Does Problem-Based Learning Work on Presentation Skills?

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Abstract: Presentation skills are seen as an important ability that must be mastered by university students to prepare them for the work-place. Another purpose of university education aside from improving knowledge and achievement is preparing the students for the real competitions and succeed in their career. This research aimed to empirically prove whether problem-based learning method has its effect on students' achievement and presentation skills. This research used descriptive qualitative method while quota sampling technique was used to select the subject. The data were analyzed by using structural equation modeling (SEM) with partial least squares (PLS) while the students' performance was measured descriptively. The result showed that problem-based learning method gave a significant effect on students' presentation ability which therefore improve their achievements. Students developed independent learning habit through their Problem-Based Learning experience which gave significant impact on the content and mastery of their presentation material although the discussions session didn't run well due to the text dependency of the participants.

1 INTRODUCTION

Presentation is a technique commonly used by students and teachers to practice their knowledge and teaching skills. Yalcin and Yalcin (2010: 480-486) state that in the 21st century, the presentation method had become the important requirement in daily life related to social and individual needs. Presentation is often used by teacher to measure the students' mastery and understanding of the material as well as to measure their communication skills. This is very essential especially for those students majoring in education as they are being prepared to deliver the knowledge to their future students.

Recent studies have emphasized on the use of Problem-Based Learning to improve students' understanding on learning material. Some studies have also mentioned on the effect of Problem-Based Learning on students' independent learning, problem solving ability and teamwork. However, combining all the aspect of learning above is another important thing. All aspect mentioned can be seen clearly through students' ability in presentation skills. Harun, Yusof, Jamaludin and Hassan (2012: 233-242) said that: In the problem-based learning models, the students are trained to do independent learning, become useful in their group to solve the real

problems through context and independent learning. This is in line with Magsino (2014: 1-5) and Jalani and Sern (2015: 153-163) who stated that students who taught with problem-based learning get wider knowledge and understand the concept deeper than those who taught with teacher-centered learning model.

A problem-based learning is used by the teachers to improve students' motivation and creativity in the learning process. Walton and Matthew in Alrahlah (2016: 155-161) and Phungsuk, Viriyavejakul, and Ratanolarn (2017: 297-306) also state that problem-based learning had been introduced and develop as an important part of learning to improve students' ability, knowledge, and attitude which is the essential part of the curriculum and encourage students to question and examine on the area, object, people, book, proof, and information. The process of Problem-Based Learning encourage students to present their study arrange the materials and present the result of their study in a form of presentation.

Presentation is a form of evaluation which become an important part of learning process that enable teacher to evaluate the students' knowledge, and understanding of the materials as well as other abilities such as communication, teamwork, group discussion and problem solving. This skill is however

less observed by researchers. Levasseur, Dean, and Pfaff in De Grez, Valcke, and Beringgs (2010: 1786-1789.), stated that oral presentation skill recognized as a major professional skill, but the learning process and skill about the presentation is ever researched by another researcher.

This research is aimed to evaluate the students' ability in presentation. This is very important to understand the effect given by Problem-Based Learning method in students' understanding and mastery of the material through presentation. Other skills promoted by the use of PBL in teaching and learning such as communication, teamwork and group discussion can also be analyzed through presentation easily.

2 METHOD

This research is carried out by descriptive method, which describes the application of the problem-based learning to develop students' achievement and presentation skill. The subjects of the research are 45 sample students of the Accountant Education Study program out 0f 96 student who are taken by quota sampling technique. The overall students initially have quite low of presentation abilities and most are using monotonous slides and paper based presentation. Their ability in mastering the material was very poor and their presentation was not interesting and alive.

2.1 Measurement of Variables

The measurement of problem-based learning collisions is 3 dimensions and 18 indicators are learning independence with the indicator code KMB1, KMB2, KMB3, KMB4, KMB5, KMB6 and KMB7, Learning Motivation with MOB8, MOB9, MOB10, MOB11, MOB12, MOB13 indicator code, and teamwork with code indicator KRT14, KRT15, KRT16, KRT17, KRT18.

The measurement of presentation capacity is 12 indicators with the code KRT15, KRT16, KRT17, KRT18, PRE19, PRE20, PRE21, PRE22, PRE23, PRE24, PRE25, PRE26, PRE27, PRE28, PRE29, PRE30.

2.2 Data Analysis Technique

The technique of analyzing the questionnaire data is using structural equation modeling (SEM) analysis with partial least squares (PLS) or smartPLS 2 tools, to know the effect of problem-based learning model on presentation ability. The reason for using SEM analysis is, because of the latent and the first order and second order constructs.

3 RESULTS

3.1 Evaluation of Measurement Model (Outer Model)

Outer model is a step to know the validity and reliability that connects with latent variables. To see the validity is measured by using outer loading and AVE. Requirements to meet validity must be above 0.50. Measuring the outer loading if there is one invalid indicator that is PRE20 on variable Ability presentation. On the AVE measurement, all contracts and dimensions meet the criterion of the criterion of 0.5 is declared valid.

Measurement reliability using composite reliability with criterion 0.7. The result of smartPLS shows that all the constants and dimensions have met the requirements, so it is declared reliable all the constants and dimensions. Here are the AVE tables and composite reliability.

Table 1: AVE and composite reliability.

	AVE	Composite Reliability
KMB	0,661662	0,931455
KRT	0,699493	0,92076
MOB	0,65102	0,917911
PBL	0,619589	0,966893
PRE	0,56497	0,933663

Source: Results of Data Processing SmartPLS 2 (2018).

3.2 Model Structure (Inner Model)

The structural model is evaluated by using R-square (R^2) for the dependent construct, and the T-test as well as the significance of the structural path parameter coefficients. R^2 can be used to assess the effect of independent latent variables on latent dependent variables whether they have substantive results. In Table R-Square shows that the lowest R-Square 0.049065 is included in the weak category and the highest 0.945921 is included in the stable category.

Table 2: R-Square.

	R Square
KMB	0,945921
KRT	0,913484
MOB	0,928598
PBL	
PRE	0,049065

Source: Results of Data Processing SmartPLS 2 (2018).

3.3 Evaluation of the Goodness of Fit

The result of the calculation of goodness of fit values is 0.67340033 above the 0.50 criteria, so that the research model is categorized fit. Here is the result of the goodness of fit calculation with the formula:

$$Gof = \sqrt{AVE\ X\ R - Square}$$
$$Gof = \sqrt{0,39347\ X\ 0,709267}$$
$$Gof = \sqrt{0,4539347}$$
$$Gof = 0,67340033$$

3.4 Significance Test

In the Path Coefficient tables can be seen that the problem-based learning model (PBL) to Presentation Capability (PRE) with the value of T-statistics 14.855864 above 1.96 or 5% significant, and the coefficient up to 0.221506 that shows the positive numbers. It shows that the constraint of problem-based learning has a positive effect on the presentation skills.

Table 3: Path coefficients (Mean, STDEV, T-Values).

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)
PBL -> KMB	0,972585	0,972489	0,001775	0,001775	547,829967
PBL -> KRT	0,955764	0,955544	0,002888	0,002888	330,887144
PBL -> MOB	0,963638	0,963682	0,002072	0,002072	465,040043
PBL -> PRE	0,221506	0,227078	0,01491	0,01491	14,855864

Source: Results of Data Processing SmartPLS 2 (2018).

The result showed that the implementation of Problem-Based Learning has a good impact on Students' presentation skill. Students' ability in constructing materials for presentation is quite good, although improvement is needed. Students' ability of presentation is also improved quite significant. However, there are some aspects that need further improvement namely mastery of the materials and readiness in responding the participants' questions.

4 DISCUSSION

Problem-Based learning develops student's independent learning as they are faced to real life problem to be solved. This is in line with Harun, Yusof, Jamaludin and Hassan (2012: 233-242) who stated that in PBL, students are trained to be independent, effectively function in group work to solve the real problem, therefore it motivates students to learn contextually and independently. Supporting the idea are Jalani and Sern (2015: 153-163) who stated that students who are taught by using PBL are able to obtained a wider knowledge and deeper understanding of the concept compares to those taught by using Teacher-Centered Learning.

The result also showed that students' ability in presentation is also improve significantly especially in term of preparing the materials. This is essential as preparing presentation is needed to give precise information which makes it well accepted by listener. Simona (2015: 69-74) says that to increase students' awareness, preparing and providing the good academic presentation, technique, and business based on the rule, clear structure, uses language list and supported by technology which can give success contribution on their future career is highly essential.

The ability of presentation can be evaluated from two kind points such as the ability to make the material presentation (slide form as a document presentation) and the ability when they do the presentation. Goto and Kashihara (2016: 1285 – 1293) says that recently was happen increases usage document presentation that consists of the slide as

learning content. The result showed that students' ability in preparing a good and precise material has improved significantly.

The similar result is found in the students' ability to present the material. This is in line with Levasseur, Dean, and Pfaff in De Grez, Valcke and Berringgs (2010: 1786-1789) that the ability of oral presentation is recognized as the main professional skill. The result shows that students' ability in oral presentation has improved compared to their previous result.

However, there are some skills that didn't show any improvement namely the material mastery and ability to give quick response to every question. Students are mostly still depend on the text in presenting their material. Although the slide content is quite effective and represent the materials, most of them still used the text to refer to the answer given by participants.

5 CONCLUSIONS

The result of the research shows that problem-based learning model has significant influence towards the students' achievement. It is also able to develop students' presentation skill, in terms of the material development and presentation performance. Students are able to develop deeper understanding of the material and present the material fluently. However, students' mastery of the material during the presentation is still hasn't improved. In addition, the students are still unable to give quick responses toward the questions given by participants and have to refer to their text to find the answer.

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