

Implementing Quiz Creator to Improve the Quality of Education

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ABSTRACT

Nowdays, there are so many ways to improve the quality of education. One of the way is using software-based instructional media called Multimedia. In this research, we use Quiz Creator which are forms of visual media such as picture, sound and video or it can be called multimedia. Learning outcomes of students at SMAN 10 Samarinda do not reach at minimum score (75) that are determine by school, so the teacher need to give a solutions in order to improve student's learning oucomes and generally improve the quality of education. At post test of 30 students in round I, students who achieve the KKM are 4 and not reached are 26. By the time students reach the second round KKM 27 students and that not reach 3 students. Based on research results obtained the conclusion that the Quiz Creator student's learning outcomes especially in IT lessons, thus suggested to school to use the Quiz Creator as a medium of learning to improve the quality of education.

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1. INTRODUCTION

The development of information technology, which of one is influenced by the rapid development of the computer. So, the development of this technology is closely related to each other. One of the application that of these technologies are now being developed in education is the creation of instructional media or media education. IT lesson at high school is a lesson that requires imagination and also logical thinking. It also requires students to be able to practice the theory presented in the group but also the ability of the individual. This lesson requires imagination and good logic to be able to put it into practice. In fact the learning process use the computer as a medium to practice the theory and need the teacher as the instructor. Based on the discussion among the teachers and the students at SMAN 10 Samarinda, apparently value-average students under 75 of 30 students, only 4 students who achive mastery minimum value and 26 students who do not achive mastery minimum value, otherwise it is difficult for students to understand the material, it cause the student's achievement lower that average. Nowadays currently there are many software-based instructional media, one of them is Quiz Creator which there are forms of visual media such as video and picture or can be called as multimedia, but it can also serve learners by themselves. With this software, the students are faced with making the learning become fun and also keep the repeating lesson, so it will become a good memory for students and they can get a good score or reach the KKM (minimum criteria for completeness) value.

2. RESEARCH METHOD

This section covers methodology of the research, they are :

a. Literatur Review

Wondershare QuizCreator is a powerful quiz maker that enables educators, trainers, researchers and more to create interactive flash-based quizzes, tests, surveys, and assessments effortlessly. (*Wondershare Software, 2011*). Quality can be defined as that which satisfies and exceeds customers' needs and wants. This

is sometimes called *quality in perception*. Quality can be said to be in the eyes of the beholder. This is a very important and powerful definition, and one that any institution ignores at its peril. (Sallis, 2002).

Education defined as a provider of services. Its services include advice, tuition, assessment and guidance to pupils and students, their parents and sponsors. The customers—the stakeholders of the service—are a very diverse group and need identifying. If quality is about meeting and exceeding customer needs and wants, it is important to be clear whose needs and wants we should be satisfying. It is important to say something about the idea of a ‘customer’ in the context of education. To some educationalists ‘customer’ has a distinctly commercial tone that is not applicable to education. They prefer to use ‘client’ instead. Client, with its connotations of professional service, is seen as more appropriate. It is the consumers who make the judgements on quality. (Sallis, 2002)

Vincent and Ross (2001) note that most professional educators “agree that learning styles exist and acknowledge the significant effect that learning styles have on the learning process.” The concept of learning styles makes sense intuitively. It is apparent, for example, that some people prefer reading books rather than listening to them on tape and vice versa, and that some people prefer working alone rather than working with others and vice versa (Curry, 1987). Indeed, some learning preferences (e.g., a preference for a quiet background) seem so self-evident that it may not be necessary to have a validated instrument to assess those preferences. As Nagy notes, “Little can be said about preference questions that ask, for example, what time of day a student prefers to study, except to wonder if such information requires the expense of a standardized test.” Learning style advocates point to a number of validating studies. For example, cites numerous studies identifying cultural differences in learning styles, and the discussions of individual instruments that follow include other examples of validating studies. Critics, however, point out that for a learning style theory to be valid and useful, it must be shown that students learn more effectively when their learning styles are accommodated, and only a limited number of studies have shown this. Some therefore feel that the usefulness or validity of learning style models and instruments has not been definitively established (Bonham, 1988a; Bonham, 1988b; Kavale & Forness, 1987; Rayner & Riding, 1997).

b. Location and Time Research

Location of the study are those used in conducting research to obtain the desired data. The research was conducted at SMAN 10 Samarinda. Subject in this study were students of class XII.

c. Materials and Tools

Materials needed in this study are software quiz creator, cd/flashdisc/harddisc, computer and lcd.

d. Treatment and Design

This study was conducted in two phases, with each phases stages : “Planning-Implementation-Observation and Reflection” and carried out participatory collaboration between researchers and teachers. Every stage in the phase is described as follows :

Planning Phase 1

The First Meeting

- a. Researchers and Teachers who teach in class XII learning plan
- b. Setting up 10 pretest question used to measure student’s learning outcomes.

The Second Meeting

- a. Researchers and Teachers who teach in class XII learning plan.
- b. Provide interactive multimedia quiz creator
- c. Prepare 10 post-test question that used to measure student’s learning outcomes.

Phase 2

The First Meeting

- a. Researchers and Teacher who teach in class XII learning plan
- b. Prepare the observation sheet that use to know teacher’s ability to teach the lesson with interactive multimedia.

The Second Meeting

- a. Researchers and Teacher who teach in class XII learning plan
- b. Prepare a question of post-test
- c. Provide multimedia quiz creator
- d. Prepare a questionnaire to students (student’s reflection on learning questionnaire)
- e. Prepare observation sheet that use to know teacher’s ability to teach the lesson with interactive multimedia.

2.4.2 Implementation

1. The teachers presents the objectives and goals of affective learning process and provide pretest.
2. The teacher explains the material in accordance with a learning plan and implement learning by using Multimedia Interactive Quiz Creator.

3. Students use the interactive multimedia quiz creator
4. The teacher circulates to guide, supervise and help students.
5. The teacher evaluate the student's work. At the end of the phase was held posttest and distributed questionnaires.

2.4.3 Observer

Observation was made by a teacher from SMAN 10 Samarinda.

2.4.4 Reflection

Reflection is the analysis phase of the observation, questionnaire and a posttest results of the stages in the phase. Reflection carried out immediately after completion of implementation and observation.

2.4.5 Observation

The observations made by the controlling variable is performed to obtain experimental research design that is good enough in order to test hypotheses and at further research can be generalized to the population, it is necessary to control internal and external validity.

1. Internal Validity

In obtaining the internal validity of the study design so, we must control the variables as follows:

- a. Controlling of special events that the treatment carried out in a relatively short period of time.
- b. Controlling of maturity or saturation, is controlled by way of carrying out treatment on a schedule of class hours field of study with a time of 2 hours each time hold a lesson for every treatment.
- c. Controlling the effect of giving the test, the way of control is reassemble a booklet and answer sheet which is expected at the end of the test execution time is not affected by the study outcome after treatment is completed
- d. Controlling effect of the variable that does not change the research instrument that has been tested.
- e. Controlling subjects that lose by checking in attendance of students during the treatment was carried out.

2. External Validity

Obtain external validity in the design of the study is carried out control variables as follows :

- a. Do not tell the students that they are the subject of research to avoid things that are not fair.
- b. The treatment is given with the help of surveillance from the school to maintain a conducive learning atmosphere.

2.5 Experimental Procedure

The experimental procedure that would be performs are :

- a. Test the instructional media whether it is feasible to use or not.
- b. If the media is feasible to use, the media will give to the experimental class.
- c. Seeing student learning outcomes shortly before Interactive Multimedia CD media quiz creator is given through pretest.
- d. Provide Interactive Multimedia quiz creator to experiment class.
- e. Collect and process the results of data findings.
- f. If the students learning outcomes are still not achieve minimum mastery score 75, then the experiment will be done again.

2.6 Data Analysis

Data analysis was carried out from the beginning, before, during and after the learning activities implemented. Sources of data derived from students and teachers. The Data is in the form of data quantitative and qualitative. Quantitative data obtained from the results of a study that analyzed table, after that we can do the calculations for gain mastery learning students. whereas qualitative data obtained from the observation analyzed in three stages, namely (1) Reflections of data, (2) exposure of data, and (3) inference analysis.

Phase I: Data Reduction. The data obtained is reduced so that the data become simpler. The way is by grouping the data - multiple data category and then organize them so that it obtain meaningful information. Phase II: Exposure Data. After the data is reduced, then the data are presented in the form of narrative exposure so that the data is clearer and easier to understand. Phase III: inference of exposure data is retrieved the core that used as a conclusion input for planning. The next instructional improvement, when prior learning has not been successful. Indicators used to see the successful implementation of the learning process and increased the learning outcomes of individual mastery of learning outcomes and classical mastery learning. Data were analyzed to describe the mastery of learning outcomes student from the final value of each phase. To determine the students' absorption for individual score is using this following formula :

$PDS = ((\text{Scores obtained by students} / \text{maximum score}) * 100\%)$, [Arikunto, 2008].

Description : Maximum Score = 100; PDS : *Presentasi Daya Serap* Biodegradable Presentation Criteria.

Criteria : $0\% \leq \text{PDS} < 70\%$ called incomplete ; $70\% \leq \text{PDS} < 100\%$ called complete.

From the description above, it can be seen the students who do not complete and complete their individual learning. Furthermore it is known whether the classical mastery learning, can be formulated as follows:

$$D = ((X/N) \times 100\%)$$

Description :

D : The presentation class that has been achieved $\geq 70\%$ of lesson absorption

X : The number of students who have reached the absorption of $\geq 70\%$

N : Number Of Students

Based on the criteria of mastery learning, if the class has found 70% of students who have achieved $\geq 70\%$, then the classical completeness are met.

Data analysis technique is a very important element in every time doing research. All collected data will be meaningless if it is not held analyzing. Results of analyzing will give you an idea, direction and purpose and the meaning of this research study. This research using simple statistical analysis, namely the descriptive analysis. Descriptive analysis is the model by comparing the average presentation, see the average increase in each phase. Then analyze of the results replicates at each phase. From the test results, it can be interpreted on mastery learning students. If the test results has reached 85% of the total proceeds of students received grades $\geq 70\%$, the study said complete. Then to see the results of student who interest in quiz creator, used the following formula:

$$PK = ((\text{Scores obtained by students}/\text{maximum score}) \times 100\%) , [\text{Arikunto}, 2008].$$

Description : Maximum Score = 100;

Interest Presentation, criteria : 76%-100% called Very Interested, 51%-75% called Interested, 26%-50% called Not Interested, 0%-25% called Strongly Not Interested.

3. RESULTS AND ANALYSIS

This section covers results and analysis, there are :

3.1 Description Of Research

The research was implementation at SMAN 10 Samarinda in class XII which is located at Samarinda. The results research are as follows:

1. In the first phase value – the students who achieve mastery criteria minimum only 4 people (13,33% of the total). Therefore, it is necessary to follow-up to the second phase.
2. In the second phase, the number of students who achieve mastery criteria minimum of 27 people (90% of the total).
3. Based on the analysis of student learning outcomes is known that an increase in the average value of student learning outcomes from the first phase to second phase is 76,67 %

Table 1 Comparison The Complete Learning Students in Phase I and II

Phase	Complete		Not Complete	
	Students	%	Students	%
I	4	13,33	26	86,67
II	27	90	3	10
Total % Increment				76,67%

3.2 Data Reduction

Based on data from the first phase there is value - average mastery in classical learning outcomes of 13,33% (4 students). This results shows that the phase has not completed, then the next phase (phase II). In the second phase is obtained in the classical mastery of student learning outcomes at 90% (27 students). This result show that the student has achieved mastery in the classical completeness criteria of 70% .

3.3 Discussion Of Results

At the first, teachers teach as usual, the teacher only use a blackboard, a computer and a simple question answer, consequently the students feel bored and tired with the media learn that normally used. As a result, students are less interested in understanding the subject matter provided so that student learning outcomes tend to be low due to the level of content mastery and the value of learn is not achieving minimum standards of mastery learning. Therefore, researchers and teachers of the next meeting are planned to use as

a Media Learning Quiz Creator. The researcher will be given a test (post-test). In this study, researchers run 2 phases will be described as :

Phase 1

1. Planning

At this stage the researcher consult with subject teachers to see how is the students in schools and plan the learning process by using Quiz Creator as a learning medium where any provision of the form of action learning program designed for each material. Each implementation of the first phase given achievement test to see whether the action should be continued or not.

2. Implementation Of The Action and Observation Measures

Teachers implement instructional activities based on planning that has been made is implementing learning by using Quiz Creator as a medium of learning by applying the stages of learning that has been designed in a learning scenario. At the end of the first phase of action is to be evaluated by giving the student achievement test after using action learning then give the Quiz Creator as a medium of learning. Observer observe how the implementation process of learning by using the Quiz Creator as a medium learning. Learned from the results of tests given to 30 students gained 26 students (86,67%) scored ≤ 70 (Complete Minimum Terms) students obtained the highest score was 80 and the lowest score was 30, and completeness classically obtained is 13,33% or 4 students who get value ≥ 70 .

3. Reflection

Based on the data observation of students who completed only 4 students (13,33%) it is not as expected. In addition the implementation of the actions that taken in the first phase still has weaknesses, The weakness are : 1. Students are still afraid to ask questions to the teachers about the lesson. 2. Students are not accustomed to using a given medium using the media because it has never been given before. Through reflection conducted in the first phase, the results of student learning is not maximized conformity with specified standards, that is 70.

Thus the next phase still needs to be done.

Phase 2

1. Planning

Based on the reflections made in the first phase, the difficulties encountered during the implementation process is not completely understand by the students in learning process. This is the evident from the results of tests on the first phase, where there are students who just answer some questions that given to them , thus they need to continue to phase II. This is need to do because the learning outcomes of students not having mastery. So, researchers make the learning process improvements to address the problem, namely : 1. Teachers often ask questions to students that have a low ability. 2. Teachers will help students who still have not been able to use the media that have been given properly. 3. Teachers and researchers together preparing lesson plans. (RPP).

2. Implementation and Observation

Teachers implement instructional activities based on action plans that have been made on the learning scenario by using Quiz Creator media to improve student learning outcomes according to the completeness of criteria. Then administered achievement test II to see the development and mastery learning students after the given action phase II. Observer observe the implementation of using media in learning scenarios Quiz Creator made for the second phase to see the development or its impact on learning outcomes. Based on observations on the implementation of measures II, it has seen students do not fuss, do not hang around, students become serious using the media and students respond to the questions that given to them.

From the results of the second phase study tests given to 30 students gained 3 students (10%) scored ≤ 75 (Complete Minimum Term) students obtained the highest score was 95 and the lowest score was 65. The completeness classically reach 90% or 27 students who get score ≥ 75 . It means that the research is successful.

3. Reflection

After the observation of phase II, the learning outcomes of students has increased by 76,67%. At the time, the learning shows that a lot of students have a brave to asking questions, and based on the questionnaire results that was given to students, there are shows that 28 students (93,33%) which states that they are very Intrigued by the media used, and 2 students (6,67%) who expressed interested. This is prove that the next cycle or phase is not necessary anymore. Therefore, the use of Quiz Creator as a medium of learning can improve student learning outcomes in learning and it can improve the quality of education.

4. CONCLUSION

Based on the description of the results of research and discussion, it can be concluded that:

1. Quiz Creator as learning media to study the lesson/subject can improve learning outcomes. It can be seen from the value of enhancing learning outcomes in the first phase 4 (13,33%) and the second phase to 27 people (90%) with an increase of 76,67%.
2. The Utilization of Quiz Creator in making the quiz or exam will produce an interesting quiz program for learners. So that students do not feel bored when exams. In addition, it's very simple for teacher to use.
3. It is unfortunate that sometimes this software is not able to display preview (not compatible) in some computers probably, because this program works with the help of other programs as a part of its, example ms. office and flash player.



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