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Development of Quiz Card Media to Improve Reading Skills and Critical Thinking on Student

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ABSTRACT

This study aims to develop and test the feasibility, practicality, and effectiveness of learning media in the form of quiz card-based learning media to improve reading skills of understanding and critical thinking. The research model used is the Borg and Gall research and development (R & D) model. The feasibility of learning media is based on the results of validation. The practicality of the media is based on the results of observations on the implementation of learning, student activities, and media practicality questionnaires. The effectiveness of the media was tested by nonequivalent control group design. The results showed that quiz card-based learning media were feasible, practical, and effective. Quiz card based learning media has an influence on student learning outcomes. This can be seen from the results of the t-test showing that tcount which is 2.671> than ttable 2.093. The use of quiz card-based learning media also received a very good response from students, which amounted to 90.5%. Based on the results of these studies it can be concluded that the quiz card-based learning media is feasible, practical, and effective to improve reading skills in the fifth grade students' understanding and critical thinking in Tuban State Elementary School.

Keywords:
Critical thinking, learning media, nonfiction text, quiz cards.

INTRODUCTION

Reading comprehension skills are very important to be mastered by students because reading comprehension skills play a role in the activities and results of everyday student learning. According to Dalman (2013, p. 87), reading aims to understand the meaning of the contents of the reading in the text. In line with the opinion of Tarigan (2008, p. 21), understanding reading skills have the purpose of understanding the contents of the reading correctly and accordingly. In accordance with the 20013 curriculum, there is material on nonfiction texts in class V in semester 2. According to Pranoto (2009, p. 5) Nonfiction is an essay or text that is not imaginary, a text that is a form of real experience based on the field. Through learning nonfiction texts, students will be required to understand the reading, conclude the reading text, find out the location or target stated in the text, and answer questions based on the text.

Based on observations at Tuban Bulurejo 2 State Elementary School in general, the implementation of Indonesian language learning in relation to reading comprehension skills in texts still uses traditional methods. The teacher presents it with the lecture method and only uses textbooks as a source of learning. In addition, the teacher is also still having difficulty in determining the appropriate media to deliver material on understanding reading skills. The teacher only relies on the reading text in the book to deliver learning material, even though if only the reading text contained in the book is taught the atmosphere of learning becomes less interesting and seems boring because it is not interspersed with *games* or interesting images. According to Yulianto (2009, p. 7), this situation causes teacher-centered learning and the atmosphere of learning to be monotonous, unattractive, and cannot stimulate students to think critically. As a result, motivation and interest in student learning reduced so that the learning outcomes obtained are less than the minimum completeness criteria (KKM). According to Nursalim (2007, p. 103), these conditions need to be considered by fifth grade teachers to create changes in learning activities in order to attract students' attention and can stimulate students to think critically so that the learning outcomes obtained increase.

Based on these problems, learning media are needed that can facilitate students in understanding the learning material delivered and stimulating students to think critically. As expressed by Gagne (in Sadiman et al., 2010, p. 6), media are various types of components in the student environment that can stimulate them

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to learn. Meanwhile, Briggs (in Sadiman et al., 2010, p. 6) suggests that media are all physical tools that can present messages and stimulate students to learn. Submission of students' reading comprehension skills should use media that is more interesting and fun for students. 5th grade students in elementary school like games that can hone strategies and brains like a quiz game. One of the appropriate media to implement is a *quiz card* based learning media. This media will make students think critically and answer questions pleasantly. Students can think critically and will better understand what they see compared to just listening to the explanation by the teacher (Sudjana, et al. 2010, p. 6). From this description, a *quiz card*-based learning media can be developed to improve reading comprehension skills of fifth grade students in elementary school. The use of *quiz card*-based learning media in learning is expected to provide a new atmosphere for students so that learning is more interesting and fun. In addition, the *quiz card*-based learning media are also expected to be able to improve student learning outcomes.

This study aims to describe the feasibility of *quiz card*-based learning media to improve comprehension reading skills and critical character of fifth grade students in Tuban State Elementary School, describing the practicality of *quiz card*-based learning media to improve reading skills in fifth grade students' understanding and critical thinking at Tuban Elementary School, and describe the effectiveness of *quiz card*-based learning media to improve reading skills in the fifth grade students' understanding and critical thinking at Tuban Elementary School.

METHOD

The development model used in developing *quiz card*-based learning media is the R & D model Borg and Gall which adapted from Dick and Carey (Borg and Gall, 2003, p. 573) on student class 5 in SDN Tuban. Based on the steps of the Borg and Gall development model, this study only reached the ninth stage, namely revise product. Data collection instruments used in this study were interviews, documentation, observation sheets, questionnaires, and test results. The feasibility analysis of quiz card-based learning media is done with a validation sheet that uses a likert scale. The practicality analysis of quiz card-based learning media uses the teacher and student response observation sheets, as well as the practicality quiz card-based media practicality questionnaire. Furthermore, the effectiveness analysis of quiz card-based learning media can be seen from student learning outcomes tests. Tests of learning outcomes through the processing stages as follows, (1) test the validity of the expert (lecturer) and tested on students using the product moment correlation formula, (2) the test of learning outcomes is tested reliability using the spearman brown formula, (3) test normality with Chi squared formula, (4) homogeneity test with variant formula, and (5) t-test test using nonequivalent control group design.

RESULT OF RESEARCH

The results of the feasibility test of *quiz card*-based learning media were obtained from the validation sheet and the media feasibility questionnaire filled in by students. Validated components are media *quiz cards*, learning devices, and research instruments. While the media feasibility questionnaire was given during individual trials and small group trials. The results of the validation sheet from the validator are as follows:

Table 1. Validation Result

Validation sheet	Percentage	Category
Quiz card media (media expert)	70,76%	Revision
Quiz card media (media expert)	97,18%	Worth using without revisions
Syllabus	100%	Worth using without revisions
RPP	89,35%	Worth using with revisions
LKS	100%	Worth using without

Validation sheet	Percentage	Category
Test of learning outcome	85%	Worth using with revisions
Questionnaire	95,78%	Worth using without revisions
Learning implementation observation sheet	88,05%	Worth using without revisions
Student activity observation sheet	91,85%	Worth using without revisions

Source: secondary data proceed, 2017

From the results of the validation sheet, it was stated that the *quiz card* media, learning devices, and instruments were suitable for use in learning. While the results of the results of the questionnaire response to the *quiz card* media eligibility are as follows.

Table 2. Results of Feasibility Questionnaire Media

Trials	Number of Students	Scores Obtained	%	Interpretations
Individual Trial	3	75	88,67	Very good with revisions
Small Group Trial	12	378	98,86	Very good

Source: secondary data proceed, 2017

The results of the student questionnaire responses state that the *quiz card*-based learning media are appropriate according to the percentage of individual trials and small group trials. The practicality of *quiz card*-based learning media can be seen from the results of the learning implementation observation sheet, student activity observation sheet, and the practicality *quiz card*-based media practicality questionnaire filled by four grade V teachers of elementary school. The results of the percentage of learning implementation are as follows.

Table 3. Result of Learning Implementation Observation

Observer		Total	Percentage	Information
O1	O1			
24	35	59	90,72	Very good

Source: secondary data proceed, 2017

Based on the data above, it can be concluded that the implementation of learning using *quiz card* based learning media is very good. Furthermore, student activities during learning can be seen as follows.

Table 4. Result of Student Activity Observation

Observer		Total	Percentage	Information
O1	O1			
30	24	54	88,66	Very good

Source: secondary data proceed, 2017

According to the table above, it can be concluded that student activities during the implementation of learning using *quiz card*-based learning media are in a very good category. For the media practicality questionnaire, the results can be seen in the following table.

Table 5. Results of Practicality Questionnaire Using *Quiz card* Media

Respondents				Total	Information
1	2	3	4		
6	42	55	50	183	Very good
Percentage				80,9%	

Source: secondary data proceed, 2017

Table 5 shows that *quiz card*-based learning media is very good or practical to use in learning activities. The effectiveness of *quiz card*-based learning media is known through the results of student learning outcomes. Before being used for research, the learning outcomes test questions are first validated to the expert (lecturer). After that, it was tested on 15 students and calculated using the product moment correlation formula, with the criteria of the question said to be valid if $r_{count} > r_{table}$, which is 0.514. The results of the validation test can be seen in the following table.

Tabel 6. Result of Question Validation

Valid Questions	Invalid Questions
1, 3, 4, 8, 10, 12, 15, 20, 23, 29, 30, 32, 37, 39, 41, 45, 46, 47, 48, 49, 50	2, 5, 6, 7, 9, 11, 14, 13, 16, 17, 18, 19, 21, 22, 24, 25, 26, 27, 28, 31, 33, 34, 35, 36, 38, 40, 42, 43, 44

Source: secondary data proceed, 2017

From the 21 valid questions, 20 questions were taken to serve as learning outcomes test instruments. After testing the validity, then performed reliability testing using the spearman brown formula. From the results of the calculation, the reliability of the problem is 0.936. Referring to the interpretation of reliability according to Guilford, the test can be concluded to have very high reliability. Questions that have been tested for validity and reliability will be used for questions of pretest and posttest in the experimental and control classes during the field trials. The results of the pretest and posttest will be tested by t-test to determine the effectiveness of *quiz card*-based learning media. However, before being tested by t-test, the results of pretest and posttest were tested for normality first using the chi-square formula. The results of the pretest and posttest normality test are as follows.

Table 7. Normality Test

Normality test	X count	X table	Information
Experimental pretest	1,964	9,49	Distributed data normal
Control Pretest	2,526	9,49	Distributed data normal
Experimental posttest	2,185	9,49	Distributed data normal
Control posttest	2,833	9,49	Distributed data normal

Source: secondary data proceed, 2017

After a normality test, the next step is to conduct a homogeneity test to find out whether the two classes are homogeneous or not. The homogeneity test is carried out using the variance formula. The sample is said to be homogeneous if the value of Fc <Ft, with Ft of 2.15. The following are the results of the pretest and posttest homogeneity test.

Table 8 Homogeneity Test

Homogeneity Test	F count	F table	Information
Pretest	1,96	2,15	Homogenous
Posttest	2,06	2,15	Homogenous

Source: secondary data proceed, 2017

After it is known that the two classes are normal and homogeneous, the next step is to do a t-test with the criteria used is H_o accepted if $t_{count} < t_{table}$.

The t-test is carried out using the following formula (in Arikunto, 2010, p. 349):

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{SD\ x_1^2}{N_1 - 1} + \frac{SD\ x_2^2}{N_2 - 1}}}$$

Based on the results of the calculation above, it is found that student learning outcomes after learning are 2,671. This can be interpreted that 2,671 ≥ 2,093, it can be concluded that H_o is rejected and H_a is accepted. Thus it can be concluded that there is a significant difference between the learning outcomes of the experimental class students and the control class.

DISCUSSION

The feasibility of learning media is based on the results of validation to media experts and material experts, the development of *quiz card*-based learning media to improve reading comprehension and critical thinking skills in very good categories. After going through the validation stage and declared feasible to use, the *quiz card*-based learning media can be continued in the next stage, namely individual trials and small group trials. In addition to validating *quiz card*-based learning media, validation of learning devices and research instruments was used. The results of all the validations state that the research instruments and instruments are feasible to use. Based on the results of the feasibility analysis, the appropriate *quiz card*-based learning media is used to improve reading skills in the fifth grade students' understanding and critical thinking in Tuban Elementary School.

The practicality of *quiz card*-based learning media can be seen from the observation sheet of the implementation of learning with a score of 90.72%, observation sheet of student activity with a score of 88.6% very good category, and practicality *quiz card*-based learning media questionnaire filled by four class 5 teachers elementary school scores 80.9% with very good categories.

The effectiveness of instructional media is based on the question of pretest and posttest for the experimental and control classes in the field test, namely class 5 of SDN Bulurejo 2 Tuban. Class 5A as the control class, while class 5B as the experimental class. Field trials were carried out using the *nonequivalent pretest posttest group design* technique. Furthermore, to find out the effectiveness of *quiz card*-based learning media is to do a t-test. Based on the t-test that has been done, the results are 2,671. With t_{table} for df 19 is 2.09. From these results it can be interpreted that 2,671 ≥ 2,093, it can be concluded that Ho is rejected and Ha is accepted. Thus it can be concluded that there is a significant difference between the learning outcomes of the experimental class students and the control class. Supported by previous research from Tommy (2017) that learning outcomes use lower traditional learning compared to learning outcomes using flashcard media. So, learning using media based *quiz card* learning is effective for improving student learning outcomes, this is evidenced by the existence of significant differences in learning outcomes between the experimental class and the control class.

CONCLUSION

Based on the results of the research and discussion the results of the study can be concluded, among others: (1) a decent *quiz card*-based learning media is used to improve reading skills in the fifth grade

students' understanding and critical thinking at SDN. This can be seen from the results of the media feasibility validation and questionnaire which states that *quiz cards* media are suitable for use. (2) practical *quiz card*-based learning media are used to improve reading skills in the fifth grade students' understanding and critical thinking at SDN. This is based on the calculation of the percentage of the results of observations of the implementation of learning, student activities, and the practicality questionnaire of learning media. The percentage of learning implementation was 90.72%, the percentage of student activities was 88.66%, and the practicality questionnaire of *quiz card*-based media was 80.9%. The three results are in a very good category. (3) effective media quiz-based learning media used to improve reading skills of students' understanding and critical thinking in class V at SDN. This is based on the results of the t-test, where the value of $t_{count} > t_{table}$, which is 2.671> 2.093. Based on this, Ho is rejected and Ha is accepted. So it can be concluded that learning uses a *quiz card*-based learning media effective to improve student learning outcomes, because there are significant differences in learning outcomes between the experimental class and the control class. This research is limited to the learning process reading understanding skill. Based on the results of data analysis and conclusions, it can be suggested a number of suggestions including in the learning process the use of instructional media is expected to be improved not only quiz card media but also other media to encourage students to learn and in this study still have many shortcomings. media design so that further researchers are expected to add more interesting media updates.

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