

Development of Cost Accounting Learning with Case-Based Method (CBM)

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ABSTRACT

This study investigates the case-based learning model (CBM). theory and its application in designing online and independent learning. The purpose of this study is to validate and refine the theory for the context of online learning. The respondents of this research are 67 students who are taking Cost accounting courses in 2021. The research methodology uses formative research, this study develops an online tutorial based on a design synthesized from the financial statements of companies listed on the Indonesia Stock Exchange (IDX). The results of the formative evaluation are: The high interest in student learning, as evidenced by: 1). Mid Exam scores obtained by each student. 2). Students' enthusiasm for learning and enthusiasm for teaching materials and applying them with financial reports. These findings extend the understanding of CBM to the online learning context, providing useful insights for students and for the design of online learning that implements CBM.

Keywords: Case-based method, Online learning, Cost accounting

1. INTRODUCTION

Learning is a process of interaction between students and their environment in educational situations, resulting in changes in knowledge and better behavior. The purpose of learning is to condition the environment with changes in behavior for students. Learning objectives can be seen from the success of students after the teaching and learning process and the benchmark of student success from learning outcomes. Learning outcomes are all changes in behavior from an interaction of act of learning and act of teaching that produce something or beneficial outcome when returning to society.

The rapid changes in the business environment greatly affect the development of the concept and practice of Cost Accounting. In this case, cost accounting pays attention to the characteristics of management accounting. The Cost Accounting course in the curriculum structure is a compulsory subject that must be taught by students majoring in Management at

the Faculty of Economics, Andalas University. Cost Accounting courses are offered in odd semesters (semester 3) for Accounting and Management majors. The Code of Management Accounting Course is: EKA202. Cost Accounting studies the methods and techniques of calculating costs that occur in the company. Prior to mastering Cost accounting, you must have passed Cost Accounting courses 1 and 2 (in semester 1 and semester 2) which are prerequisites. Cost accounting learns more about the concepts, methods, and techniques of calculating the cost of a cost object with an emphasis on calculating the cost of products in a factory company. The objectives or learning outcomes (hard skills and soft skills) of Cost Accounting are:

- a. With a better understanding of cost accounting for manufacturing companies, it is hoped that students can also apply it to trading companies and service companies, as well as all other relevant cost objects such as: suppliers, activities, customers and others.
- b. Students are expected to be able to calculate costs for all cost objects using both traditional cost accounting

approaches and contemporary cost accounting approaches.

- c. Students are able to independently prepare, analyze, and interpret the financial statements of separate entities by applying accounting principles for transactions in accordance with general financial accounting standards and applicable ETAP financial accounting standards.
- d. Students are able to independently compile and analyze Cost Accounting reports, including planning and budgeting, cost management, quality control, performance measurement, and benchmarking, which are relevant and reliable in supporting decision making and management control by applying Cost Accounting techniques.

1.1. Contribution of Courses to Competence

Contribution after taking the Cost Accounting course is the students are able to make business reports that are useful for the world of work. By taking Cost Accounting courses, students can improve their skills like having an attitude of being responsible for work in the field of expertise independently, mastering theoretical concepts in depth about the basic framework for the presentation and preparation of financial statements. Moreover, the students are expected to be able to demonstrate independent, quality and measurable performance, demonstrate an attitude of being responsible for work in their field of expertise independently, master in-depth theoretical concepts regarding basic framework for presentation and preparation of financial statements, master in-depth theoretical concepts regarding recognition, measurement, presentation, and disclosure financial statement elements.

1.2. Method of Learning and Assessment

The TCL method is applied with tutorial methods, discussions and case discussions. The case discussion is given to the issue of the company's financial statements that have been published on the Indonesia Stock Exchange (IDX). At each subject or at the end of the meeting, the material explained, we provide several case examples and students are required to complete the specified cases. Students are required to be independent, adapted to a more interactive and innovative learning pattern. After the assignment is given, students present it online. The assessment is carried out by assessing the mastery of the material and practice of students in solving a given case. The task given for learning outcomes is to form a group of 5 people to discuss the company's financial statements. The discussion of the report is adjusted to the lecture session, then every week students can present by requiring the activity of each student. The final score of the student is determined based on the Mid-Semester Examination (UTS) score,

group assignment scores, personal quiz scores and attendance.

1.3. Problem Analysis

Submission of material carried out using the SCL and TCL methods can be quite encouraging for students, but after the covid 19 pandemic, online learning is a bit difficult for students due to very limited distance and time. Some of the obstacles faced by students are that they still do not understand and absorb material using i-learn (Susiana & Faisal (2020). Lack of interest in learning for students. The impact felt by lecturers is that the low score of students' final exams is possible because of the lack of absorption of the material provided, so that the message is not fully conveyed. By paying attention to current developments, it is necessary to equip students with the abilities they have to study every problem, the previous method in the form of SCL and TCL is still not optimal because they are still carrying out online lectures.

1.4. Formulation of the Problem

From the background of the problems above, the researchers found various problem formulations as follows: How does the use of the case-based method (CBM) influence students' interest in learning Cost Accounting?

2. THEORETICAL FOUNDATION

2.1 Learning Theory

Learning theory explains how information is processed in the human mind and learning occurs (Trianto, 2011:12). Based on a learning theory, it is expected that in a learning process, students can improve their learning outcomes as a result of the learning process. Various kinds of learning theories that underlie the learning model are as follows:

1)Information Processing Theory

This theory explains the process, storage, and repetition of events from people regarding knowledge. Mental events are described as transformations of information from input (stimulus) to output (response).

2)Paivio's Dual Coding Theory

Humans have separate performance memory in managing verbal and visual information (Paivio in Pajriah, 2013). Both of these information have limited capacity to process incoming information. Information, stored, and retrieved can be coded. The first information is adjusted to verbal information, the second information is adjusted to visual information. In relation to the learning process, based on this dual coding theory, information

(material) will be easier to remember and understand if it is presented verbally and visually.

There are several learning models according to Hosnan (2014:199-203) including:

a. Small Group Discussion

Discussion is one element of active learning and is part of many student-centered learning models. This group involves students with groups of students or groups of students with lecturers to analyze, explore and debate a particular problem by finding a solution.

b. Role Play and Simulation

This method uses symbols and equipment to interact between two or more students as a substitute for the process of the system and actual events. Students who plan, implement and assess their own learning experiences that have been undertaken.

c. Cooperative Learning (CL)

Usually used by lecturers in doing a certain task and solving certain problems

d. Collaborative Learning (CbL)

CbL is a consensus built by group members by emphasizing the cooperation of group members.

e. Contextual Instruction (CI)

CI is a way of learning that relates the content of the lesson to the real situation. Or linking lessons with everyday life to help/motivate students to connect knowledge and its application in everyday life.

f. Project Based Learning (PjBL)

PjBL is a systematic learning method, which involves students in learning knowledge and skills through a long and structured inquiry/calling process for authentic and complex questions and carefully designed assignments and products.

g. Problem Based Learning/Inquiry (PBL/I)

PBL/I is a way of learning by giving a problem to students, students must find solutions and dig up information (inquiry) to be able to find solutions to these problems.

In the learning model of learning activities or activities, lecturers must realize that everyone has an optimal and different way (Susiana and Faisal, 2020) to learn and understand new information, that every student needs to be taught, in order to understand better in learning activities, then must be used another way, namely by maximizing information. (Hosnan, 2014:83). Based on some of the opinions above, it can be concluded that the learning model is a plan designed by the lecturer.

2.2 Definition of Case-Based Method (CBM)

The case-based method as an inquiry-based instructional design theory, provides a potential design solution to improve the quality of independent online instruction. While the case study method (CBM) is a

learning design in the form of an explanation of certain problems, events, situations. Students are given the task of finding alternatives for problem solving and then this method is used to develop critical thinking (Yamin, 2007).

This method encourages problem solving, investigation and persuasion by students. Students are formed in groups to be able to solve a problem, namely a company's financial report that has been reported in the media and the company is listed on the Indonesia Stock Exchange. By providing these reports, students are required to participate actively and can find out the problem and understand the problem given. With the collaboration of students and with the interactions that occur, students can draw conclusions and the need for interaction between students.

Another thing that supports is the online learning environment (Eberly and Rand 2003; Lee et al. 2009;). Researchers also provide evidence that the use of videos and images can increase the textuality and authenticity of case development and thus can aid case development and presentation (Baker 2009; Boling 2007), interactive elements such as hypermedia, quick questions and automated feedback can be useful features for active learning and reflective thinking during case investigations (Berg et al. 2004; Choi et al. 2008).

Several researchers suggest case-based learning including: Ertmer, et al. (2014) which states that it prepares students for what they will face in their future professions by exposing them to similar scenarios that provide representative participation in professional reality. It is also problem-oriented instruction. Ertmer and Kohler (2015, p. 70) state that to solve problems in the learning environment, blocks such as building blocks are formed to build and develop ways of thinking. This is reinforced by the statement of Jonassen (2011, p. 149); Choi and Lee (2009) which state that developing is considered a form of 'problem-centered' instruction for students to be able to think intelligently and cognitive skills in complex and unstructured contexts.

2.3. Rating

Efforts are made to improve and develop thinking skills by not only explaining or lecturing but must do a way so that students can train and practice. Familiarize students to be able to analyze and find solutions to problems that are around them. One of them is by using the Case-based method (CBM). Performance assessment on CBM can be done individually by taking into account the quality of the resulting product, the depth of understanding of the content shown, and the contribution made to the ongoing project realization process. CBM also allows students to reflect on their own ideas and opinions, and make decisions that affect project outcomes and the learning process in general, and present the final product.

3. METHODOLOGY

3.1 Research Setting;

The research design was carried out by developing the Plomp model (1997). With the development of research activities (Research and Development / R & D). The steps are carried out by carrying out the stages: initial assessment, design, realization, evaluation and revision and then implemented.

3.2 Research Subject

The research subjects are students of the Faculty of Economics, Payakumbuh Campus, majoring in management, class of 2020 who take the Cost Accounting course. In the odd semester of 2021, the number of students who teach Cost Accounting courses is 74 people consisting of 2 classes, namely M1 and M2.

3.3. Research Parameters

Research on material mastery and student satisfaction after implementing the CBM learning method. This study used a questionnaire distributed to students. Besides the results of the questionnaire, it also uses the midterm exam (UTS) scores to see how much students' absorption and mastery are.

3.4 Data Sources

The source of research data is primary data obtained from the results of the performance carried out by students. Techniques and data analysis using SPSS software version 16 to see the characteristics of respondents and then analyzed using the Structural Equation Modeling Partial Least Squares (SEM-PLS) method.

3.5. Research Procedure/Flow

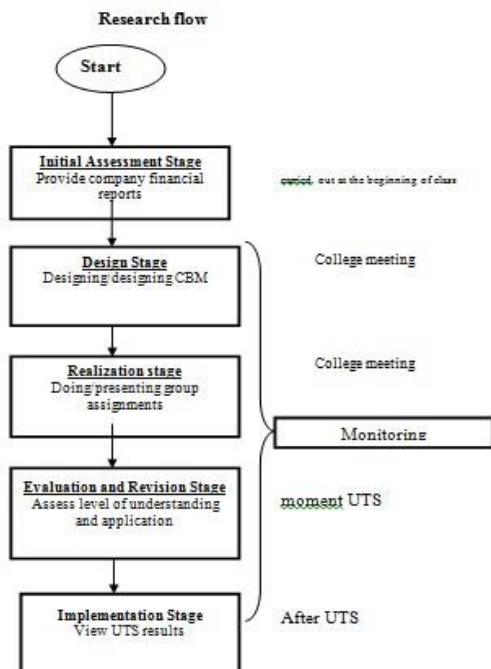


Figure 1. Research Procedure

R&D steps are as follows:

At the beginning of the class meeting, students are formed into several groups, each group consisting of 4 or 5 people.

- 1). Initial assessment stage: At this stage an assessment of the syllabus, student performance sheets and assessment sheets is carried out.
- 2) Design Stage: Opening the lesson with a challenging question (start with the big question). Giving group assignments by providing company financial reports that have been published on the Indonesia Stock Exchange.
- 3). Realization Phase: Carry out activities according to the schedule of activities / schedule). Students collaboratively solve cases given in groups outside of class hours. When learning is done during lecture hours, students present their results in class.
- 4) Assessment is carried out to assist educators in measuring the achievement of standards, playing a role in evaluating the progress of each student participant, providing feedback on the level of understanding that has been achieved and preparing the next learning strategy. The assessment is carried out when each group presents in front of the other groups in turn, assessing individual and group activity.
- 5) Evaluation (evaluate the experience). Assessment after the UTS is carried out in order to monitor the absorption of students whether the method used can improve understanding, has no effect or is getting lower.
- 6). Implementation Phase. The assessment carried out is implemented on each subject of the course. Students are expected to be able to make steps according to the subject matter.

4. RESEARCH RESULTS

4.1 Semester Study Plan (RPS) Revision Plan

The existing Semester Study Plan was revised by incorporating elements of blended learning Mixed/blended learning settings: namely placing the online delivery system as an inseparable part of the overall learning process. This means that both the face-to-face process and online learning are a unified whole. In contrast to the adjunct model, which only places an online delivery system in addition (Chaeruman, 2017)

4.2 Evaluation of the Success of the Revised Semester Study Plan

The effectiveness of the Revised RPS in facilitating students' learning outcomes is evaluated at the end of the semester through the following parameters:

1. Learning outcomes at the end of the odd semester. The results of student learning achievements can be seen from the final grades of students when the entire learning process is carried out. The results of this learning achievement are in the form of letters A to E along with their value components.
2. Distribution of final exam and Quiz. scores

The end-of-semester exam will be held at the end of October 2021 and the quiz will be held at the 5th meeting. Each quiz and test and practice is scored and the results of the answer sheets are returned to students.

3. Student response to development is measured by the theory of technology acceptance model which was originally developed by Darwis in 1989 (Davis 2013). If there are questions or complaints, they can be responded by bringing evidence. It may be wrong to enter grades and we sincerely apologize for the error to the student.

The following are some questions made in the form of a questionnaire distributed after students take the midterm exam. The results of student answers are summarized in table 1 below:

Table 1
Learning With the CBM Method

No	question items	Indicator				
		5	4	3	2	1
1.	How does the lecturer explain the lesson plan (objectives of the course, the structure of the face-to-face material, the factors as the basis for assessment / evaluation, etc.) in the Cost Accounting course?	38 56,7%	18 26,9%	4 5,9%	6 8,9%	1 1,5%
2.	Is the material provided obtained from handouts, modules, lectures, reference books, up-to-date journals?	18 26,9%	29 43,3%	16 23,9%	4 5,6%	0
3.	How is the suitability between the lecture material given and the planned material structure?	16 23,9%	25 37,3%	26 38,8%	0	0
4.	Can the task of the company's financial statements be carried out according to the topic of discussion?	15 22,4%	18 26,9%	33 49,2%	0	0
5.	Is the material given followed by example questions and discussion?	44 65,7%	19 28,3%	2 2,9%	0	0
6.	Can the group assignments given add to the deepening of the lecture material?	20 29,8%	25 37,3%	15 22,4%	6 8,9%	1 1,5%
7.	How much benefit from the assignments given by the lecturer?	26 38,8%	24 35,8%	16 23,9%	0	1 1,5%
8.	Do the quizzes carried out receive adequate feedback/evaluation and correction?	20 29,8%	16 23,9%	23 34,3%	6 8,9%	1 1,5%
9.	Do the quizzes that are carried out get feedback?	18 26,9%	16 23,9%	23 34,3%	6 8,9%	3 4,5%
10.	What are the duties regarding the company's financial statements?	17 25,3%	18 26,9%	26 38,8%	6 8,9%	0
11.	How often does this course take place on time both at the beginning and at the end?	24 35,8%	36 53,7%	5 7,5%	2 2,9%	0
12.	How is the interest and enthusiasm for learning with the learning method that is carried out?	16 23,9%	30 44,8%	20 29,8%	1 1,5%	0
13.	How does the lecturer deliver the material?	16 23,9%	19 28,3%	28 41,8%	2 2,9%	2 2,9%
14.	How much material can you clearly absorb during this lecture	21 31,3%	28 41,8%	17 25,3%	1 1,5%	0
15.	How do lecturers respond to suggestions/complaints submitted by students?	17 25,3%	22 32,8%	25 37,3%	3 4,5%	1 1,5%

Source: Data processed 2021

From the results of the table above, the results can be described, including questions that ask about how the lecturer explains the lesson plan in the Cost Accounting course? The highest answer is clearly explained orally and in writing, which is 38 people or 56.7%. Questions about the material provided were obtained from handouts, modules, lecture instructions, reference books, up-to-date journals, 29 people answered up-to-date or 43.3%. The suitability between the lecture material given and the planned material structure, a balanced answer is 26 or 38.8% stating it is appropriate.

Whether the task regarding the company's financial statements can be done according to the topic of discussion, they generally answer according to 49.2% or 33 people. Questions regarding the material given were followed by sample questions and discussions, their answers were explained orally clearly and in writing which answered 44 people or 65.7%. Questions

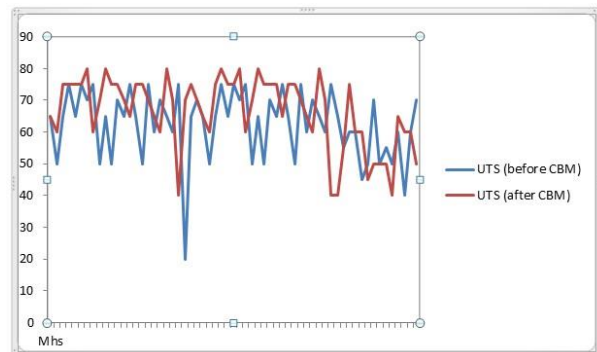
about whether the group assignments given can add to the deepening of the lecture material? student answers 25 people answered a lot (50%-60%) while those who answered almost entirely were 20 people or 29.8%.

The question is how much benefit from the assignments given by the lecturer? Most of the answers very much increase the ability that is equal to 38.8% or 26. answers. Do the quizzes carried out receive adequate feedback/evaluation and correction? Students' answers discussed were 38.8% or 26 people. Questions Does the task regarding the company's financial statements can be done affect understanding? Most of them answered accordingly, namely 38.8%. How often does this course take place on time both at the beginning and at the end? In general, they answered Interested and excited with the results of the answers as many as 36 people or 53.7%. How does the lecturer deliver the material? Answers as many as 28 people answered interesting. How much material can you clearly absorb during this lecture. Their answers were 50 to 60% with 28 people's answers or 41.8%. As well as questions about how lecturers respond to suggestions/ complaints submitted by students? They answered Wise and Wise once, namely as much as 25 or 37.3%

4.3 Distribution of Final Scores

The results of this study include data on learning outcomes from psychomotor, affective, and cognitive aspects. The assessment of the psychomotor aspects of students is taken from observations during class learning (before UTS/before using CBM and after using CBM) as shown in Figure 2.

Figure 2
Distribution of UTS Values for Cost Accounting Course



Source: Data processed 2021

Based on Figure 2 above, generally the B+ and B scores (81%) and a small percentage who get the C score are 6%. This is because the learning method used has not made students understand the course. The old method was to provide material directly via email to the group leader and then giving lectures according to the topic of discussion and students feel less absorbent because they only read books and take notes while practicing a little.

This is in line with the opinion of Prasetya, et al., (2008; Andi and Susiana (2021) who state that the use of learning media is very important to support the success of the learning process in the classroom, one of which is computer-based learning media. Arsyad, (2011) who stated that besides that learning media can overcome the limitations of the senses, space and time, Amayati and Mariono (2010) stated that the use of computer media / online media is designed to motivate students and increase their knowledge and skills.

5. CONCLUSION

5.1 Conclusion

Based on the results of research and data analysis, it can be concluded that:

- a. The application of case-based learning methods (CBM) in cost accounting courses in M1 and M2 classes at ANdalas University is able to improve students' thinking skills marked by increasing students' ability to identify problems, namely company financial statements. With financial reports, students can analyze problems, seek information and draw conclusions and can present them.
- b. The CBM method increases student enthusiasm during cost accounting lectures and the role of lecturers as facilitators, motivators and evaluators has been done well.
- c. The application of CBM produces a positive impact, democratic thinking, and good communication is established between members and groups. The existence of a democratic attitude, cooperation, dare to express opinions, respect the opinions of others.

5.2 Suggestion

The use of the Moodle learning method should be socialized in advance and given time for the trial phase, thus allowing students to get used to using applications that have not been used previously.

5.3 Limitations of Research Results

This research is inseparable from limitations. It is hoped that the limitations of the study can be an improvement in the future for further research. The limitations found in this study are:

1. The scale of respondents in this study is relatively small, amounting to 67 respondents from students of the economics faculty of Andalas University.
2. The research location is only focused on the area of the Payakumbuh campus economics faculty. So the results of this study can only be implied on the Payakumbuh campus. Considering that other regions have different conditions, the results of the research may not necessarily be implied in other faculties.

3. This research is only limited to the variable of providing cost accounting teaching materials with conventional methods and the use of the CBM method at the level of student experience.

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