Learning Innovation Using the Zahir Application in Improving Understanding of Accounting Materials

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Abstract. The purpose of this study in order to innovate in accounting learning activities using zahir accounting application tools. This is done because based on observations of student learning outcomes it can be said that the level of understanding of accounting material is still low. Especially if the student's background comes from high school from the majors of natural sciences, languages, and not from social science principles. With this learning innovation, it will be easier for lecturers to provide material so that teaching and learning activities are more centered on students who will impact on the absorption and ultimately will increase the understanding of accounting material. The method in this study uses a quasi-experimental time series design type. Population and sample using probability sampling techniques The results of this study will be used as a benchmark to improve student safety and serve as a reference for educators to be able to innovate in developing learning resources.

1. Introduction

The more massive development of information technology in various sectors will be directly proportional to the development of innovation in teaching and learning activities in universities[1]–[4]. Meanwhile lecturers as the main actors in learning activities are required to be able to be versatile and master technology in this millennium era[5], [6]. Lecturers as people who have knowledge must also be able to be facilitators, collaborators, motivators, demonstrators, and evaluators[7]–[10]. To be able to answer this, the use of information technology has become a necessity to be used as a supplement and learning resource to be able to improve understanding of material which at the end is to prepare students to face the challenges of the industrial era 4.0 [11]–[15].

To be able to create a comprehensive understanding of the material it is necessary to collaborate or innovate in the process of teaching and learning activities that facilitate the object and subject of learning to understand teaching materials and teaching content that can be easily accessed in open source both online and offline. Zahir Accounting as a leading software developer is here to be able to answer these challenges and has issued Zahir Education to be able to accommodate student teaching and learning activities. Through zahir accounting software, the accounting material delivered will be directly implemented and demonstrated by students either through laptops or in the android version through zahir simply. In the application it is presented easily regarding the analysis of financial statements, balance sheets, profit and loss, sales, accounts receivable, debt, general ledger and cash flow. This zahir accounting software will be applied to be tested in learning accounting computer package courses.

2. Research Method

The design of this study uses a quasi-experimental type using time series design. In quasi experiments there are classes that have treatments, impact measurements and experimental units that do not use random placement. There are 3 main stages in the design of this study, namely the first stage will be conducted to provide a pre test, while the second stage is a session used to provide treatment in the experimental class using zahir accounting software, then in the third stage is a session where the class will be evaluated use post test to see whether there is a difference between before and an existence of learning activities using zahir accounting software.
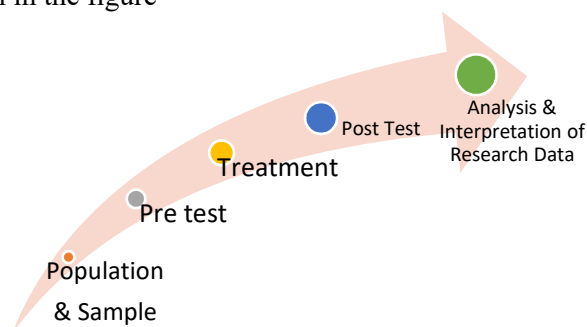
O1 → O2 → O3 → O4 → (X) → O5 → O6 → 07 → 08
Information:
O   = Observation / Measurement Results
X   = Treatment

The flow of this research was carried out in several stages in accordance with the formulation of the problem and the research objectives to be achieved. The first step is to determine the class to be used as the experimental class shown in the figure

Figure 1. Research flow

Furthermore, after class determination, the thing to do is to spread the pre-test both in the experimental class which functions to determine the students' initial abilities in accounting computer package subjects. After that, the next session of the experimental class will be subject to intervention by using the Zahir accounting software in the learning process for one semester. In the last session, the class will be given a post test to find out the final results of the students' understanding of the material during the learning process for one semester. Meanwhile, the experimental class which uses learning tools for accounting software will be given a questionnaire to find out their responses and perceptions of the learning process that has been passed. The results of the pre-test and post-test will then be assessed and compared whether there are significant differences in the use of learning aids for accounting software tools in the learning process that has been carried out.

3. Result and Discussion

The description of the results of this study came from the pre-test activities carried out during four face-to-face meetings. The researcher gave a pre-test with a view to knowing the stability and clarity of the group's condition before being treated.

Table 1. Pre-test statistics results

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance
Pretest1	31	16,00	74,00	1678,00	54,1290	13,92059	193,783
Pretest2	31	30,00	70,00	1722,00	55,5484	8,81604	77,723
Pretest3	31	39,00	65,00	1737,00	56,0323	7,44976	55,499
Pretest4	31	32,00	65,00	1739,00	56,0968	7,89242	62,290
Valid N (listwise)	31						

Table 2. Kruskall wallis pre-test results

Test Statistics[a,b]

	Pretes
Chi-Square	,144
Df	3
Asymp. Sig.	,986

a. Kruskal Wallis Test
b. Grouping Variable: Sesion

Taking significance (α) of 0.05, the Asymp value is obtained. Sig. amounted to 0.986. Because the Asymp value. Sig = 0.0986> 0.05 then H0 is accepted. This shows that the pre-test score of the students' initial ability using zahir accounbting software is no different. This means that the initial abilities of the research class are the same.

After conducting pre-test activities for 4 face-to-face meetings, then the researchers conducted a post-test for 4 face-to-face meetings with the number of respondents as many as 31 students of the accounting computerized study program STMIK IKMI Cirebon where the results are as follows.

Table 3. Post-test statistics results

Descriptive Statistics							
	N	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance
posttest1	31	50,00	72,00	1942,00	62,6452	6,12399	37,503
posttest2	31	62,00	75,00	2172,00	70,0645	3,67818	13,529
posttest3	31	74,00	84,00	2481,00	80,0323	2,90384	8,432
posttest4	31	84,00	94,00	2689,00	86,7419	3,30623	10,931
Valid N (listwise)	31						

Because the pre-test data come from a population that is not homogeneous, the next statistical test uses a non-parametric statistical principle that is using the Kruskal Wallis hypothesis test where the results are in accordance with the table. Submission of the hypothesis is as follows:

Ho: There is no difference in the average pre-test score of the learning system by using the Zahir accounting software

Ha: There is a difference in the average pre-test score of the learning system by using the Zahir accounting software

Table 4. Kruskall wallis post-test results

Test Statistics[a,b]

	nilai
Chi-Square	183,586
df	7
Asymp. Sig.	,000

a. Kruskal Wallis Test
b. Grouping Variable: pretespostes

Taking significance (α) of 0.05, the Asymp value is obtained. Sig. of 0,000. Because the Asymp value. Sig = 0,000 <0.05 then H0 is rejected. This shows that the pre-test and post-test score scores indicate a significant difference where the results of the post-test have been proven to be better, this

means that learning activities using the tools of accounting software can improve students' understanding of accounting material

Based on the results of the study in which the researchers applied pretest as many as 4 face-to-face meetings, then given treatment with accounting learning using zahir accounting software for 6 face-to-face meetings, after that posttest was given 4 times face-to-face meetings where the results were in pre-test activities 1 obtained an average value of 54.129, pre test 2 activities obtained an average value of 55.548, pre test 3 activities obtained an average value of 56.032, pre test 4 value obtained an average value of 56.097. On the other hand, the post test 1 activity shows a value of 62,645, the post test activity 2 shows an average value of 70,065, the post test 3 activity shows an average value of 80,032, the post test 4 activity shows an average value of 86,742 according to the following chart .

Figure 2. Pre-test post-test result graph
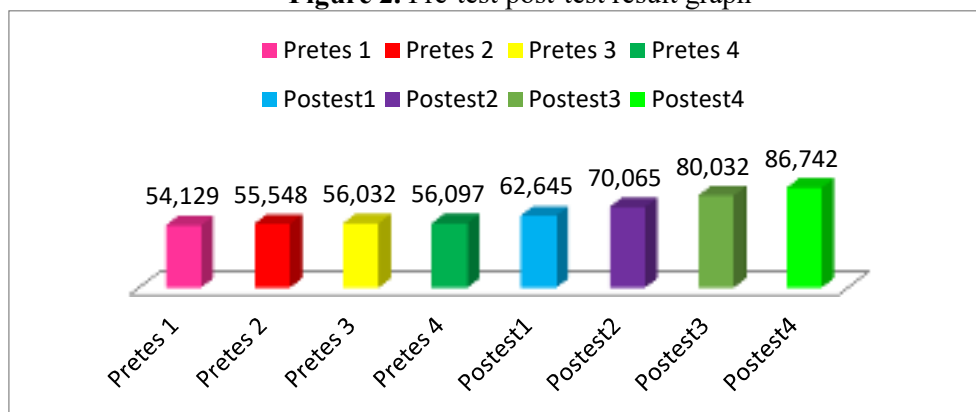
Analysis of the results of student response questionnaire data is useful to find out how students' attitudes or responses to accounting learning using zahir accounting software, students are given a Likert scale questionnaire, carried out by giving positive and negative questions with the criteria of answers strongly agree, agree, doubtful, disagree, and strongly disagree. With a total sample of 31 respondents who answered 56 question items that have gone through the feasibility process of validity and reliability testing.

To find out students' responses to the use of zahir accounting software in increasing understanding of accounting material, the researchers conducted an analysis of the questionnaire with the following calculation: Total criterion scores (if each item gets the highest score) ie = (highest score of each item = 5) x (number item = 56) x (number of respondents = 31) is 8680. The total recapitulation of the questionnaire data score is 6036. So it can be concluded that the response of students to accounting computer package courses that use the accounting software software is, (6036: 8680) x 100% = 69.54% and when interpreted the value 69.54% is included in strong criteria.
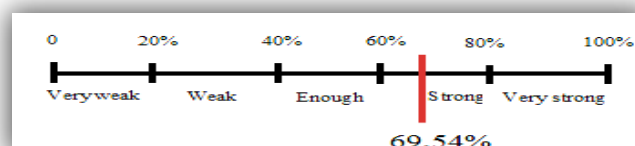
So it can be concluded that students have a positive response in the strong criteria for the use of Zahir accounting software in improving understanding of accounting material in accounting computer package courses.

4. Conclusion

The results showed that the learning process using zahir accounting software can have a positive impact on increasing the understanding of material in accounting computerized study program students. This

study uses a test instrument in the form of multiple choice. researchers conducted a study with a total sample of 31 students from the class of 2018 accounting computerized study program STMIK IKMI Cirebon with stages of research divided into 3 stages: stage 1 researchers determine the class to be used as a research sample that is a computerized accounting accounting program year 2018 with the number of 31 students then respondents were given pre-test 4 times face-to-face meeting to measure the level of initial understanding of students where the results in pre-test 1 showed an average value of 54,129, pre-test 2 an average value of 55,548, pre-test 3 average value an average of 56,032, pre-test 4 an average value of 56,097. Based on Kruskall Wallis test results showed the Asymp Sig. amounted to 0.986 where the value indicates that there is no significant difference where the initial perception of understanding student material is the same. Phase 2 is carried out accounting learning by using zahir accounting software for 6 face-to-face meetings. In stage 3, post-test activities were carried out for 4 face-to-face meetings with the results of post-test 1 showing an average value of 62.6456, post-test 2 an average value of 70.065, post-test 3 an average value of 80.032, post-test Test 4 shows the value of 86,742. The statistical test results of the pre-test and post-test activities were further tested using the Kruskall Wallis test which showed the Asymp Sig. of 0,000 where the value indicates a significant difference between the pre-test and post-test results.

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