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The Influence of Problem Based Learning Model toward Students' Activities and Learning Outcomes on Financial Management Subject

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Abstract

This research aims to know the influence of problem based learning model toward students' activities and achievement on Financial Management subject for undergraduate program students of Accounting Education. It was a quantitative research that used true experimental design. Samples of this study were undergraduate program students of Accounting Education in the year of 2014. Class A were control class and class B were experimental class. Data were analyzed by using t-test in order to determine the differences of learning outcomes between control class and experimental class. Then, questionnaires were distributed to gather students' activities information in their students' learning model. Findings show that there is an influence of Problem Based Learning model toward students' activities and learning outcomes on Financial Management subject for undergraduate program students of Accounting Education since t-count ≥ t-table. It is 6.120 ≥ 1.9904. Students' learning activities with Problem Based Learning model are better than students who are taught by conventional learning model.

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INTRODUCTION

Along with the development in the globalization era, it brings the great impacts in all fields. These developments also influence the quality improvement of education. Furthermore; the development of technology leads to the development of science; either positive or negative impact. The development of this technology starts from the developed countries. Therefore; the developing country needs to align itself with the progress happened in the developed countries.

There were several things which have been done in education; such as, updating the curriculum, increasing the school facilities/ educational institutions in the form of manuals books, multiply computers, props, constructing the buildings/ facilities and infrastructure. Similarly, the universities should also continue improving the educational input, upgrading the process quality and then preparing the output which can be accepted in the real world after graduating from the universities.

Surabaya State University conducted various activities, such as; trainings and seminars to improve the quality of the lecturers and staff. It happened also at Accounting Education Study Program. For improving *Tridharma* (Three duties) of Higher Education, the accounting lecturers were responsible fot producing the qualified graduates in the future. One of the efforts was making the improvements at each lecturing. At the teaching and leanring process of fincancial management subject, the lecturer prepared the lesson plan, prepared the books/ materials, improved the learning model based on learners' characteristics, used the instructional media such as; media based on technology, and made the evaluation tools based on KKNI curriculum.

Financial Management was a subject which must be taken by students of Accounting Education Study Program. It consisted of Financial Management at companies; which were related to financial statement analysis, financial environment, time value of money analysis, bond and stock valuation model, capital cost analysis, capital budgeting technique, and project cash flow analysis.

At the teaching learning process of Financial Management, the lecturer gave the lecturing by considering the materials, methods, media, models, and learning assessment. One of the efforts which supported students' activities and produced the better learning outcomes was the Problem Based Learning (PBL) model. It emphasized on students' engagement at the teaching and learning process; they should think actively about the problems around them and focused on solving the problems.

Problem Based Learning (PBL) model was a learning approach which encouraged students to develop their thinking skills rather than just to memorize the information. Etherington (2011) revealed that PBL gave the positive influence on the teacher's motivation since it raised the ideas of the real-world context. Learning in the context of the real world was expected to be responded positively by the students. Zahra & Widiyanto (2015) revealed that implementation of PBL got the positive responses from students.

The objective of financial management subject was to provide an understanding on the concepts and theories of finance as the basis for financial decision making. Bilgin et al. (2009) revealed that PBL could improve students' conceptual understanding. While in decision making, Simone (2014) discussed that Problem-based learning (PBL) provided a generative context for prospective teachers to work together in small groups to analyze the problems, to discuss the options, and to make the informed decisions to solve the problems based on authentic teaching situations at the real and multiphases challenges. Bottom of Form

Sudarman (2007) argued that problem-based learning was a learning approach which the learning activities used the real-world problems as the context for learners to improve their critical thinking and problem-solving skills, and also to acquire the essential knowledge and concepts from the materials given.

According to Suyatno (2009), the characteristics of the problem-based learning model were at least two learning outcomes achieved when applying the model; they were the answer to the problem and how to solve the problem. The learning situation was about the real problem-solving process since it was one of activity characteristic of problem-based learning model. Sulistyani (2014) explained that PBL could improve students' critical thinking skills.

Thomas and Setiaji (2014) revealed that the learning process quality could be seen from the lecturer's activities which were able to motivate students to learn actively and creatively, so the learning process was no longer centered on lecturers but it centered on students. In Problem Based Learning, the lecturer was the facilitator who helped students to present and solve the problems.

The lecturer was also the mentor for students to be active physically and intellectually during the learning process. Yuniarti and Hadi

(2015) indicated that PBL succeeded in increasing students' activities and learning outcomes. According to Hamalik (2005), the values at the teaching activities were: (a) students directly experienced their own experiences, (b) did independently to develop all aspects of students' personal integrity, (c) improved the harmonious cooperation among students (d) did the jobs based on their own interests and abilities, (e) improved the discipline and made the learning atmosphere democratic, (f) strengthened the relationship between the school and community, and the relationship among the parents and the lecturers, (g) Teaching was conducted realistically and concretely so it was expected to develop students' understanding, critical thinking and to avoid verbalisticism, (h) teaching at university was a real life as it happened at the real life community.Top of Form

The objective of this study was to determine the influence of Problem Based Learning (PBL) towards students' activities and learning outcomes at Financial Management subject for the undergraduate students of Accounting Education. The studny was done by giving the treatments to two classes. One class was an experimental class treated with the application of Problem Based Learning and another class was a control class. Both classes then were compared to know students' activities and learning outcomes. The result of this study was useful for the lecturers to provide an overview of the effectiveness of PBL model.

METHODS

It was a quantitative research using experimental approach with true experimental design because the researchers classified the subjects or participants into a control group and an experimental group. The research was designed to know students' learning outcomes and learning activities after implemeting the Problem Based Learning model. It was a Pretest Posttest Control Group Design. In general, the research design was described below:

E	:	0_1	x	0_2
K	:	0_3	-	0_4

(Arikunto, 2012)

Notes :

E:symbol for the experimental group

K:symbol for the control group

0_1 dan 0_3:the pretest results

0_2 dan 0_4:the posttest results

X:the treatment for the

Experimental group

Based on the research design, the research steps were: 1) giving pretest to the experimental group and the control group to measure the average of students' learning outcomes before the treatment was given (01 and 03); 2) giving treatment (x) to the experimental group, the treatment was Problem Based Learning (PBL) at Financial Management subject and there was not any treatment (-) to the control group, it was only the conventional learning; 3) giving posttest to the experimental and the control groups to measure students' learning outcomes after being treated differently (02 and 04); 4) determining the difference between the values at 01 and 02 for the experimental group and the difference between the values at 03 and 04 for the control group to measure the average of pretest and posttest; 5) Using statistical test, it was t-test to know the difference.

The study took place at the Economics Faculty, Surabaya State University. It was at Ketintang Street, Surabaya. It was conducted at the semester of 2015 (when Accounting Education students took the Financial Management subject). The population of the study was also the samples of the study. They were all students in 2004 who took Financial Management subject; they were 81 students, 41 students were from Accounting Education Class A, and 40 students were from Accounting Education class B. the data were collected by tests and questionnaires.

It was quantitative data in the form of pretest and posttest scores. They were analyzed to test the proposed hypothesis. The hypothesis of this research was tested by t-test to know students' difference on their activities and learning outcomes between the experimental and control classes. The experimental class was treated by PBL model; whereas, the control class was treated by the conventional model or lecturing.

RESULTS AND DISCUSSION

It was conducted at Financial Management class. During the teaching learning process, the lecturer monitored the learning process, applied the conventional learning model at class A, and the problem-based learning model at class B. Here are the results of the research during the learning model implementation.

Students' Learning Activities

To know students' learning activities; both experimental and control classed were given questionnaires for students' activities. The statements at the questionnaire were based on Umar Hamalik's theory (2005) which was supported

with various related sources consisting of 9 statements. Questionnaires were filled by students, and they were accumulated as can be seen on Table 1 for experimental class' learning activities and Table 2 for control class' learning activities.

Whereas; the questionnaires' results from the control class with the conventional learning model could be seen on Table 2.

Table 1. Students' Learning Activities at the Experimental Class by Implementing the Problem Based Learning Model

Statements	Average Scores
Expressing the opinions	4.275
Finding the information from various learning sources	4.750
Developing the personal aspect integrally	4.800
Fostering the cooperation	4.900
Confidence	4.875
Discipline and democratic	4.725
Being excited with the PBL model	4.850
Understanding and critical thinking	4.950
Linking the activities and people's lives	4.875

Table 2. Students' Learning Activities at the Control Class by Implementing the Convenional/ Lecturing Learning Model

Statements	Average Scores
Expressing the opinions	3.512
Finding the information from various learning sources	3.732
Developing the personal aspect integrally	3.732
Fostering the cooperation	4.219
Confidence	3.732
Discipline and democratic	3.683
Being excited with the PBL model	3.756
Understanding and critical thinking	3.317
Linking the activities and people's lives	3.195

(Source: processed data by the researchers)

Based on Table 1 and Table 2 above, there were differences on students' learning activities between the experimental class and the control class. The experimental class students were more able to express their opinions, to find the information independently, to be able to develop all personal aspects, to cooperate with teams, to do the tasks confidently, to be more disciplined, and to be more excited in learning the subject than students at the control class. By implementing the problem-based learning model at the financial management, students were able to develop understanding and critical thinking and could avoid verbalistic. The teaching learning process of financial management subject was more alive by implementing the PBL model.

It was similar to Surif's study results (2013), it showed that PBL could make students able to solve the problems presented by using lecturing approach, making the group activities, guiding the students and the independent learning which could improve their soft skills especially on their motivation, communication skills, and self-learning. Graff & Kolmos (2003) also revealed that the PBL model could improve their involvement in learning activities and led to have more complex understanding level.

Pre Test and Post Test Scores

There were the same treatments on pre-test and post-test both at the experimental and control classes. By using SPSS version 22 for windows, here are the results of pre test and post test as can be seen on Table 3.

Table 3 explained that there were differences on respondents' characteristics between experimental class B and control class A. The mean score of experimental class was 50.12, and then it increased up to 80.5. On the other hand, the mean score of control class at pre test was 42.43 and it increased up to 74.46 at the post test.

Based on Table 3 above, it showed that the difference between the experimental class and control class happened because of the different treatments. It showed that experimental class (PAK 2014 B) which was given PBL model performed better than control class (PAK 2014 A) which was given the lecturing model.

The Learning Outcomes for Students' Critical Thinking Skills

To know the influence of Problem Based Learning (PBL) model towards students' activities and learning results, it used t-test between experimental class (PAK 2014 B) and control class (PAK 2014 A). The analysis of SPSS version 22 for windows showed the results on table 4 below.

Based on Table 4, the results of Independent Samples Test explained that the value of equal variances assumed with the value of $t\text{-}_{count} \geq t\text{-}_{table}$ was $6.120 \geq 1.9904$. Hence; the null hypothe-

Table 3. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PreTest PAK B	40	40.00	65.00	50.1250	7.29309
PostTest PAK B	40	75.00	92.00	80.5000	4.45490
PreTest PAK A	41	30.00	55.00	42.4390	7.16955
PostTest PAkA	41	70.00	85.00	74.4634	4.42209
Valid N (listwise)	40				

(Source: processed data by the researchers)

sis (Ho) was rejected and the alternative hypothesis (Ha) was accepted. Therefore; it could be concluded that there was a difference at post-test results between the experimental class (Problem-Based Learning model) and the control class (conventional/ lecturing model).

The results showed that the influence which was proved by the difference between experimental students who were treated by Problem Based Learning (PBL) and control students who were treated by conventional learning model. It was showed that $t\text{-}_{count} \geq t\text{-}_{table}$ (6.120≥1.9904) from the results of hypothesis testing with t -test two independent samples. Learning by applying Problem Based Learning model in the experimental class was able to increase students' activities and learning results better than the control class which was applied by lecturing/ conventional learning model. It was suitable with the theory that students learnt the concepts and principles as they solved the problems. Bilgin et al. (2009) also revealed that students using PBL had better performance on the conceptual issues.

Suyatno (2009) revealed that there were two characteristics of the problem-based learning model; i.e. answering the problem and solving the problem. Dutch (1994) explained that Problem Based Learning (PBL) was an instructional method which challenged students to "learn and learn", worked in groups to find the real solutions. The problem was used to relate students' curiosity and students' analysis ability and students' initiatives to the subject matter.

Problem Based Learning (PBL) prepared students to think critically and analytically, and to seek and to use the appropriate learning resources. The learning which began with the real problems will be more meaningful for students. It was proven by the questionnaires results given to students that students who got the financial management subject with Problem Based Learning model were able to think more critically and to avoid verbalistis and to teach the reality in the world. Whereas; the conventional learning was less meaningful for students' learning development; it made them have the low critical thinking.

Based on the data analysis of pretest scores, it showed that students' learning results between experimental dan control classes were not very different. The pretest average score for experimental group was 40.00 and for control class was 30.00. It happened because students at pre test did not get the complete and clear materials.

Whereas; the results of data analysis at post-tests between experimental class and control class indicated a very significant difference; it could be seen with the average students' learning outcomes for experimental class was 80.5, and for control class was 74.4.

It indicated that the students' learning

Table 4. The Results of Independent Samples Test for Students' Learning Results between Experimental class and Control Class

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Post Test	Equal variances assumed	.505	.479	6.120	79	.000	6.03659	.98637	4.07327	7.99990
	Equal variances not assumed			6.119	78.917	.000	6.03659	.98646	4.07306	8.00012

results at experimental class were better than at control class. Conventional learning made students less able to receive real information, students were less able to think critically and the learning was not real-life. Therefore; conventional learning was less favored by students.

Based on the questionnaire results for students about applying of PBL model, it showed that students were very enthusiastic and gave positive opinions about PBL model. Experimental students could express opinions, find information independently, be able to develop all personal aspects, cooperate with teams, do the tasks confidently, be more disciplined, be more excited on the teaching and learning process.

The teaching and learning process on financial management with the problem-based learning model made students able to develop their understanding and critical thinking well and to avoid verbalistic. The teaching and learning process made the class more alive since there was any student who disagreed with the statements.

Conventional learning model was less interesting and boring for students, so students could not improve their critical thinking ability because there were too many lectures; the teaching learning process was not alive because there were not any real samples at each given case. Thus; control class got the lower post test scores and less learning activities.

CONCLUSION

From the explanation above, it can be concluded that there was an influence of Problem Based Learning Model toward students' learning activities and students' learning results on Financial Management Subject for undergraduate Accounting Education student. It is indicated by the value of $t\text{-}_{count} \geq t\text{-}_{table}$; i.e. 6.120≥1.9904. So it can be concluded that there was an influence shown by students' learning activities and students' learning results between experimental class (students who were given PBL treatment) and control class (students who were given conventional learning / lecture). The average post test score for experimental class was 80.5 and 74.4 for control class. Furthermore; students' learning activities at experimental class were better than those at control class. The implementation of Problem Based Learning model was much better and gave the positive influence than the conventional one.

Therefore; it is suggested for: 1) the lecturer to consider the tools, methods, media, and learning models at each meeting to provide the learning materials well to students; 2) For further researcher to do further research about the influence of PBL model toward students' psychomotoric or they can do researches with other learning models or different variables.

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