for presentation and they reported on group's activities and observed recommendation and selection made by their group's members. 26% of student said they gave cooperation by brainstorming on how to manage information, performing task as a team work, participate in discussion, giving opinion and search the internet for resources. 18% of students stressed that they gave guidance and ensured the tasks' progress.

Table 8  
*Perspective 1: Individual contributions in PBL*

| <b>Perspective 1: Contribution in the group (n=34)</b> |  |  |   |
|--|--|--|---|
| Themes   | Number of interviewees who cited this view | Percentage of interviewees who cited this view | Evidence from data  |
| Information and ideas                                  | 19   | 56%  | <ul style="list-style-type: none"> <li>• Research for the information of credit rating agencies and the impact to the company ERM</li> <li>Contribute ideas and opinion.</li> <li>Share information.</li> <li>Useful ideas and information.</li> </ul>  |
| Recording and presenting                               | 15   | 44%  | <ul style="list-style-type: none"> <li>I gather and record information.</li> <li>I prepare slides for presentation.</li> <li>I am presenting ideas to audience.</li> <li>I have to report about group activities and observe recommendations and selection made by particular individuals.</li> </ul> |

|                           |   |     |  |
|---------------------------|---|-----|--|
| Cooperation               | 9 | 26% | Brainstorming on how to manage information.<br>Perform task as a team work.<br>Participate in discussion.<br>Giving opinion.<br>Search the internet resources.   |
| Guiding and task progress | 6 | 18% | • Research on the memo requirement.<br>Solve the task given.<br>Convey message to group members.<br>Be a researcher to gather resource and information.<br>Be sure that every member keeps on track during the project.<br>Monitor the process of document findings.<br>Understand the task given. |

The second question asked about the difficulties the students faced in PBL (See Table 9). The students said that they had difficulties in terms of time, understanding

the task, communicating with members, presenting, segregating the tasks and thinking critically on the given task.

Table 9  
*Perspective 2: Difficulties in PBL*

| <b>Perspective 2: Difficulties in PBL (n=34)</b> |   |   |   |
|--|---|---|---|
| <b>Themes</b>                                    | <b>Number of interviewees who cited this view</b> | <b>Percentage of interviewees who cited this view</b> | <b>Evidence from data</b>   |
| Time constraint                                  | 21  | 62%   | Hard to gather information in limited time given.<br><br>Hard to manage time.   |
| Understanding                                    | 20  | 59%   | Hard to understand the connection between rating agencies and company's ERM.<br><br>Hard to understand because of confusion.<br><br>Hard to understand the problem. |
| Communicate                                      | 7   | 21%   | Hard to say my opinion.<br><br>Hard to communicate with group members.  |

|                   |   |    |  |
|-------------------|---|----|--|
|                   |   |    | Hard to explain to other members because they do not understand as well. |
| Presentation      | 2 | 6% | It is hard to select the best to present the group.                      |
|                   |   |    | It is difficult to present well.   |
| Work segregation  | 2 | 6% | Hard to prepare the presentation slides.                                 |
|                   |   |    | Hard to choose the best solution to solve the task given.                |
| Critical thinking | 2 | 6% | Use logical & critical thinking while gathering information.             |
|                   |   |    | Struggle to explain about credit rating.                                 |

The third question asked on the improvements on the PBL. Students stressed that they needed to be more cooperative, focus and prepared. They

needed to find useful information, manage the time, segregate the tasks, communicate well, understand the task, be committed and tolerate and seek lecturer assistance.

Table 10  
*Perspective 3: Improvements in PBL*

| <b>Perspective 3:Improvements in PBL (n=34)</b> |   |   |  |
|---|---|---|--|
| <b>Themes</b>                                   | <b>Number of interviewees who cited this view</b> | <b>Percentage of interviewees who cited this view</b> | <b>Evidence from data</b>  |
| Cooperation                                     | 19  | 56%   | Discuss and brainstorming with group members to generate the idea.<br>Ask group mates for cooperation.<br>Sharing of information.<br>Contribute ideas.<br>Ask the group members to select the best option for the group. |
| Focus and prepared                              | 13  | 38%   | Do more research.<br>Do extra reading on relevant sources.<br>Having the information before the session.<br>More search in the internet.<br>Encourage members to support information with examples and suggestions.      |
| Useful information                              | 13  | 38%   | Gather all information.<br>Generate more ideas.<br>Obtain information in advanced prior to the session.  |

|                     |    |     |   |
|---------------------|----|-----|---|
| Time management     | 11 | 32% | More information from other sources.<br>Find information related to PBL.<br>Gather data effectively and efficiently.<br>Need to manage time more effectively.<br>Need more ample time.                |
| Duties segregation  | 10 | 29% | Understand the purpose of task,<br>research the needed information and<br>discuss with group members.<br>Segregating duties among members.<br>Segregate tasks based on roles given in<br>the problem. |
| Communication       | 10 | 29% | Have proper communication.<br>Improved and effective<br>communication.<br>Discussion and brainstorming.<br>Ask if lack of understanding.<br>Presentation made to other members.                       |
| Understanding       | 9  | 26% | Have full understanding of the issue.<br>Improve capability to understand.  |
| Commitment          | 7  | 21% | Provide full commitment during<br>discussion.<br>Active participation by asking.<br>Do more research.<br>Need to fulfil the role given.   |
| Lecturer assistance | 2  | 6%  | Always ask what I should do.<br>Ask explanation from lecturers.   |
| Tolerance           | 2  | 6%  | Tolerate among group members.<br>Allow each member to speak.  |

The fourth question asked on the benefits of PBL to the students (See Table 11). The students agreed that PBL brings lots of benefits to them. PBL increased their knowledge. They learned about time management. Their communication and

teamwork skills were enhanced. They worked effectively in a team. They participated in giving ideas. They learned how to form committee. PBL is a challenging learning experience to most of the students.

Table 11  
*Perspective 4: The benefits of PBL*

| <b>Perspective 4: The benefits of PBL (n=34)</b> |   |   |   |
|--|---|---|---|
| <b>Themes</b>                                    | <b>Number of interviewees who cited this view</b> | <b>Percentage of interviewees who cited this view</b> | <b>Evidence from data</b>   |
| Knowledge  | 29  | 85%   | Increase knowledge<br>Learn how to convert ideas and opinion to decision making<br>More understanding.<br>More understanding on the impact. |

|                      |    |     |  |
|----------------------|----|-----|--|
| Time management      | 14 | 41% | Learn how to manage time wisely with limited time given.<br>Divide time properly.<br>Manage time effectively and efficiently.<br>Perform task within a given time. |
| Communication skills | 10 | 29% | I learn communication skill in share information.<br>Better communication with group mates.<br>Improve communication skill.  |
| Teamwork skills      | 9  | 26% | To cooperate with others.<br>Work as a team.   |
| Work effectively     | 5  | 15% | I learn how to work effectively.<br>Learn to manage information.<br>Learn to perform task in a given time.<br>Segregation of duties.                               |
| Participation        | 2  | 6%  | Acting as financial department.<br>Cooperation from each member.   |
| Team formation       | 1  | 3%  | I learn how to understand the task provided.   |
| Challenge            | 1  | 3%  | Task is challenging  |

**Reflection on the second session**

In the second session, most of the students were already aware of PBL. They participated well during discussion and did a good presentation. The difficulties that the students faced during PBL has lessened where *Time Constraint* percentage changes from 71% in session one to 62% in session two. The students are effectively use the time given in PBL. Most of students are still having problems in understanding and communicating the task. It is due to the second task is quite challanging compared to the first tasks. From the interviews in the class, students’ reactions according to Ryff’s scales were:

**The positive relations with others**

“I can communicate with my friends and coloborately find the solutions for the case”  
“My friends assist me in answering the exercise”

The interviews and observations revealed that students have warm, satisfying,

trusting relationship with others. They cared with each other and tried to help others’ problem with high intensity. The relationship showed genuine gestures with so much affections.

**Environmental mastery**

“I feel happy in the classroom “  
“I understand more on the case which make it less stress!”  
“I feel good cause the other students will guided me”

The student has a sense of mastery and competence in managing the environment, handling difficult situations and make the best use of surrounding opportunities. They were able to understand suitable context to their personal needs and values.

**Personal growth**

“It gives me a great experience in understanding the case”  
“I feel more confident in solving the case and not afraid to share opinions”

Students had feeling of continues development and able to see future undertakings. They were opened to new experiences, possible potential, self-improvement and self-knowledge.

### Conclusion

Findings reveal that PBL has been proven to aid cultivating communication skills and psychological well-being effectively. Students have more opportunity in discussing topic effectively with the collaboration of among students. PBL develops students' judgment, creativity, critical thinking, and information integrating abilities. They feel more confidence and happy on the subject under study since they understand their goal or where they are leading to. PBL guides students in the search for significance and instruction in life and help them see their true potential.

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