# The Effect Of The Implementation Of Quizzes Based-Blended Learning Towards The 4th Grades Students Learning Outcome On Theme Of Beautiful Diversity Of My Country At Sdn Pace 3 Jember

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*Abstract : The emergence of the Industrial Revolution 4.0 directs all areas of life towards digital, one of which is in the field of education. Utilizing technology in learning is a challenge for elementary school teachers in making changes to the learning process, that is developing towards learning in the era of the industrial revolution 4.0. This research aims to determine whether or not there is an effect of the application of blended learning -based quizizz on the learning outcomes of fourth grade students on the theme of Beautiful Diversity of My Country at SDN Pace 3 Jember. This type of research is quasi experimental with pretest-post test control group design pattern. The subjects of this study were students of class IVA and IVB SDN Pace 3 Jember with a total of 40 students. Methods of data collection included interviews, documents and tests. The results of the t-test study indicate that the value of $t_{count} > t_{table}$ is 4.036> 2.024, so that the alternative hypothesis (Ha) was accepted and the null hypothesis (H_0) was rejected. The calculation of the relative effectiveness test (ER) was to determine the effectiveness of the application of blended learning -based quizizz on student cognitive learning outcomes is 55.1% with the moderate category. Based on the research result, it can be concluded that the implementation of quizizz based-blended learning towards the 4th grades stutends learning outcoe on theme of beautiful diversity of my countru at SDN Pace 3 Jember was effective.*

**Keywords**: *Blended Learning, Quizizz,* Learning Outcomes

## Introduction

In the era of revolution 4.0 directing all areas of life to digital technology, one of which is education. The world of education is required to take advantage of technology in learning activities. In other words, teachers or educators must be able to master technology to be integrated in learning activities.

Utilizing technology in learning is a challenge for elementary school teachers in making changes to the learning process that is developing towards learning in the era of the industrial revolution 4.0. To answer these challenges, the ability of TPaCK *(Technological, Pedagogical, and Content Knowledge) is* very important for a teacher to be able to integrate technology in the learning process (Sintawati and Indriani, 2019: 417). One way that a teacher can do to improve the quality of learning in the industrial era 4.0 with the TPaCK framework is to implement *blended learning.* implementation *Blended learning* requires electronic media orbased applications *e-learning* that can be accessed via the internet network. Websites that can be used in learning activities *online* are *quizizz. Quiziiz* is an educational game application that can be operated using a smartphone or laptop anywhere and anytime. *Quizizz* is a game-based educational application, which brings multi-game activities and makes interactive exercises fun (Purba, 2019: 33).

Based on the results of interviews with class IV teachers at SDN Pace 3, teachers have never applied *blended learning* in the learning process, because they have not been able to operate technology properly. Teachers have also never used theapplication *quizizz* in the learning process, and have never even known about the application. The purpose of this study was to determine whether or not there is an effect of the application of *blended learning* -based *quizizz* on the learning outcomes of fourth grade students with the theme Beautiful Diversity of My Country at SDN Pace 3 Jember.

## Literature Review

Barry Morris in Rusman (2010: 17) classifies the four patterns of learning, namely traditional learning patterns 1, 2 traditional learning patterns, patterns and media teacher learning and learning patterns of media. This learning pattern provides a description of the development of learning, especially in the use ofmedia *software* or *hardware* that changes the role of the teacher as a messenger or material. The teacher is no longer the center in the classroom, but students can get information from various sources in line with technological developments. One of the learning approaches that teachers can apply in teaching and learning activities by utilizing existing technology is *blended learning.*

*Blended learning* is a combination ofmeetings *face to face* and *online* in integrated learning activities (Moebs and Weibelzahl in Husamah, 2014: 12). Meanwhile, Thorne (in Husamah, 2014: 12) states that *Blended learning* is an approach that combines face-to-face learning and computer-based instructional activities in a pedagogic environment. There are 3 *blended learning* namely the *models,Web Course Model, Web Centric Model, and Web Enhanced Course Model.* In this study, themodel *blended learning* to be used

is a *web enhanced course* in which the teacher uses an internet connection as well as face-to-face learning. The use of the internet is intended to help teachers deliver learning material to students in order to improve the quality of learning and student learning outcomes.

According to Carman (in Hendarita, 2018: 5) there are 5 keys to implementing learning using *blended learning,* namely:

a. *Live Events,* face-to-face learning at the same time and place, or at the same time but in different places.

b. *Self-Paced Learning,* independent learning allows students to learn without the limitations of a specific time and place *online*.

c. *Collaboration, the* occurrence of collaboration between teachers and students through *tools* possible communicationsuch as *chatrooms,* discussion forums, and so on.

d. *Assesment,* teachers must be able to design assessments in the form of tests and non-tests *online* and *offline*.

e. *Performance Support Materials,* study materials are prepared in digital form that can be accessed by students *online* and *offline*.

Implementation *Blended learning* requires electronic media orbased applications *e-learning* that can be accessed via the internet network. Website with can be used inlearning activities *online* is *quizizz. Quiziiz* is an educational game application that can be operated using a smartphone or laptop anywhere and anytime. *Quizizz* is a game-based educational application, which brings multi-game activities and makes interactive exercises fun (Purba, 2019: 33).

Using theapplication *quizizz* requires an internet connection. According to Aini (2019: 3), here are the steps for using *quizizz*:

a. Visit the *website* www.Quizizz.com

b. After theaccount *quizizzdisplay* appears, select the "lessons" feature.

c. Write down the title or theme of the lesson to be made in the column provided, then adjust it to the type of subject that is relevant as the subject.

d. Make a compelling summary of the material with the *slides* provided on the "lessons" page *quizizz*by utilizing the image, audio and video features.

e. After the material summary has been created, add an interactive quiz by clicking *the "add" icon*.

f. Write down some questions, alternative answers and correct answer choices.

g. When the materials and quizzes have been created, click the "publish" icon to share with students.

h. Get thecode *quizizz* and give it to students, through the account *quizizz* students can directly access the subject matter and quizzes.

The application of *blended learning* -basedis *quizizz* expected to improve student learning outcomes. According to

Gronlund (in Khodijah, 2014: 189) learning outcomes are an expected outcome of learning that has been carried out in the formulation of certain behaviors. Learning outcomes are the attainment of a form of behavioral change that tends to persist from cognitive, affective, and psychomorphic aspects that can be done within a certain time (Jihad and Haris, 2012: 14). From some of the opinions above, it can be concluded that learning outcomes are obtained after learning activities that can be seen from various changes in student behavior to achieve learning objectives which involve 3 aspects of learning outcomes, namely cognitive, affective and psychomotor. In this study, the focus of the domain being analyzed is the cognitive domain (knowledge) which emphasizes *high order thinking skills* (C4, C5), while the affective and psychomotor domains are used as supporting data for learning outcomes.

## Research Methods

Type of research is experimental research. According to Masyhud (2016: 138), experimental research aims to determine whether there is an effect of a treatment on changes in certain conditions. The subjects of this study were 20 grade IVA students and 20 grade IVB students at SDN Pace 3 Jember.

The research design used a *quasi-experimental design* with a *pretest-posttest control group design* consisting of two groups, namely the control group and the experimental group. To determine the control and experimental class, the researcher must perform a homogeneity test to determine whether the research subject is homogeneous or not. The data used for the homogeneity test is the Odd Semester Final Assessment (PAS). After conducting the homogeneity test and the results are homogeneous, then the next step is to determine the control class and the experimental class using the lottery technique.

In the control group, conventional learning which is usually applied by the teacher will be applied, namely the lecture and assignment methods. Whereas in the experimental group, learning was carried out with

a *blended learning* -based *quizizzapproach*, combined learning between face-to-face and *online* usingmedia *quizizz* to improve the quality of learning. Data collection methods in this study were interviews, documentation and tests. The test instrument used in this study was 28 multiple choice questions that had been tested for validity and reliability. Reliability test results indicate the test instrument is included in the category "very high reliability".

The data analysis technique usedstatistical analysis technique *t-test* a separate sample. Theformula *t-test* separate sampleis as follows.

$$t = \frac{M_1 - M_2}{\sqrt{\frac{\sum x_1{}^2 + \sum x_2{}^2}{N(N-1)}}}$$

**Information:**
$M_1$ = mean value of group X1 (experimental group)

$M_2$ = mean value of group X2 (control group)
$x_1$ = deviation of each value $x_1$ and mean $x_1$
$x_2$ = deviation of each value $x_2$ and mean $x_2$
$N$ = number of research subjects.

Data analyzed was the difference between thescores *pretest* and *posttest* in the experimental class (IVB) and the control class (IVA). The t-test is done with the criteria if $t_{arithmetic} \geq t_{table}$, then the null hypothesis (H$_0$) is rejected and the alternative hypothesis (H$_a$) is accepted. The calculation of the t-test was carried out with using SPSS program *statistical* version 18. The average data obtained before and after treatment difference in the experimental class ($M_x$) is 15.70, while in the control class ($M_y$) is 8.95.

T-test calculation results obtained by value $t_{count}$ 4,036. These results are then compared with $t_{table}$, it is known that df = 38 at the 5% significance level so that the value of tobtained $t_{table}$ = 2.024. Based on these result it can be seen that $t_{arithmetic} \geq t_{table}$, is 4,036> 2,024.maka Ha is received, it can be concluded that there is a significant positive effect on the implementation *of blended learning* based *quizizz*

Calculation t test will be tested again using the relative effectiveness of the formula to determine how much influence given of treatment . Relative effectiveness test can be done using the following formula.

$$ER = \frac{MX_1 - MX_2}{(\frac{MX_2 + MX_1}{2})} \times 100\%$$

Keterangan:
ER = relative effectiveness level of the experimental group treatment compared to the control group
$MX_1$ = mean or mean value in the control group
$MX_2$ = mean or mean value in the experimental group
(Masyhud, 2016: 384)

According to Masyhud (2016: 385) the results of the relative effectiveness, then interpreted based on the criteria in the table as follows.

Table of Criteria for Interpretation of Relative Effectiveness Test

| Effectiveness Relative Test Result | Effectiveness category |
|---|---|
| 81% < ER ≤ 100% | Very high effectiveness |
| 61% < ER ≤ 80% | High effectiveness |
| 41% < ER ≤ 60% | Moderate effectiveness |
| 21% < ER ≤ 40% | Low effectiveness |
| 0% < ER ≤ 20% | Very low effectiveness |

(Masyhud, 2016: 285)

The results of the calculation of the effectiveness test were 55.1% in the moderate category. It can be concluded that the achievement of student learning outcomes in the experimental class with a *blended learning* based *quizizz approach* shows that it is 55.1% more effective when compared to the control class who applies conventional

learning to the learning theme of the Beautiful Diversity of My Country.

The existence of a significant positive effect on student learning outcomes is influenced by learning outcomes factors. According to Susanto (2013: 12) factors that are affect student learning outcomes, namely internal factors and external factors. Learning to apply *blended learning* - based *quizizz* can be increased the level of effectiveness from moderate to high or very high categories by taking into account other factors that affect student learning outcomes. In this study, the factors that influence student learning outcomes are internal factors, namely intelligence (IQ), reasoning power, interest, persistence, study habits, as well as physical and health conditions. External factors that affect student learning outcomes are parental attention, family circumstances, and theapproach *blended learning* with the help of *quizzes*. The *blended learning* -based *quizizzapproach* is a factor that affects student learning outcomes, because classes that apply *blended learning* -assisted *quizizz* during learning encourage students to be more active than those that don't.

### Conclusion

According to the results of data analysis and the discussion that has been presented, it can be concluded that: there is an effect of the application of *blended learning* - assisted *quizizz* on the learning outcomes of grade IV with the theme of the Beauty of My Country's Diversity at SDN

Pce 3 Jember. The result of the t-test calculation on the learning outcomes of the cognitive domain is 4.036. These results show that $t_{count}$> $t_{table}$, so that the alternative hypothesis (Ha) is accepted and the null hypothesis (H$_0$) is rejected, while the calculation result of the relative effectiveness is 55.1% which is included in the medium effectiveness category and 44.9% is influenced by other factors affect learning outcomes, namely internal and external factors.

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