

# Innovation Model of Problem Based Learning for Banking and Financial Information Systems Courses

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**Abstract:** *The Information Systems Study Program of the Perbanas Institute of Information Technology (FTI) is one of the Information Systems study programs that has a specialty in the world of Banking and Finance. Banking and Financial Information System Course is one of the courses that characterizes this Information System study program. In teaching the instructors have used problems that are in accordance with the theme of Banking and Finance and use the learning method with lectures and group discussions, however there are still some students who claim that the method does not support students to be actively involved in class. As a result of the inactivity of the students, ultimately the hope that students can understand and solve the problems given by the instructor is not optimal. Therefore it is necessary to have a new learning model that is Problem Based Learning, with this learning the students can be more active, more independent, and more critical thinking so that they can solve the given problems.*

**Keywords:** method, lecture, discussion, model, problem based learning

## 1. Introduction

Most learning in classes ranging from elementary schools to tertiary institutions in Indonesia is delivered by lecturers in the form of lectures and is one-way, which certainly causes students to become inactive. Students are only fed with materials provided by the instructor, as a result students are not independent and not creative. If this continues, then the quality of education in Indonesia will certainly continue to decline, graduates of the Indonesian nation will be unable to compete with graduates from other nations.

The Information Systems Study Program of the Perbanas Institute of Information Technology (FTI) is one of the Information Systems study programs that has a specialty in the world of Banking and Finance. The Information Systems study program has been established since 1983, so far the learning model has been submitted to each lecturer, the study program believes that the lecturer will provide the best learning.

Banking and Financial Information System Course is one of the courses that characterizes the Information Systems study program at Perbanas FTI. This course began to be offered in 2012. The average lecturer is a practitioner in the world of Banking and Finance, where he already knows very well the material and problems that exist in the world of Banking and finance. In teaching the instructors have used problems that are in accordance with the theme of Banking and Finance, this is intended so that students better understand the application of the material being taught. Some teaching methods are given by the instructors namely lectures and group discussions, however there are still some students who state that the method does not support students to be actively involved in class, this is due to many factors namely students are still shy in expressing their opinions, embarrassed ask questions, lack of preparation with the material to be studied, lack of information seeking outside (for example the internet). As a result of the inactivity of the students,

ultimately the hope that students can understand and solve the problems given by the instructor is not optimal. Therefore it needs innovation in terms of learning that is Problem Based Learning, with problem based learning so students will understand more about the material taught by teachers and can solve real-life problems, learning becomes student-centered (Azlin Norhaini Mansor, et al. 2014 ), more students can be more active more independent, and more critical thinking (Indri Anugraheni, 2018).

## 2. Literature Review

Problem Based Learning (PBL) is essentially a set of teaching models that use problems as a focus to develop problem solving skills, material and self-regulation (Eggen and Kauchak, 2012), PBL also prepares students to think critically and analytically, and to search for and use appropriate learning resources according to Dutch (1994) cited in M. Taufik Amir (2009).

Problem-based learning strategies have the main characteristic that is the first is a series of learning activities, meaning that students not only listen to lectures or memorize but emphasize the activities of students in thinking, communicating, processing data, and concluding. Second, learning activities are directed to solve problems. In the learning process there is a need for problems to be examined. Third, problem solving is done using a scientific approach to thinking. This thought process is carried out systematically and empirically (Sanjaya, 2006). Problem solving itself is divided into three characteristics, namely problem solving is a cognitive activity, but influenced by behavior. Then the results of problem solving can be seen from the actions in looking for problems. Furthermore problem solving is a process of manipulating actions from prior knowledge (Wina, 2009).

Difference vs. PBL OTHER METHODS (Savin: Badin, 2000 & Moust, Bouhuijs, Schmidt, 2001) as followed in (M. Taufiq Amir, 2009)

1. Lecture: Information is presented and discussed by educators and students
2. Case or case study: Case discussion is usually done at the end of the lecture and is always accompanied by a discussion in class about the material (and its sources) or concepts related to the case. Various related materials and questions are given to students
3. PBL: Written information in the form of problems is given before class begins. The focus is how learners identify their own learning issues to solve problems. Relevant material and concepts are found by the learners themselves

### 7 Steps of the PBL Process

In the PBL process the teacher must be prepared with all the necessary tools (problems, supplementary forms, etc.). Learners must also understand the process, and have formed small groups where each group runs a 7-step process (M. Taufiq Amir, 2009).

Step 1: Clarifying terms and concepts that are not yet clear; step 2: Formulate the problem; Step 3: Analyze the problem; step 4: Organize ideas and systematically analyze them deeply; step 5: Formulate learning objectives; step 6: Look for additional information from other sources (outside of group discussion); Step 7: Synthesize (combine) and test new information, and make reports for lecturers / classes.

### 3. Methodology

The methodology used in this study is qualitative. Data were collected using questionnaires and interviews, which involved two instructors in the Banking and Financial Information System course and ten students. Questions given to students and instructors are arranged to find out how learning has been carried out so far, and how they think about PBL learning.

The instructors interviewed have more than ten years of teaching experience and they are also practitioners in the Banking world. So far the teachers have never used the teaching model with PBL, the learning methods they do are with lectures, case studies and discussions. Ten students interviewed were students who had taken the Banking and Financial Information System course.

### 4. Discussion and Results

#### Discussion:

Data obtained from the results of interviews and questionnaires with students are:

- With the current learning methods, namely lectures, discussions and case studies, have not made all students actively involved in class.

- With the learning that has been carried out at the moment, there are still some students who are reluctant to discuss and are difficult to work with.
- The Banking and Finance Information System course has been equipped with examples or cases / problems regarding Information Systems that exist in the world of Finance and Banking, but often students do not understand important terms in the banking world, this causes difficulties for students in solving cases that are was given.
- All students answer that the current learning needs to be developed.
- Some students have heard about the problem based learning model, and they stated that this model is suitable for this course.

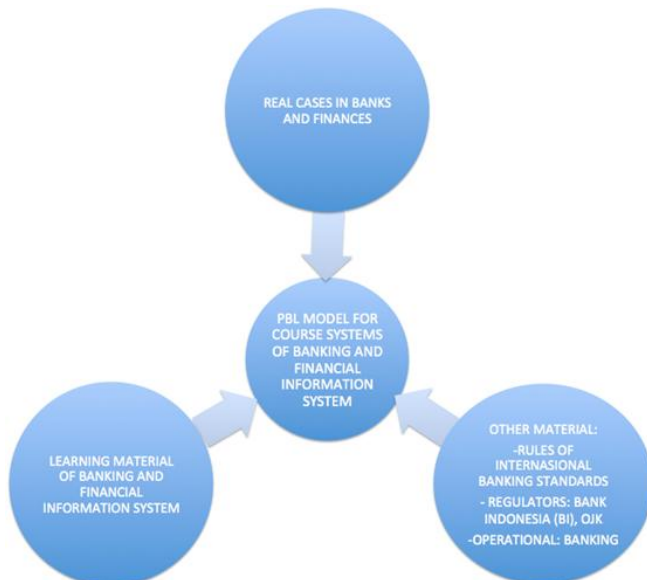
Data obtained from the results of interviews and questionnaires with instructors are:

- The instructor states that the current learning methods, namely lectures, discussions and case studies, have stimulated some students to be active in class, but in group work there are still a few students who are ignorant just following along with their friends.
- The instructor also states that learning applied to this subject has increased students' understanding even though it has not been maximized
- the learning that is currently applied has used cases / problems regarding information systems that exist in the banking and financial world.
- The instructor believes that a new learning model needs to be made to be able to further enhance student activity in the classroom and improve students' critical abilities so that they can solve the given problem.

From the results of interviews and questionnaires both with students and with teachers, it is known that there are still many weaknesses that occur in learning in the Banking and Financial Information Systems course. Since students are students, learning should be more independent, they must be more active in looking for information outside, not only depending on the material in the class given by the instructor, the cases given to the course should be able to trigger students to Critical thinking, students must have the courage to share information they know or ask questions that they do not yet know, and the teacher has more role as a facilitator who directs and provides input so that learning runs smoothly and optimally.

### 5. Results

So that learning in the Banking and Finance Information Systems course can be maximized, it is necessary to create a problem based learning model of learning that is felt to be very suitable, as discussed above. Therefore, based on the input, it is proposed that the Problem Based Learning model is divided into several stages. The first stage, based on interviews with several instructors who are also practitioners at one of the leading private banks, obtained an initial overview of what can form PBL learning model.



Picture 1: PBL models and their constituents

The second stage is to look back at the suitability of the learning model for this course in Banking and Financial Information Systems.

The third stage is to prepare tools that will be used to facilitate this learning. The toolkit is: a form for students in the form of meetings, for teachers in the form of meetings and assessment forms overall. Besides that, a student feedback form is also prepared on the teacher implementing the PBL process (Taufiq, 2009)

The things that need to be prepared in learning Problem Based Learning, use a 7 Step process, namely:

Step 1: Clarifying terms and concepts that are not yet clear.

The study program that conducts this course is Information Systems not economics or banking, so students do not have a strong basis for Banking and Financial material, so it is very important to have a common perception of the terms used in the world of financial banking. Clarification of the concepts of banking and finance must be clear so that students can understand easily, especially in the world of banking many terms that are sometimes not understood by ordinary people.

Step 2: Formulate the problem

Formulating the problem is difficult for students, but students must be able to formulate the problem with their own language on a case given by the teacher. The case given is a case in connection with banking and finance that has occurred a lot lately.

Step 3: Analyze the problem

After being given a case in connection with banking and financial material by the instructor, students conduct group discussions, learners share their knowledge with each other in connection with the issues discussed, then

analyze it critically. At this stage all students must be active.

Step 4: Organize ideas and systematically analyze them deeply.

After the students have done the analysis, then analyzed more deeply, and seen how related to one another.

Step 5: formulate learning objectives

The group can formulate the learning objectives of banking and financial information system courses, such as:

- What is the Indonesian Banking Architecture (ATPI)?
- What are ATPI's targets?

Step 6: Look for additional information from other sources

To enrich information related to banking and finance, students can obtain it by reading a lot of textbooks, or by supporting IT to search for it via the internet, namely by extracting the reading in writing (not just copy paste directly) and write the source clearly.

Step 7: Synthesize and test new information

In this step the group has been able to synthesize, combine and communicate things that are relevant.

## 6. Conclusions and Suggestions

### Conclusion:

During this learning method applied to the subjects of Banking and Financial Information Systems in the Perbanas IKPIA Information Systems study program is still using lectures and discussions only, this causes students to be less independent in seeking information, students are less active in discussions, still shy and afraid of being wrong in asking. Similarly, the problems given by teachers in class are not immediately responded critically by students. Even though learning at this time is still comfortable, all students expect that this learning can be developed so that all students can be active. Likewise, the instructor realizes that the current learning process is not optimal, not all students want to be active in class discussions, it seems that there are some students who are only following their friends. Therefore proposed a PBL model for this course, with the existence of PBL it is expected that all students can be more independent and active in lectures.

### Suggestion:

In order for PBL to run optimally, the teacher as a facilitator must be able to stimulate students to actively ask questions, discuss. Teachers must also be prepared with problems, supplementary forms and other supporting.

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