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An Analysis of the Reliability of a Teaching Model for Presenting a Computer-based Cash Flow Report

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Abstract

From a preliminary observation it was found out that, in general, the students of the Accounting Department of Universitas Pendidikan Ganesha have not understood how to write a cash flow report well. Hence, the researcher would like to develop a model in writing a reliable computer-based cash flow report. This study aimed at obtaining a teaching model in presenting a reliable computer-based cash flow report. The reliability of the teaching model was established through an inter-expert group discussion. The reliability of the model in writing the computer-based cash flow report was assessed in terms of its content reliability and organizational reliability. On the basis of the summary of the experts' assessment, it was found out that the teaching model used in writing the computer-based cash flow in this study fell into the very reliable category. This cash flow report writing model can be used in the teaching of cash flow report.

Keywords: model, teaching, cash flow report, computer

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1. Introduction

Accounting study program is a study program that has competence or expertise in the field of accounting. The basic expertise qualification in accounting covers the fields of financial accounting, managerial accounting, information system accounting, taxation and computer. To become experts in financial accounting the students are required to understand accounting basic concepts and financial report writing process in an economic entity. According to Ikatan Akuntan Indonesia [1] in the statement of the financial accounting standard, a financial report contains elements of profit-loss report, retained earnings, balance report and cash flow report. The stages in writing a financial report are often called accounting cycle, because its writing follows a long and recurring stages. The accounting cycle starts with the making of a journal, posting the journal to the ledger account, the making a trial balance, the making of the adjusting entry, the making of the worksheet and ends with a financial report presentation. From the series of the

stages in the accounting process, a financial report can be produced which contains a profit-loss report, retained earnings report, a balance report, and a cash flow report. A cash flow report can be presented by analyzing the cash book which can be done through a two-period balance. Erni Sulindawati (2017)[2 } states that during the teaching and learning process, the students found difficulties in mastering and understanding a cash flow report writing. Conceptual understanding in cash flow report writing requires more ability from the students. To facilitate the students' understanding in presenting a cash flow report we need to use a set of suitable teaching materials. The set covers a suitable teaching model, suitable teaching materials, and computer technological media that facilitate the process of presenting a cash flow report.

According to panduan guru.com [3] teaching models are ways/techniques/ presentations that are applied by a teacher in the implementation of teaching to achieve the desired learning objectives. Furthermore, according to panduan guru.com, there are some teaching models such as lecturing, discussion, case study, role play, etc. Each of them has its own weaknesses and strengths. A model or method plays a very important role in enhancing the quality of teaching, thus, an appropriate model can be used by the teacher in the implementation so that an effective teaching can be realized.

Furthermore, based on panduan guru.com, teaching models can be defined as ways, examples and patterns, that have the aim of presenting messages to students that have to be known and understood by making patterns or examples with materials selected by the teacher suitable for the topic given and the condition in the classroom. A model will have certain characteristics in terms of the elements that constitute it.

According to Darminto (2000) [4] and Erni Sulindawati (2017) [2] in writing a cash flow report one can follow some stages. The stages or procedures needed in writing a cash flow, both using direct and indirect methods are: (1) calculating the change in the balance in the cash account by comparing the first and the last cash during the current period; (2) calculating a net change of every balance account other than cash account and cash balance and its changing categories; and (3) determining cash flow that is separated into three classifications, investment activity, and funding other than cash and the effect of change in exchange rate that uses information from the comparative balance, the report of profit-loss in the current period and additional information.

According to Erni Sulindawati (2017) [2] the stages in presenting a cash flow report can be processed into a cash flow report using Microsoft excel by following some stages. First, calculating the difference in accounts in the balance. Second, analyzing change in the accounts in the balance based on the understanding of the concept: if there is an increase in the assets group, it will cause a decrease in cash, if there is a decrease in the

assets it will cause an increase in cash. If there is an increase in the liabilities, it will cause an increase in cash and if there is a decrease in the assets, it will cause a decrease in cash. Third, presenting the accounts change analysis based on the regulation in cash flow report.

The stages in presenting a cash flow report can be done by using a computer program application to improve the students' ability in presenting a cash flow report. In this study a teaching model for presenting a cash flow report through computer media was developed through computer media. The development of this teaching model was designed by following six stages. All the stages in the teaching model have interconnected one another in order to increase the students' competence in presenting a cash flow report. The first stage is directing the students in learning through pictures and power points media that are related to cash flow reports from various types of businesses. The second is understanding concepts and procedures in presenting a cash flow report. The third is an activity of presenting a cash report through Microsoft excel program. The forth is an activity of presenting a computer-based cash flow report. The fifth is presenting the process of writing a cash flow and the six is evaluating the result.

The teaching model in presenting a cash flow report that was developed in this study is an output of the study. A study output is said to be good if it meets some conditions, such as reliability, practicality and effectiveness (Nieveen, 1999) [5]. In this study the focus was placed on content reliability, and organizational reliability of the teaching model in presenting a cash flow report to improve students' competence in presenting a cash flow report.

2. Method

Then the teaching model for presenting a cash flow report developed was tested by four experts in a discussion called Focus Group Discussion (FGD). In this focus discussion activity, the validity of the model that was developed theoretically was studied. The components of the model according to Joice et al. (1992) [6] consist of (1) syntax, (2) social system, (3) the principle of reaction, (4) support system and (5) instructional impact and nurturing effect. According to Marrelli, 2008 [7], the FGD activity is a small group discussion that answers a series of questions and suggestions focused on a topic. According to Hennik, 2007 [8], FGD aims at identifying various perspectives and obtaining an understanding concerning a theme of a study from the participants' perspectives. In an FGD, an expert panel technique is used. In this expert panel activity, the experts who know about a theme share their knowledges in a discussion (Marreli, 2008) [7].

Discussion group functions like an interview group that asks a series of questions and each group member gives an answer. This expert panel is a way that is appropriate for collecting data on validity of a model for presenting a computer-based cash flow report.

The result of this group discussion was used as the guidelines for revising the teaching model in presenting a computer-based cash flow report. The reliability of the teaching model was evaluated based on content reliability and organizational reliability that agrees with Nieveen's opinion (Nieveen, 1999) [5].

The evaluation of the content reliability was viewed from six aspects of evaluation (Arends, 2012 [9];; Nieveen, McKenney, & Akker, 2007 [10]; Joyce & Weil., 2003)[6] as follows:(1) the need of the developer of the teaching model for presenting a cash flow report; (2) the current knowledge, (3) theoretical support that underlies the teaching model in teaching a cash flow system; (4) planning and implementation of the cash flow system, 5) the supporting learning environment; and (6) application of the way how to evaluate.

An evaluation of the organizational reliability according to Arends (2012) [9] is viewed from some aspects of evaluation such as (1) the need of the developer of the teaching model for presenting a computer-based cash flow report; (2) theoretical and empirical supports of the teaching model; (3) the planning and implementation of the cash flow system teaching model; (4) the learning environment of the teaching model; (5) the use of evaluation techniques; and (6) the teaching model: a final thought.

The evaluation of the organizational reliability in this study covered (1) the theoretical foundation of the teaching model in presenting a computer-based report, (2) the basic framework of the teaching model for presenting a computer-based cash flow report, (3) the planning and guidelines for using a cash flow system, (4) the environment that supports the teaching process, (5) the implementation of the evaluation method, and (6) the cash flow system model.

The reliability of this model was determined by referring to the criteria of reliability specified in Table 1.

Table 1: Teaching model validation criteria.

No.	Score Interval	Evaluation Criteria	Remarks
1	$3.25 < P \leq 4.00$	Very reliable	Can be used without revision
2	$2.50 < P \leq 3.25$	Reliable	Can be used with a small number of revisions
3	$1.75 < P \leq 2.50$	Less reliable	Can be used with a lot of revisions
4	$1.00 \leq P \leq 1.75$	Not reliable	Cannot be used yet and still needs some consultation

Source: Prahani, Nur, & Yuanita, 2016 [11].

Data on the reliability of the teaching model were obtained from the teaching model reliability sheets. These model reliability sheets were filled by experts who studied and evaluated the teaching model developed by the researcher at the time of Focus Group Discussion (FGD). The reliability of the teaching model reliability sheet instrument was established based on the statistical analysis of the percentage of agreement (R) (Borich, 1994). An instrument is said to be reliable when it has the ≥ 75% (Borich, 1994) [12].

3. Results and Discussion

The teaching model for presenting this computer-based cash flow was developed to enhance the students' competence in writing a cash flow report with reference to education in the information technology perspective. There are five changes in information technology in the process of teaching developed in the field of education according to Rosenberg (2001) as cited in Erlisa Dwi Ananda), that is, [13] from training to performance, from classroom to any free place wherever and whenever it is, from paper to on line, from physical facility to network facility and from time cycle to real time. Cash et al., (1992) [14] states that there are four eras in the information technology development: (1) computerization era, in which works use computers that are more efficient, (2) information technology era, in which computers are used not only for improving efficiency, but they are used more for supporting a more effective work process, (3) information system era, in which it is those who master technology that will have competitive advantages in the macro regulated free market environment, and (4) globalization era in which information transactions and interactions can easily be done in the cyber space through electronic transaction using electronic money.

3.1. Theoretical basis for developing a teaching model in presenting a computer-based cash flow report

To understand the concepts in presenting a cash flow report the students need to develop their maximal ability. The students need to be helped with a teaching model in the process of writing a cash flow report. This can be done by implementing an appropriate model or strategy which is supported by a teaching model, appropriate teaching materials, and computer tools or media. The teaching materials used should also accommodate technology development and make use of the technology itself. The use of the technology includes the development of a computer-based program in presenting a cash flow report.

This computer program helps in processing financial data into various cash flow reports. Through this computer program one can enhance the students' ability and make it easy for them to present a cash flow report. This computer program contains stages in presenting a cash flow report that conforms to the presentation of a cash flow report which according to Erni Sulindawati (2017) [2] consists of the following stages: First, calculating the difference in accounts in the balance. Second, analyzing changes in the accounts in the balance based on the understanding of the concept: if there is an increase in the assets group, it will cause a decrease in cash, if there is a decrease in the assets it will cause an increase in cash. If there is an increase in the liabilities, it will cause an increase in cash and if there is a decrease in the assets, it will cause a decrease in cash. Third, presenting the analysis of the effect of the cash flow change and entering it into the cash flow report format. Through this teaching model, the students were able to understand a cash flow report more easily. This kind of learning will show the real condition in the work places and it is hoped that the quality of teaching can be enhanced.

3.2. The basic framework of the teaching model for presenting a computer-based cash flow report

This computer-based teaching model for presenting a cash flow report that was developed contains the following cash flow report presentation stages.

3.2.1. Starting the system in the cash flow system by opening login to the cash flow system

After successfully entering the system, there will be the main page that contains the menu display that is located on the page top left side. The top menu functions to facilitates the user to exit from the system by pressing the admin button, and then by pressing the log Out Menu Dashboard button, Processing Menu, and Transaction Menu. The Dashboard Menu functions to display the main page of the cash flow system. The data processing menu functions to process the master data that will be used in the transaction. The transaction menu is used to make a transaction in the cash flow system. Login to the cash flow system shown in Figure 1.

Figure 1: Login to the cash flow system.

3.2.2. Data processing

The transaction in the cash flow system needs some master data that have to be input before making a transaction. The data that have to be input before user makes a transaction are information, category, data No., account and data on account No. relations. Transaction in the cashflow system shown in Figure 2.

Figure 2: Transaction in the cashflow system.

3.2.3. Transaction processing

The transaction menu consists of three features, that is, Ledger Feature, Balance Feature, and Account Difference & Report Feature. The ledger feature contains a feature to process transaction data that can be used for Cash, Account Receivable, Supply of Commodities, Prepaid Expense, and Trade Debt.

Based on the researcher's argument that was supported by a theoretical review and empirical review, the syntax of the teaching model was formed with six stages: (1) orienting the students toward the teaching of how to present a cash flow report; (2) an activity to understand concepts and stages for presenting a cash flow report; (3) an activity to write a cash flow report using Microsoft Excel media; (4) an activity of presenting a computer-based cash flow report; (5) presenting a cash flow report; and (6) evaluating learning achievement.

Figure 3: Transaction menu.

The stages in the teaching model for writing a cash flow report consists of six stages that can be seen in Table 2.

TABLE 2:

No.	Stages	Lecturer's Activities	Students' Activities
1.	Preparing students to learn how to write a computer-based cash flow report	The lecturer explains the lesson plan, materials required, motivates the students who are involved in the teaching activities, talking about the evaluation sheet used in evaluating the students' works	Preparing materials required in the learning process
2.	Understanding concepts and steps in writing a cash flow report	The lecturer helps and encourages the students to collect information and understand concepts and stages for presenting a cash flow report	The students are divided into small groups of 3 students in each group, investigating. developing various perspectives and assumptions that are logical
3.	An activity of presenting a cash flow report using Microsoft Excel media	The lecturer encourages the students to make and write a cash flow report using Microsoft Excel media from various businesses, whether they are services, businesses or manufactures	Understanding the process of writing a cash flow report using the steps that are needed that consist of (1) calculating the difference in accounts in the balance; (2) analyzing changes in the accounts in the balance in three activities, i.e., operation, investment, and funding; (3) analyzing changes in balance accounts by understanding the concept: if there is an increase in the assets group, it will cause a decrease in cash, if there is a decrease in the assets it will cause an increase in cash. If there is an increase in the liabilities, it will cause an increase in cash and if there is a decrease in the assets, it will cause a decrease in cash. (4) presenting an analysis of the effect of changes in balance account in the cash flow report.

No.	Stages	Lecturer's Activities	Students' Activities
4.	An activity of presenting a computer-based cash flow report	Helps the students to use a computer program for writing a cash flow report from various types of real businesses in the field	The students write a cash flow report by following the guidelines (manual for using the application with steps: (1) Starting the System in the System of Cash Flow After successfully entering the system, there will be the main page that contains the menu display that is located on the page top left side. The top menu functions to facilitates the user to exit from the system by pressing the admin button, and then by pressing the log Out Menu Dashboard button, Processing Menu, and Transaction Menu. The Dashboard Menu functions to display the main page of the cash flow system. The data processing menu functions to process the master data that will be used in the transaction. The transaction menu is used to make a transaction in the cash flow system.(2) Data Processing The transaction in the cash flow system needs some master data that have to be input before making a transaction. The data that have to be input before user makes a transaction are information, category, data No., account and data on account No. Relations. (3) Transaction Processing The transaction menu consists of i 3 features, i.e., Ledger Feature, Balance Feature and Account Difference & Report Feature. The ledger feature contains a feature to process transaction data that can be used for Cash, Account Receivable, Supply of Commodities, Prepaid Expense, and Trade Debt.
5.	An activity to present a cash flow report	Preparing the students to present a cash flow report from different economic entities	Presenting and making the printouts of cash flow report individually and collectively and presenting it in front of the classroom and discuss about in in the classroom. Attending the evaluation and submitting the tasks as the material for evaluating the learning process.
6.	Evaluating learning achievement	The lecturer helps the students in the evaluation process and gives them follow-up tasks	Doing the evaluation and returning the printouts as the basis for evaluating the teaching and learning process.

To support the fluency in implementing this teaching model there is a need for a supporting materials that consist of (1) the course syllabus, (2) the semester lesson plan, and (3) course contract, a group of cases that are related to the writing of a financial report of an entity, whether in service, trade, cooperative, and industrial sectors. Using this model it was hoped that the learning objectives for the course will be achieved, that is the students will be able to write a financial report of an entity, whether it is service, trade, cooperative and industrial After an FGD was held it was obtained that the content and organizational reliability were as shown in Tables 3 and 4.

Table 3: Content reliability of the computer-based cash flow system model.

No.	Elements of the Teaching Model	Reliability	Reliability	R	Reliability
1	The meeting of the need for developing a teaching model for presenting a cash flow report	3.41	Very reliable	94.3%	Reliable
2	The most up-to-date knowledge	3.36	Very reliable	91.5%	Reliable
3	Theoretical support that underlies the cash flow system teaching model	3.45	Very reliable	88.8%	Reliable
4	The planning of the cash flow system teaching model and its implementation	3.27	Very reliable	90.9%	Reliable
5	Supporting learning environment	3.13	Very reliable	90.3%	Reliable
6	Evaluation technique application	3.20	Very reliable	87.5%	Reliable
	Mean	3.30	Very reliable	90.5%	Reliable

No.	Elements of the Teaching Model	Reliability	Reliability	R	Reliability
1	Theoretical basis for Teaching Model Development for Presenting Computer-Based Cash Flow Report	3.28	Very reliable	88.6%	Reliable
2	Basic Framework of the Teaching Model for Presenting a computer-based cash flow report	3.31	Very reliable	87.5%	Reliable
3	Planning how to use a cash flow system and guidelines for using it	3.33	Very reliable	93.8%	Reliable
4	The environment that supports the teaching process	3.20	Very reliable	87.5%	Reliable
5	The implementation of the way how to evaluate	3.16	Very reliable	91.7%	Reliable
6	Cash flow system Model	3.24	Very reliable	89.6%	Reliable
7	Mean	3.25	Very reliable	89.8%	Reliable

The content reliability of the teaching model of cash flow system developed fell into the very reliable category. This can be seen from various aspects of evaluation: (1) the meeting of the need for developing a teaching model for presenting a cash flow report; (2) the most up-to-date knowledge; (3) theoretical support that underlies the cash flow system teaching model; (4) the planning the cash flow system and its implementation;5) supporting learning environment; and (6) evaluation technique application. The percentage of the intervalidators' agreement falls into the reliable category with R = 90.5%.

The organizational reliability of the cash flow system was very reliable as can be seen from (1) the theoretical basis for teaching model development for presenting computer-based cash flow report; (2) Basic Framework of the Teaching Model for Presenting a computer-based cash flow report; (3) Planning how to use a cash flow system and guidelines for using it; (4) the environment that supports the teaching process; (5) the implementation of how to evaluate; and (6) the cash flow system model. On the basis of the

result of the FGD, this cash flow system teaching model can be used to facilitate the students in understanding the process of presenting a cash flow report. The percentage of the intervalidators' agreement was 89.8%, falling into the reliable category

4. Conclusion

Based on the results of the sudy above, it can be conluded that the cash flow system model that was used in the process of writing and presenting a computer-based cash flow report that was developed is the very reliable category and can be used and implemented in the teaching process. The teaching model of the cash flow system needs to be tested in terms of its practicality and effectiveness in teaching.

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