

# The Influence of Using the Discovery Learning Learning Model Assisted by the Quizizz Application Media on the Learning Outcomes

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**Abstract:** The research aims to examine the influence of using learning using the discovery learning learning model assisted by the Quizizz application on the learning outcomes of Class VI students on the topic of Ecosystem Balance. The research was carried out at SD Negeri 2 Keputran on class VI students. The sampling technique uses a purposive area sampling method. The research used a quasi-experimental design with data collection techniques through post-tests in the form of multiple choice questions and descriptions, observation, documentation and interviews. The data obtained was analyzed using statistical tests which included normality tests, data analysis using the Paired Samples t-Test. Based on the Validity Test, the results show  $r = 0.829$   $\alpha > (0.05)$  so that all question items show valid results. Reliability test if the  $\alpha$  value  $> 0.734$  the value is reliable. Then the results of the normality test value of learning outcomes are  $0.562 > \alpha (0.05)$  exceeding the significant value, so the variable values are normally distributed, followed by using the Paired Sample t-Test test, the results of the t-test results are learning outcomes at a sig value of  $0.00 < \alpha (0.05)$  then reject  $H_0$ . So it can be concluded that there is an influence of the use of learning using the discovery learning learning model assisted by the Quizizz Application on the Learning Outcomes of Class VI Students on Ecosystem Balance Material.

**Keywords:** Discovery learning; Ecosystem balance; Learning results; Quizizz

## Introduction

Education is the key to building a future, with education it can give birth to a generation that is intelligent, superior and has good competencies. Education can also be used as a forum that can develop the abilities possessed by every human being (Sukarja, 2019). In human life, education is a human need that absolutely must be fulfilled, in the absence of education it is impossible for humans to live and develop progressively and prosperously in accordance with their aspirations in accordance with their outlook on life (Farib et al., 2019).

Education has the aim of expanding knowledge and developing students' potential so they can contribute to every community activity. In the 21st

century, education must prepare students to live in a world with science, technology, engineering and mathematics. This movement has an impact on the quality of life, resulting in changes in many aspects of life (Al Mawaddah et al., 2021). As time goes by, education will become more advanced and can foster new and more advanced learning innovations than before (Aisy et al., 2022). Therefore, innovation is created as an alternative way to problems that arise, such as problems from educators who lack innovation in learning models and creating learning media (Sugiharto et al., 2022).

One of the subjects that requires a lot of use of innovation and learning media is Natural Science Learning (IPA), which is learning that is related to the nature around us. This means that the materials in

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science are always related to students' daily activities and science learning is concrete or real. As stated by Hariawan (2017), science is rational and objective knowledge about the universe and all its contents. IPA does not use "myths" that will lead to traditional patterns that remain like that from time to time. Natural Sciences (Science) is needed by elementary school (SD) students, because science has a function and purpose in the learning process. According to Ajri et al. (2023) Science has the following functions and objectives: a) gaining confidence in the greatness of God Almighty based on the existence, beauty and order of His natural creation, b) developing knowledge and understanding of useful science concepts and can be applied in everyday life, c) develop curiosity, positive attitudes, and awareness of the interplay between science, the technological environment, and society, d) develop process skills for investigating the natural environment, solving problems, and make decisions, e) increase awareness to participate in maintaining, guarding and preserving the natural environment, f) increase awareness to respect nature and all its order as one of God's creations, g) acquire knowledge, concepts and science skills as a basis for continue their education to junior high school/MTS (Pradani et al., 2018). In accordance with the stated objectives of science teaching, in science learning a teacher is required to be able to encourage his students to utilize the natural surroundings as a learning resource, because the natural surroundings are the most authentic learning resource and will never be used up. Even though it looks easy, in reality many students get poor grades in science learning. This is because in presenting the material the teacher still uses the lecture method. The lecture method tends to make students lazy and feel bored quickly (Saputra et al., 2021).

For class VI students at SD Negeri 2 Keputran, the problems encountered were not much different. However, the problem is more specific to learning outcomes which tend to be low. This is evident from the learning outcomes of students who have not reached the Minimum Completion Criteria (KKM) set by the school for science subjects, namely 70. Of the 29 students, the number of students who have reached the KKM as a percentage is around 51.72%, and the remaining 48.28% have not yet reached the KKM. To overcome this problem, it is necessary to carry out a learning innovation by implementing a learning model that can improve student learning outcomes, especially in science subjects. Learning innovations that can increase students' understanding through scientific processes or conducting experiments so that learning becomes more real and students actively and directly have their own learning experiences. The learning experience that students have will cause students to understand the material better. The appropriate learning to use is

constructivist learning. Constructivism is a school that states that students can construct their initial knowledge. Learning models based on constructivist views are considered most suitable for science learning (Chrisma et al., 2024). Constructivist theory states that each student must discover for themselves and transform complex information, checking new information against old rules and revising it if the rules are no longer appropriate (Andriyani et al., 2020).

Therefore, in students' science learning They should carry out trials or experiments regarding the material being studied because by experimenting students discover the science concepts themselves so that students gain a deeper understanding of the natural surroundings and create meaningful learning (Wahyuni et al., 2020). Apart from models that are appropriate to science subjects, teachers are expected to use varied and innovative models so that students are more interested in participating in learning in an effort to improve student learning outcomes (Erita, 2017). Such science learning is in line with the learning expected by the curriculum, namely by using the Discovery Learning model. The Discovery Learning model is defined as a learning process that occurs when students are not presented with lessons in their final form, but are expected to organize them themselves. As Bruner (1999) argues that: "Discovery Learning can be defined as the learning that takes place when the student is not presented with subject matter in the final form, but rather is required to organize it himself (Rudyanto, 2016)". Bruner's basic idea is Piaget's opinion which states that children must play an active role in learning in the classroom. According to Budiningsih (2005) states that "The Discovery Learning Model is understanding concepts, meanings and relationships, through an intuitive process to finally arrive at a conclusion". Discovery occurs when individuals are involved, especially in using their mental processes to discover several concepts and principles (Farib et al., 2019). Discovery is carried out through observation, classification, measurement, prediction, determination and inference. This process is called the cognitive process, while discovery itself is the mental process of assimilating concepts and principles in the mind (Harianti, 2018). So it can be concluded that discovery learning is a model that emphasizes finding a problem. The learning process emphasizes problems, meaning that there will be no learning process without problems. These problems need to be solved with students' thinking processes and understanding. In applying the discovery learning model, the teacher acts as a guide by providing opportunities for students to learn actively, as the teacher believes, they must be able to guide and direct students' learning activities according to the objectives (Andrian, 2019).

Conditions like this want to change teaching and learning activities that are teacher oriented to student oriented. In the discovery learning model, teaching materials are not presented in their final form, students are required to carry out various activities to collect information, compare, categorize, analyze, integrate, reorganize the material and make conclusions (Kemendikbud, 2015). The research results of Balim (2009) show that the discovery learning model is suitable to be applied so that it has a significant effect on learning outcomes and students' discovery learning skills. Discovery learning is very appropriate to use because it has several advantages such as helping students to improve and improve skills and cognitive processes, the knowledge obtained through this model is very personal and powerful because it strengthens understanding, memory and transfer, creates a sense of joy in students because of growth. a sense of investigation and success, causes students to direct their own learning activities by involving their own reason and motivation, encourages students to think and work on their own initiative, and encourages students to think intuitively and formulate their own hypotheses (Nizar et al., 2016).

In implementing the learning model, it can also be assisted by the use of learning media so that it can attract more students' interest in studying with groups, so the use of this discovery learning model is collaborated with the use of ICT-based learning media. According to Trisyanti (2018) learning media is an important aspect of teaching methodology whose function is to as a teaching aid that is expected to improve student learning outcomes. One of the ICT-based learning media is Quizizz, which is a web tool for creating interactive quiz games that can be used as learning media. According to Yana et al. (2020) that Quizizz is the best alternative choice used as learning media which is available in mobile applications such as Android and app stores and can be used as a website via a browser on a computer (Wihartanti et al., 2019). Quizizz is an application in the form of an interactive quiz which is considered capable of attracting students' interest because it replaces the old method of quizzing which only involves paper and pen but consists of questions created by someone on Quizizz for other people to do by entering a join code (Salsabila et al., 2020). The use of learning media that can be accessed via students' cell phones is a positive use of technology and can increase students' interest in learning. Apart from that, the features available in Quizizz can also make it easier for teachers in giving assignments and the assessment process which can be downloaded in Excel format. Based on the description above, research was conducted with the title "The Effect of Using Learning Using the Discovery Learning Model Assisted by the Quizizz Application on

the Learning Outcomes of Class VI Students on Ecosystem Balance Material."

## Method

The research was carried out at SD Negeri 2 Keputran on class VI students on ecosystem balance material for the even semester of the 2022/2023 academic year. The sample selection used a purposive area sampling method, namely determining samples based on specific criteria for the objects the researcher hoped for Marginingsih (2017). The criteria addressed are that the sample used must be homogeneous and have recommendations from the teacher. Researchers used two classes as samples, namely the control class (X2) and the experimental class (X1). The experimental class was given learning treatment using the discovery learning model assisted by the Quizizz application, while the control class was not given use learning treatment (but used conventional learning).

The quasi-experimental research design is that the researcher does not carry out randomization in determining research group subjects (Yusuf, 2016). The researcher used two classes as samples and the design used was a post-test only control design, where the post-test was held after learning was carried out to determine the effect of the treatment. The post-test only control design research design can be seen in Table 1.

**Table 1.** Rancangan Desain Penelitian Post-Test Only Control Design

Class	Treatment	Posttest
Eksperiment	X1	O1
Control	X2	O2

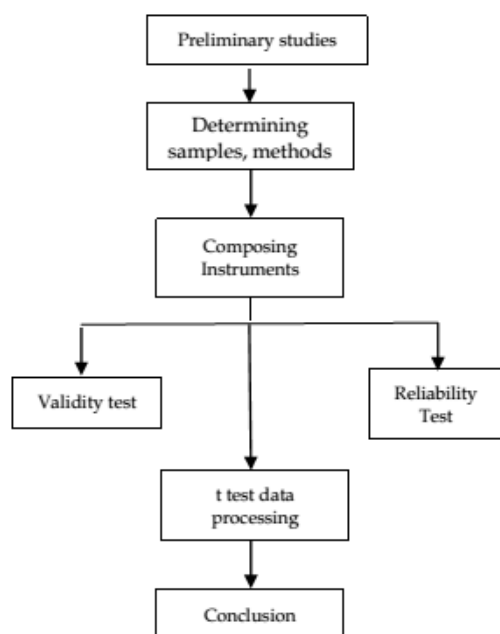
The data collection technique uses a multiple choice test containing 10 questions. Apart from that, observations take the form of sheets given to observers to make observations during the learning process, documentation related to photos of activities during the research, as well as interviews with science teachers at the school regarding learning activities, methods, models and media commonly used during learning.

Data analysis techniques use measurement of learning outcomes, especially in the cognitive or knowledge domain. After the results are obtained, they are then categorized into the percentage of completeness in accordance with the K13 guidelines which have been adjusted to the minimum completeness criteria (KKM) at the school, namely 70. The percentage of completeness is shown in Table 2.

**Table 2.** Percentage of Completeness

Value	Completeness
≥ 70	Complete
< 70	Not Complete

Furthermore, the post-test result data that has been obtained will be analyzed using the Paired sample t test to determine whether learning after using learning using the discovery learning model assisted by the Quizizz application has an influence on student learning outcomes or not. The data must be tested for normality first before carrying out the t-test to decide which test will be used next. The following is the research flow.



**Figure 1.** Research flow

## Results and Discussion

The method used in this article is quantitative research. The examination model used is a pre-test and post-test using a Likert scale estimate. The population in this logic work is 50 students from SD Negeri 2 Keputran, taking samples using a purposive examination procedure so that the number of tests is 25 students from class VI C and 25 from class A. This concentration is for one purpose only. class to be given inspirational treatment. Information collection uses 10 question items to measure student learning outcomes. Formed into an inspirational testing instrument that is estimated using a Likert scale.

### Data Processin

The data is analyzed using SPSS, so that data that has been tabulated in Excel can be directly transferred to the t-test statistical formula. Sudjana (2013: 47) said that to create a list of frequency distribution tables with the

same class length, first carry out the following processing.

**Table 3.** Descriptive Analysis

Data analysis	Minimum	Maximum	Average ( $\bar{x}$ )	Standard deviation
Pre-Exp	21	61	37.29	12,588
Post-Exp	79	95	66.44	4,519
Pre-Con	10	61	32.32	13,168
Post-Con	45	79	62.64	9,548

In this research, students' learning outcomes were measured before and after learning, namely Pre-Test and Post-Test. Data analysis uses descriptive analysis techniques. The results of the analysis are shown in Table 1. Measurement of student learning outcomes aims to test the effectiveness of learning using the discovery learning model assisted by the Quizizz application which has been used during learning. The measurement data were analyzed using descriptive statistics. The average pretest score for the control class was 31.40, while the average post-test score for the control class was 67.89. For the experimental class the pretest score was 336.48 while the average post-test score was 85.48 which shows an increase. So, it can be concluded that there are differences in learning outcomes before and after in the experimental class and the control class. According to the results above, the highest score was obtained in the experimental class. This means that the use of the discovery learning model assisted by the Quizizz application media is more effective than conventional learning.

### Validity and Reliability Test

Validity test uses the Pearson Correlation method. Question items are said to be valid if the Pearson coefficient is more than the r-table. Apart from that, it can be seen from the significance value, if the significance value is less than  $\alpha$  (0.05) then the question item is considered valid. Following are the results of the validity test for each question item for all variables (Riduwan, 2012). The validity test is intended to find out whether the instrument used really measures what it is supposed to measure. Validity is tested through Confirmatory Factor analysis. If  $R_{count} > 0.50$  the question item is valid (Ghozali, 2004). Validity testing is carried out using the product moment correlation formula. The calculated r is obtained from the SPSS version 26 output results, this value is then compared with the table r value from the statistics book. Complete validity testing can be seen in Table 4, which shows that everything used to measure the items used in this research has a correlation coefficient that is greater than the r-table, which is for a sample of 25 students at SD Negeri 2 Keputran class VI B. by using different classes

with 10 questions, the r-table value is 0.81 with a significance level of 0.05 or 5%. The resulting calculated r-value is presented in Table 4. These results show that all of these indicators are valid.

**Table 4.** Pre-Test Validity Test Results Critical Thinking Skills

Question Items	R <sub>table</sub>	Person Correlation	Description
1	0.396	0,67	Valid
2	0.396	0,87	Valid
3	0.396	0.63	Valid
4	0.396	0.73	Valid
5	0.396	0,76	Valid
6	0.396	0,65	Valid
7	0.396	0,45	Valid
8	0.396	0,65	Valid
9	0.396	0,76	Valid
10	0.396	0,79	Valid

Based on the table 4, all question items have valid items because  $R_{count} > R_{table}$ . This means that the instrument is able to measure what is desired and capable disclose the researched data accurately.

**Table 5.** Post-Test Validity Test Results for Critical Thinking Skills

Question Items	R <sub>table</sub>	Person Correlation	Description
1	0.396	0.54	Valid
2	0.396	0.63	Valid
3	0.396	0.83	Valid
4	0.396	0.45	Valid
5	0.396	0.87	Valid
6	0.396	0.58	Valid
7	0.396	0.89	Valid
8	0.396	0.59	Valid
9	0.396	0.65	Valid
10	0.396	0.76	Valid

Based on the table 5, all question items have valid items because  $R_{count} > R_{table}$ . This means that the instrument is able to measure what is desired and is able to reveal the data studied accurately. Based on table 5, the results of the validity test on all learning outcome variable items with a total of 10 items each show that the Pearson coefficient value is more than the r-table 0.82 and the significance value is less than  $\alpha$  (0.05). So all question items in the questionnaire to represent all variables in this research are valid. Then proceed with the reliability test, namely the reliability or consistency or trustworthiness value of a measuring instrument. Researchers used the Cronbach's Alpha method to test the reliability value of each item from all variables. A variable is said to be reliable if it provides a Cronbach's Alpha value  $> 0.70$ . Following are the results of the reliability test.

**Table 6.** Pre-Test Reliability Test Results

Reliability Statistics	
Cronbach's Alpha	N of items
.734	10

Based on Table 6, the results of the Pre-Test reliability test can be seen that the Cronbach's Alpha value for all variables is more than 0.70. So it can be concluded that all question items from all variables are reliable or consistent. Because all items for each variable are valid and reliable.

**Table 7.** Post-Test Reliability Test Results

Reliability Statistics	
Cronbach's Alpha	N of Items
.826	10

Based on Table 7, the results of the post-Test reliability test can be seen that the Cronbach's Alpha value for all variables is more than 0.70. So it can be concluded that all question items from all variables are reliable or consistent. Because all items for each variable are valid and reliable, the next analysis can be continued.

*Normality Test*

The researcher tested normality using the Shapiro Wilk test, because the sample in the study was less than 30. The hypothesis underlying the data normality test was.

$H_0$ : Data is normally distributed

$H_1$ : Data is not normally distributed

The following are the results of the normality test of the learning motivation variable.

**Table 8.** Data Normality Test Results

Variables	Class	Shapiro Wilk test statistics	Value of Sig.
Learning outcomes	Experiment	0.972	0.562
	Control	0.965	0.347

Based on Table 8, it shows that changes in learning outcomes have a significance value of more than  $\alpha$  (0.05), so the decision to accept  $H_0$  is obtained. It can be concluded that the learning outcome variables are normally distributed. Then the analysis can be continued using the t-test.

*T-test*

In this section we will review whether there are significant differences in the two tests. After implementing learning using the discovery learning model assisted by the Quizizz application to improve student learning outcomes, analysis uses statistical testing, namely the Paired Samples t-Test, where the aim is to compare the values of samples that are not paired with each other. Paired sample t-test t-test is used to test

whether the mean of a variable is statistically significantly different when compared with the known mean value as an assumed or hypothesized value. In this study, we wanted to find out whether the average learning outcome scores were different or not. The Effect of Using Learning Using the Discovery Learning Learning Model Assisted by the Quizizz Application on the Learning Outcomes of Class VI Students on Ecosystem Balance Material.

The hypothesis in this research is:

$H_0$  = There is an influence of the use of learning using the discovery learning learning model assisted by the Quizizz Application on the Learning Outcomes of Class VI Students on Ecosystem Balance Material.

$H_1$  = There is no effect of using learning using the discovery learning learning model assisted by the Quizizz application on the learning outcomes of class VI students on ecosystem balance material.

The following are the results of the paired sample t-test t-test analysis.

**Table 9.** Paired Sample t-Test Results

Variables	Statistics-t	Value of Sig.
Learning outcomes	17.834	0.000

Based on Table 9, the results of the t-test on learning outcomes show a significance value of less than 0.05, so reject  $H_0$ . Based on the test results in the equal variances assumed section, it appears that the value of Sig.(2-tailed)  $< \alpha$  is  $0.001 < 0.05$ . So, the decision taken is to reject  $H_0$  and the final conclusion is that there is an influence of the use of learning using the discovery learning learning model assisted by the Quizizz Application on the Learning Outcomes of Class VI Students on Ecosystem Balance Material.

*Discussion*

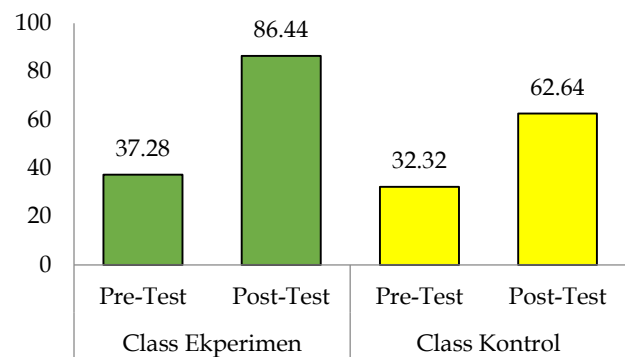
In this research, the use of Quizizz media is based on several syntaxes of the Discovery Learning model. These include providing stimulus, collecting data, and also at the evaluation stage of the students. The online-based Quizizz media can direct students to find their ideas about the material that will be given, namely ecosystem balance.

From the description of this research, researchers used pre-test and post-test learning outcomes in the experimental class and control class. The aim of learning using learning using the discovery learning learning model assisted by the Quizizz application is to help improve student learning outcomes. Before researchers carry out research, researchers first validate the research instruments needed during learning. From the validator's opinions and suggestions, it can be concluded that the entire research instrument prepared by the researcher has reached the valid validation

category. Then test the validation of the questions and reliability. The results of the items tested were valid and reliable.

The results obtained from the data above are that there is an influence of learning using the discovery learning learning model assisted by the Quizizz Application on the Learning Outcomes of Class VI Students on Ecosystem Balance Material. After testing the hypothesis using the t test of 0.001. After testing the hypothesis, there is an influence of learning using the discovery learning learning model assisted by the Quizizz application on the learning outcomes of Class VI students on the topic of Ecosystem Balance.

Based on the results of data processing, graphic results of student learning outcomes can be seen before and after learning.



**Figure 2.** Learning outcomes graph (Source. Excel 2023)

*Data Processing*

Based on graphic image 1 above, it can be seen that learning outcomes increased before using learning using the discovery learning learning model assisted by the Quizizz application. The measurement results data were analyzed using descriptive statistics. The average pretest score for the control class was 31.40, while the average post-test score for the control class was 67.89. For the experimental class the pretest score was 336.48 while the average post-test score was 85.48 which shows an increase. So, it can be concluded that there are differences in learning outcomes before and after in the experimental class and the control class. According to the results above, the highest score was obtained in the experimental class. This means that learning using the discovery learning model assisted by the Quizizz application is more effective than using conventional learning.

So, it can be concluded that there are differences in students' learning outcomes before and after learning using learning using the discovery learning learning model assisted by the Quizizz application. Validity test results show  $r = 0.82 < (0.05)$  so that everything shows valid results, so from the dependability test if the value

is  $> 0.70$ , the value is reliable, to be precise 0.82, from the consequences of the legitimacy and quality test unwavering, all factors are solid/predictable because they matter for each variable.

Then a normality test was carried out before solving using the t-test, the results of the regularity test for the inspiration value were  $0.467 > \text{value } (0.05)$ . This value shows that the free factor is more important than large values, then the variable values are usually adjusted. then use the t-test. Based on the test results in the equal variances assumed section, it appears that the Sig (2-tailed)  $< \alpha$  value is  $0.001 < 0.05$ . So, the decision taken is to reject  $H_0$  and the final conclusion is that there is an influence of the use of learning using the discovery learning learning model assisted by the Quizizz Application on the Learning Outcomes of Class VI Students on Ecosystem Balance Material. The conclusion is that there is a significant difference in the average value of student learning outcomes between the two classes. Because the score obtained by the experimental class was higher than the control class, it was concluded that learning using the discovery learning learning model assisted by the Quizizz application could improve the learning outcomes of Class VI students on Ecosystem Balance Material.

Based on the post-test scores and statistical test results obtained, it can be said that the discovery learning model assisted by the Quizizz application has proven to be efficient and has an influence on student learning outcomes. The Discovery Learning learning model assisted by the Quizizz application strives to follow the correct theoretical steps in learning (Setiyowati et al., 2019). This implementation has been able to increase student learning achievement to reach average scores. It turns out that this value has exceeded the indicators of success of the proposed research. From these results, the Discovery Learning learning model assisted by the Quizizz application has been implemented correctly according to existing theory, student interest has increased due to researchers actively providing motivation, students' learning enthusiasm has increased due to completed tasks, students' independent learning activities have been completed. able to do well. It is understood that the high achievement of student learning outcomes in the experimental class is due to learning activities using the discovery learning model, students can be active in the learning process because they have their own responsibility to look for concepts from the learning material (Azizah et al., 2023). Then the use of the discovery learning model becomes a new learning experience for students because previously they only learned conventionally. Then applying quizizz at the end of the lesson challenges students and can help them remember the learning that has taken place that day. By

implementing the discovery learning model assisted by Quizizz, students are given their respective responsibilities to search for information related to the material being discussed. In this way, the learning process can run better because it will minimize things that are not useful for students to do during learning (Al Mawaddah et al., 2021). However, it certainly doesn't run smoothly, there are still obstacles, such as students who lack the desire to learn. Discovery Learning is a learning model that aims to help students understand a certain concept (BS et al., 2023).

This model directs students to discover something through the learning process they carry out. Students are not only presented with a number of theories but they are also faced with a number of facts. And quizizz is an application that can help teachers create quizzes that students can take by joining with the code provided. This finding is in accordance with Windiyani's findings, whose findings show that the discovery learning model influences student learning outcomes (Oknaryana et al., 2023). Then also research conducted by Husna, his research explains that the use of Quizizz learning media influences student learning outcomes in economics subjects (Sanjaya et al., 2023).

Hariawan (2017) explains that discovery learning is in accordance with active human search, students learn best through discovery so that they are able to try themselves to find solutions to problems and the knowledge that accompanies them, thus producing truly meaningful knowledge. . This model directs students to discover something through their learning process. The different learning outcomes when using the Quizizz-assisted discovery learning model and the conventional one are due to several factors, namely students who apply the Quizizz-assisted discovery learning model are more optimal because students are required to play a dominant role in learning activities. Using the Quizizz-assisted discovery learning model, students are given freedom to seek information about learning from various sources, so that students can get more data about the material being studied. After that, the memory of the material that has been studied is evaluated with the Quizizz application which is interesting for students because of the use of new technology (Mahendra et al., 2021).

In contrast to students with conventional learning models, students just sit and listen so that learning activities become boring. Passive students are not active in learning, students often forget about the material that has been taught and students only learn to memorize the text instead of understanding the material. This learning problem cannot be solved if the teacher only uses conventional methods in learning (Oknaryana et al., 2023). If in conventional learning the teacher explains the material, in discovery learning assisted by Quizizz,

students are encouraged to be more active in learning activities. In line with Emilia's findings, students' cognitive learning outcomes increase when the discovery learning model is implemented (Samantha et al., 2019). And research conducted by Pratiwi, quizizz can increase motivation so that achievement becomes better (Hidayati et al., 2021).

## Conclusion

Based on the results of the research and data processing that has been carried out, it can be concluded that there is an influence of the use of learning using the discovery learning learning model assisted by the Quizizz Application on the Learning Outcomes of Class VI Students on Ecosystem Balance Material. Based on the test results in the equal variances assumed section, it appears that the value of Sig.(2-tailed)  $< \alpha$  is  $0.001 < 0.05$ . So, the decision taken is to reject  $H_0$  and the final conclusion is the effect of using learning using the discovery learning learning model assisted by the Quizizz application on the learning outcomes of class VI students on ecosystem balance material.

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## Author Contributions

Esti Retnaningrum Conceptualized the research ide, designed of methodology, analyzed data, management and coordination responsibility Joko Pamungkas.

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## Conflicts of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study.

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