

THE ROLE OF DIGITAL-BASED EVALUATION IN IMPROVING LEARNING OUTCOMES

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ABSTRACT

The purpose of this research is to determine the extent to which digital-based evaluation methods combined with learning motivation are capable of influencing the economics learning achievement for high school students at SMA Negeri 53 Jakarta. The experiment was conducted by a quasi-experimental design. Two classes were selected, one consisting of students who were assessed using the digital assessment method of Quizizz platform while the other was taught using the conventional methods of assessment. The interventions included a pre-test and post-test measurements, and a learning motivation scale was also given to the students. The ANOVA results showed that there was a better level of economics learning outcomes between the digital based and conventional evaluation methods. There was also found a significant interaction of evaluation method and motivation level on learning outcomes, meaning that when students are highly motivated to learn subjects like economics, performance is best with the help of digital tests. These results encourage the use of digital assessment methods as a remedy to improve the learning of economics.

Keyword: Digital-based evaluation, Economics learning outcomes, Learning motivation, Quizizz

ABSTRAK

Penelitian ini meneliti pengaruh metode evaluasi berbasis digital dan motivasi belajar terhadap hasil belajar ekonomi siswa SMA di SMA Negeri 53 Jakarta. Dengan menggunakan desain quasi-eksperimental, dua kelas dipilih, yaitu satu kelas menggunakan evaluasi berbasis digital melalui platform Quizizz, dan kelas lainnya menggunakan metode evaluasi konvensional. Pengumpulan data melibatkan pretes dan postes, serta kuesioner untuk menilai tingkat motivasi belajar. Hasil uji ANOVA menunjukkan adanya perbedaan signifikan dalam hasil belajar ekonomi antara metode evaluasi berbasis digital dan metode konvensional. Selain itu, terdapat pengaruh interaksi antara metode evaluasi dan tingkat motivasi terhadap hasil belajar, yang menunjukkan bahwa evaluasi digital ditambah motivasi tinggi menghasilkan hasil belajar ekonomi yang optimal. Temuan ini menunjukkan potensi integrasi evaluasi digital untuk meningkatkan hasil belajar dalam pendidikan ekonomi.

Kata kunci: Evaluasi berbasis digital, Hasil belajar ekonomi, Motivasi belajar, Quizizz

INTRODUCTION

Learning outcomes are one of the main indicators in assessing the success of the learning process, reflecting the extent to which the desired knowledge, skills and attitudes are

achieved by learners. Various studies have shown that optimal learning outcomes can be achieved through approaches involving appropriate evaluation and effective teaching methods. According to a journal by Wijayanti et al (2023), the use of technology-based evaluation techniques, such as digital evaluation tools, is proven to increase the accuracy of learning outcome measurement and provide faster and more detailed feedback, thus encouraging students to be more active in learning (Wijayanti et al, 2023). In addition, another study by Ricardo & Meilani (2017) also revealed that high learning motivation plays an important role in improving learning outcomes, because motivated students tend to be more focused and committed in following the learning process (Ricardo & Meilani, 2017). Therefore, the importance of learning outcomes is not only determined by teaching methods, but also by effective evaluation and strong motivational support from students.

Based on observations made by researchers during the Teaching Skills Practice at the 53 Senior High School Jakarta in the 2022/2023 school year, the majority of students still have difficulty obtaining KKM scores in economics subjects. The average score of class XI-1 is 69 with the number of students who completed 12 people (33%) and the number of students who did not complete was 24 people (67%). While in class XI-2 has an average score of 61 with 11 students who are complete (31%) and the number of students who are not complete is 25 people (69%). And finally class XI-5 which has an average score of 64 with the number of students who completed 12 people (35%) and the number of students who did not complete was 22 people (65%). The following learning outcome data is data from classes with specialization in economics subjects at the 53 Senior High School Jakarta. Seeing the low student learning outcomes and the low percentage of student completeness in economics subjects shows that there are problems in the economic learning outcomes of students at the 53 Senior High School Jakarta.

Based on Purba & Dwi (2023) in their research on the development of digital-based learning outcomes evaluation also said that the implementation of learning outcomes evaluation is less practical if using conventional media because it often makes students bored and burdened, therefore alternative evaluation tools are needed that are able to make learning evaluations fun, one of which is by using digital-based evaluation tools. Furthermore, Hartanti (2019) student learning outcomes using Kahoot media as a digital-based evaluation tool tend to improve compared to conventional learning methods. The learning process with Kahoot can increase the percentage of student completeness, make students more active in learning, and make it easier for them to understand the material presented by the teacher. See et al (2022) in their research explained in more detail the effect of using technology in formative assessment in schools on student learning outcomes. The use of technology for formative assessment is more effective for improving learning outcomes only in younger age groups and some subjects such as math and reading.

In addition to factors from evaluation tools, learning motivation is also one of the factors that can affect student learning outcomes. According to Sardiman in Stevani (2016), motivation can be said to be the overall driving force within students that gives rise to learning activities, which ensures the continuity of learning activities and provides direction to learning activities, so that the goals desired by the learning subject can be achieved. Based on research from Nurmala et al (2014), it shows that learning motivation contributes to improving learning outcomes in accounting subjects through its influence on student learning activities. Furthermore, Evans & Martin (2023) note that motivation plays an important role in students' well-being in school and beyond, as well as in how students internalize values from their social environment. As such, increased motivation resulting from the application of LRI (Load Reduction Instruction) principles may contribute to better learning outcomes, as motivated students tend to be more engaged in the learning process and better able to cope with academic challenges.

Based on some of the above research, learning outcomes can be influenced by various factors, including evaluation tools and student learning motivation. Although many studies have examined learning outcomes that are influenced by digital-based evaluation tools and learning motivation, there is still a research gap in which there is no research that examines economic learning outcomes as the dependent variable with digital-based evaluation tools and learning motivation as the independent variable. Based on this background, it is necessary to conduct research on economic learning outcomes that are influenced by digital-based evaluation and learning motivation. This study aims to determine the role of digital-based evaluation and learning motivation on economic learning outcomes.

LITERATURE REVIEW

Learning Outcomes

Understanding the nature of learning is crucial to comprehending learning outcomes. Learning outcomes include the capacity to exhibit activity following instruction. Learning is the process of altering behavior as a result of contact with the environment to meet life's needs. Gagne & Briggs in Nurrita, T. (2018) identified five types of abilities: intellectual skills, verbal information, cognitive strategies, motor skills, and attitudes (Nurrita, T., 2018). Learning outcomes include changes in the cognitive, affective and psychomotor fields (Sudjana 2009).

Cognitive, emotional, and psychomotor behavioral changes are examples of student learning outcomes. Both student internal variables and the quality of instruction have an impact on the learning process. Learning outcomes are children's abilities after learning activities with objectives set by the teacher. There are three categories of elements that affect student learning outcomes: learning approach factors, external influences from students, and internal factors. Indonesia uses Bloom's Taxonomy: cognitive (knowledge, understanding), affective (motivation, attitudes), psychomotor (physical skills) in learning. Learning outcomes can be measured through non-test techniques such as rating scales, questionnaires and checklists (Arikunto, 2015).

There are also test techniques, such as diagnostic, formative, and summative, as well as subjective and objective, with various assessment methods used. Participants take part in learning and are evaluated in three domains: cognitive, affective and psychomotor. according to Graham in Hikmah et al (2022), cognitive indicators include knowledge, understanding, and evaluation; affective includes attitudes and values; while psychomotor includes creativity, emphasizes students' focus on acquiring knowledge, attitudes, values, and creativity. Highlights the importance of memory, application, analysis, generalization, judgment, attitude, active participation, and body coordination in learning (Muhibbin 2003) . Research at SMA Negeri 53 Jakarta used economics students' report cards to measure the cognitive domain, highlighting students' academic understanding.

Digital Based Evaluation

Evaluation in education is divided into three groups: learning, programs, and systems to achieve goals. Evaluation is a structured and continuous way to assess the quality of something and provide stimulus to improve learning outcomes (Magdalena, et al., 2020). Digital-based evaluation uses technology to measure, analyze and provide feedback on learning. It provides flexibility in data collection, accuracy in analysis, and an interactive way of presentation. The collected data can be tracked and managed easily. The evaluation process is more efficient with special software producing reports that can improve learning and provide immediate feedback to students. However, adequate technological infrastructure and appropriate evaluation instruments are required. Digital-based evaluation is an effective tool in improving the quality of learning. Online learning allows students to study independently from

many sources, in accordance with the 2013 curriculum, by using online-based devices for learning from home.

There are various digital evaluation tools that can be used in education, such as Power Point, Adobe Flash, Hot Potatoes, and others. With this technology, teachers can make computer tests interesting and students can take them flexibly. Evaluation of learning from home can also be done using a distance exam method via online applications such as Quizizz. This makes it easier for teachers to evaluate learning outcomes online. The evaluation function is important in the learning process. Evaluation helps teachers and educational observers assess student success, teaching effectiveness, and curriculum development needs. Evaluation is also used to determine student status, understand the accuracy of learning plans, provide information for counseling guidance, and design improvements to the school curriculum. With proper evaluation, there can be significant improvements in the teaching and learning process.

Motivation To Learn

Motivation to learn is a key factor in learning. Students will learn well if they have high learning motivation. Motivation to learn includes the desire to succeed, encouragement to learn, hope for the future, appreciation for learning, and a conducive environment Hamzah (2012). Learning motivation is a student's psychological drive to achieve goals Winkel (2005). Motivation as a driving force for learning activities that ensure goals are achieved Sardiman (2012). There are two types of learning motivation: extrinsic (originating from outside the person) and intrinsic (originating from within the person). A personal desire to learn significant and practical things is the foundation of intrinsic motivation. Extrinsic motivation, on the other hand, originates from outside sources and is supported by external incentives like praise or good grades. Both are crucial for boosting students' motivation to learn and assisting them in completing the teaching and learning process successfully. (Sardiman, 2012).

Aspects of Education, The effectiveness of the teaching and learning process depends on motivation, explains that student interest and attention, student enthusiasm, student responsibility, student reactions to teachers, as well as students' feelings of joy and satisfaction in learning, are very important Sudjana (2009). Student learning motivation is influenced by various factors such as aspirations, abilities, physical and mental conditions, environment, and learning dynamics. This is important to increase student learning motivation Dimiyati & Mudjiono (2013). Motivation to learn is influenced by culture, family, school, and student desires. Other factors such as aspirations, abilities, and environment also play a role in student learning motivation.

Indicators of learning motivation include a sense of wanting to succeed, encouragement to learn, hope for the future, rewards, interesting activities, and a conducive learning atmosphere Nasrah dan Muafiah (2020). Indicators of learning motivation, such as activity, persistence, task completion, teacher support, feedback, and reinforcement Sumiyati (2017) Indicators of student learning motivation include perseverance, resilience, interest in problems, independent work, desire to create, determination, and ability to solve problems. Sardiman (2000). This study employs a number of the previously mentioned markers, including the following: a strong desire to succeed, encouragement and necessity for learning activities, conscientious completion of assignments, resilience in the face of learning challenges, and engaging learning activities.

The research hypothesis is formulated as follows:

H₁: There is a difference in economic learning outcomes between the group of students who applied digital-based evaluation and the group of students who applied conventional evaluation

- H₂: There are differences in economic learning outcomes between groups of students who have high levels of learning motivation and groups of students who have low levels of learning motivation
- H₃: There is an interaction between digital-based evaluation and learning motivation on economic learning outcomes
- H₄: There are differences in economic learning outcomes in classes where conventional evaluation is applied and in classes where digital-based evaluation is applied for students who have a high level of learning motivation
- H₅: There are differences in economic learning outcomes in classes where conventional evaluation is applied and in classes where digital-based evaluation is applied for students who have low levels of learning motivation
- H₆: There are differences in economic learning outcomes in classes where conventional evaluation is applied to students who have high and low levels of learning motivation
- H₇: There are differences in economic learning outcomes in classes where digital-based evaluation is applied to students who have high and low levels of learning motivation

METHOD

The method used in this research was carried out with a quantitative approach using experimental techniques. According to Sugiyono (2018) research using empirical methods is research used to determine the effect of independent variables by using treatment on the dependent variable, namely the results under certain conditions. so that empirical research uses a control group to control a situation. The type of empirical research methodology used in this study is a quasi-experiment with a two-factor design. The experimental group will be given the opportunity to succeed by using digital-based evaluation, while the control group will be given the opportunity to succeed by using conventional evaluation (Creswell, 2016).

Population is all research components in the form of a collection of individuals with certain classifications so that it can produce something that can be drawn and studied conclusions (Kurniawan & Puspitaningtyas, 2016). Based on these views, it can be concluded that the population in this study were grade 11 students at 53 Jakarta High School. The sample in this study was taken using purposive sampling technique, which means sampling using certain criteria and considerations in determining the number and sample to be studied (Sugiyono, 2018). This study consists of two classes, class XI-6 and class XI-7 which are the same number, as many as 30 students. Class XI-6 was used as a control class using conventional evaluation, while class XI-7 was used as an experimental class using digital-based evaluation.

This research uses a questionnaire instrument to measure the level of student learning motivation, which is then divided into groups of high learning motivation students and groups of low learning motivation students in each class. Furthermore, to measure economic learning outcomes in this research using test instruments in the form of pre-test and post-test. The control class used conventional tools or paper tests while the experimental class used digital-based evaluation tools.

The results of this study were measured using a two-way analysis of variance (ANOVA) hypothesis testing technique. Pre-test and post-test results on student learning outcomes are used to evaluate the hypothesis of differences between sample groups using two-way ANOVA. If there is an interaction, the Tukey test is used to determine the extent to which learning motivation and digital-based evaluation interact to affect student learning outcomes in order to comprehend the differences in learning outcomes between the use of conventional evaluation and digital-based evaluation.

RESULTS AND DISCUSSION

Data Description

In this research, there are three variables studied, namely evaluation methods and learning motivation as independent variables or variable student. To collect data on students' economic learning outcomes, researchers used a pre-test and post-test method consisting of 20 multiple choice questions. The material that will be tested in taking economic learning outcomes is the material in chapter 2 of class XI SMA, namely Economic Growth and Economic Development.

Table 1. Control Class Pre-Test Data

	N	Minimum	Maximum	Mean	Std Deviation
Pre-Test Control	30	5	70	34,67	19,911
Post-Test Control	30	20	85	60,50	15,776
Valid N	30				

Table 1, it is known that the pre-test scores in the control class have a sample size of (N) 30 students. The lowest score obtained by all samples was 5 and the highest score obtained was 70, with the average score being 34.67. The range value or difference between the lowest value and the highest value is 65, and the standard deviation is 19.911.

Table 1, it is known that the post-test scores in the control class had a sample size of (N) 30 students. The lowest score obtained by all samples was 20 and the highest score obtained was 85, with the average score being 60.50. The range value or difference between the lowest value and the highest value is 65, and the standard deviation is 15.776

Table 2. Experimental Class Pre-Test Data

	N	Minimum	Maximum	Mean	Std Deviation
Pre-Test Experimental	30	15	55	36,00	10,860
Post-Test Experimental	30	40	90	74,17	11,453
Valid N	30				

Table 2, it is known that the pre-test scores in the experimental class have a sample size of (N) 30 students. The lowest score obtained by all samples was 15 and the highest score obtained was 55, with the average score being 36.00. The range value or difference between the lowest value and the highest value is 40, and the standard deviation is 10.860.

Table 2, it is known that the pre-test scores in the experimental class have a sample size of (N) 30 students. The lowest value obtained by all samples was 40 and the highest value obtained was 90, with the average value being 74.17 and the highest value or mode being 70. The range value or difference between the lowest value and the highest value was 50, and the standard deviation is 11,453.

Validity Test

In this study, the validity test of pre-test and post-test items was carried out using SPSS version 26 using product moment correlation with the following results.

Table 3. Results of Validity Test, Pretest and Posttest Question

Question Item	Pearson Correlation Value (r)	Critical Value	Significance	Description
Item 1	0,446	0,361	0,014	Valid
Item 2	0,446	0,361	0,014	Valid
Item 3	0,390	0,361	0,033	Valid
Item 4	0,422	0,361	0,020	Valid
Item 5	0,419	0,361	0,021	Valid
Item 6	0,436	0,361	0,016	Valid
Item 7	0,409	0,361	0,025	Valid
Item 8	0,391	0,361	0,033	Valid
Item 9	0,503	0,361	0,005	Valid
Item 10	0,422	0,361	0,020	Valid

From the table above, it can be seen that the critical value is 0.361 with many respondents (N) is 30 people. With the decision-making criteria rcount and rlabel, it can be seen that all of these items have a value of $r > 0.361$. So it can be concluded that all pre-test and post-test items are valid. As for decision making by comparing the Sig. (2-tailed) value, it can be seen that all items have a Sig. (2-tailed) value of <0.05 . So it can be concluded that decision making by comparing Sig values. all questions are valid.

Table 4. Results of Validity Test, Pretest and Posttest Question

Question Item	Pearson Correlation Value (r)	Critical Value	Significance	Description
Item 1	0,596	0,361	0,001	Valid
Item 2	0,635	0,361	0,000	Valid
Item 3	0,797	0,361	0,000	Valid
Item 4	0,408	0,361	0,025	Valid
Item 5	0,610	0,361	0,000	Valid
Item 6	0,717	0,361	0,000	Valid
Item 7	0,391	0,361	0,033	Valid
Item 8	0,640	0,361	0,000	Valid
Item 9	0,747	0,361	0,000	Valid
Item 10	0,749	0,361	0,000	Valid

From the table above, it can be seen that the critical value is 0.361 with many respondents (N) is 30 people. With the decision-making criteria r and critical value, it can be seen that all of these items have a value of $r > 0.361$. So, it can be concluded that all pre-test and post-test items are valid. As for decision making by comparing the Sig. (2-tailed) value, it can be seen that all items have a Sig. (2-tailed) value of <0.05 . So it can be concluded that decision making by comparing Sig values. all questions are valid.

Reliability Test

Reliability test is a tool used to see how a measurement result is obtained using identical objects so that they are comparable to each other (Sugiyono, 2018). In this study, researchers

used the alpha formula to understand the reliability of the test results. Because the data they use is not only 1 and 0 but also data from questionnaire reports, they use the alpha formula. The criterion for determining the reliability of something is if the alpha coefficient is greater than 0.6, it can be said that the variable is reliable:

Table 5. Results of Reliability Test, Pretest and Posttest Question

Reliability Statistics	
Cronbach's Alpha	N of Items
,787	20

Based on the output table above, it can be seen that the N of items or the number of items is 20 with a Cronbach's Alpha value of 0.787. In accordance with the decision-making criteria that Cronbach's Alpha $0.787 > 0.60$, it can be concluded that the 20 items of pre-test and post-test questions are reliable or reliable.

Table 6. Results of Reliability Test, Motivation Questionnaire

Reliability Statistics	
Cronbach's Alpha	N of Items
,889	20

Based on the output table above, it can be seen that the N of items or the number of items is 20 with a Cronbach's Alpha value of 0.889. In accordance with the decision-making criteria that Cronbach's Alpha $0.889 > 0.60$, it can be concluded that the 20 questionnaire items are reliable or reliable.

Hypothesis Test

After conducting an instrument test (validity test and reliability test) with the result that the research data can be said to be valid and reliable and after conducting pre-analytical tests with the results of the data collected normally distributed and homogeneous samples, the results of this hypothesis are ready to be tested with a two-way ANOVA test using SPSS software. The results of the two-way ANOVA test will show the difference in economic learning outcomes between digital-based evaluation methods and conventional evaluation methods, as well as differences between students with low and high learning motivation, and see whether there is interaction in learning. If there is interaction, it can be continued with the Tukey Test then the analysis is carried out with factorial ANOVA, the ANOVA results are shown in the following table:

Table 7. Results of Two-Way ANOVA Test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Evaluation Method	2801,667	1	2801,667	45,084	,000
Learning Motivation	7260,000	1	7260,000	116,828	,000
Evaluation Method*Learning Motivation	281,667	1	281,667	4,533	,038

Error	3480,000	56	62,143
Total	285850,00	60	0

The results of the factorial ANOVA indicate a number of important aspects regarding how students' economics learning outcomes are impacted by their motivation level and the manner of assessment. Firstly, there was a notable improvement between students in the digital evaluation class and those in the traditional evaluation class when it came to learning outcomes. The ANOVA output (Table 7) indicates F-value 45.084 at 0.000 p-value for the evaluation method variable while the F-table was 3.986 at $df_1 = 1$ and $df_2 = 56$. Since $p < 0.05$ and F is greater than F-table, the null hypothesis was rejected indicating that learning outcomes differed adversely between the two methods of evaluation at a 5% significance level. Second, this study found that there was a significant difference in economics learning outcomes of students who were very motivated and students who were not very motivated. The ANOVA results (Table 7) confirm that the motivation variable F-value of 116.828, and $p = 0.000$ can be compared to the F-table value 3.986 once more F-hypothesis H_0 was tested. This implies that H_0 was not accepted, indicating a variance in learning outcomes when motivation levels vary among students, with the motivated students performing better. Third, it was found that a significant interaction exists between the evaluation method and the level of motivation which in turn affects the learning outcome. The interaction variable for motivation and evaluation method had F-value of 4.533 and p-value 0.038 in addition to the F-table which was 3.986. This interaction, whereby $p < 0.05$, demonstrates that the joint effect of using digital evaluation and having high motivation was distinct on the learning outcomes. Therefore, this interaction effects need to be further examined and in this case a Tukey post-hoc test is necessary.

Tukey Test

The last task finished in this analysis is the Tukey test. The Tukey test was used because of the interaction between the independent and dependent variables. Finding the difference between sample groups that differ significantly is the goal of this result. If the significance level is less than 0.05, there is a significant difference between the sample groups. The results of the Tukey further test are displayed in the table below:

Table 8. Results of Tukey Test

Variances		Mean Difference	Sig.	Description
A1B1	A1B2	26,33	0,000	Signifikan
A1B1	A2B1	-9,33	0,010	Signifikan
A1B2	A2B2	-18,00	0,000	Signifikan
A2B1	A2B2	17,67	0,000	Signifikan

The results of Tukey's post-hoc test provided in Table 4.9 bear out the hypotheses of the study about the variations in economics learning outcomes based on evaluation methods and levels of motivation. To begin with, a significant difference was noted regarding students with high motivation levels and classes engaging in traditional forms of assessments in comparison to those engaging in assessments mediated by technology; the difference in mean was 9.33 when the significance value was 0.010 showing that conventional means of evaluation methods focused on highly motivated students had lower achievements as opposed to the digital means ($p < 0.05$). In the second order, there was also a similar trend among low motivation level students where in there, high results were achieved by students assigned to digital evaluation classes rather than to students placed in the conventional classes, as

supported by mean difference of 18.00 and a significance value of 0.000. Thirdly, in the classes where evaluation using conventional methods took place, it was found that there is a difference between students with high motivation from those with low motivation and the difference in means was 26.33 and the significance value was 0.000 implying that in conventional settings, students who had high motivation levels were better than those who were lowly motivated. Finally, this was also true for classes where evaluations were done using digital system-based methods, there was a mean difference of 17.67 and significance value of 0.000 where students with high motivation levels performed better than those with low motivation levels. Hence, it is affirmed by the fact that learning outcomes are affected by both evaluation technique and students' motivation although the digital evaluations tilt heavily in favour of students irrespective of their motivation levels, having a fairly large gap between the two.

Discussion

In the discussion of the findings of this study, emphasis is placed on how digital based assessment complemented by student motivation is capable of enhancing the learning outcomes in economics. As per the results of ANOVA, it has been found that students from classes that employed digital assessment methods, particularly the Quizizz method, outperformed their counterparts who were assessed traditionally. This is consistent with previous studies carried out by Larasati et al. (2023) who pointed out that tools such as Quizizz promote learning outcomes by making the process interactive and enjoyable. Digital formatted assessments help in grading, enhance immediate feedback, and promote an appealing learning atmosphere, which is probably the reason why the performance of the experimental group in this study was higher than that recorded in most studies.

Moreover, motivation proved to be another important factor as high motivated students performed better than low motivated students irrespective of the type of evaluation used. This result supports the existing belief that students' motivation plays a crucial role in their academic performance. Such students do not only attend classes but get involved and stick to the very end of the course (Ricardo & Melani, 2017). In addition, the findings of the research support Gottfried's model, which asserts that high academic motivation results in more participation, fun and persistence in learning activities. Hence, the effectiveness of digital assessments is improved by motivation by allowing the learners to fully engage and have a positive attitude towards the learning tasks.

Fascinatingly, the research also ascertained a notable interaction between evaluation method and level of motivation. Learning outcomes were the highest for students most motivated in digital assessment environments because these students were provided with digital tools that suited their learning style and engagement preference. Assessments designed for Quizizz have an element of gamification which provides one of the basic intrinsic needs among students especially high motivation students that entails competition and immediate feedback. As they are learning these students use digital assessments to their maximum potential. Achievement in academics tends to be very high when students are highly motivated and digital assessment done (Sukmah et al., 2021). Moreover, for students with low motivation, the digital format still offered significant benefits compared to the traditional format most probably because it provided a different form of assessment that broke the tedium and kept them interested.

These conclusions highlight the necessity of using assessment techniques that are compatible, or rather suited, with the motivational levels and preferences of students especially with the growing adoption of technology in the educational curriculum. The results corroborate the case for wider adoption of digital assessments in high schools as they can be a considerable addition to the existing examination techniques. However, it should be noted that to achieve a great deal of success, other strategies aimed at enhancing student motivation should also be

employed by schools. When the students are motivated, the digital tools can significantly enhance the learning outcomes and therefore, the learning becomes more effective than in traditional assessment modes.

To conclude, the results of the research indicate that e-assessments with high levels of motivation work hand in hand to enhance learning in economics. These results contribute to the increased understanding that modern-day learning techniques, when complemented by motivational endeavours, are capable of improving learning and performance. Future research might look into the effect of digital assessments in different subjects and environments, in addition to the possible long-lasting effects of these instruments on the progression to learning of the students.

CONCLUSION AND RECOMMENDATION

Conclusion

The purpose of this study is to enhance students' economic learning outcomes by using digital assessment tools like Quizizz. The results demonstrate that digital and traditional evaluation techniques differ significantly. The degree of student motivation has an impact on economics learning results as well; motivated students typically have superior learning outcomes. Particularly for highly motivated students, classes using digital evaluation techniques yield higher economic learning outcomes than those using traditional techniques. Furthermore, the economic learning results of students with high and low motivation levels varied significantly across the two assessment techniques.

Research Limitations

The limitations of this study include several aspects that can be used as lessons for future research. First, this study only focuses on two factors that affect learning outcomes, namely the use of digital-based evaluation and learning motivation, so the results are limited to the influence of these two variables without considering other factors that also affect learning outcomes. Secondly, the sample selection was carried out in a small scope, namely only economics specialization students at SMA Negeri 53 Jakarta, so the generalization of the results of this study is limited and less representative of the wider population. Third, this study only used one type of digital-based evaluation platform, which limits the validity of the results if applied to other digital platforms or a combination of several platforms.

Recommendation

For future research, it is recommended to expand the scope of the study by adding other variables that are relevant in influencing learning outcomes, such as teaching strategies, learning environment, or students' digital literacy level. The sample selection should also include a more diverse population from different schools and regions to improve the generalizability of the findings. In addition, the use of various digital-based evaluation platforms or a combination of several platforms can help obtain more comprehensive results that are relevant to the dynamic development of educational technology.

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