

THE IMPACT OF THE TPACK LEARNING MODEL ON ENGLISH LEARNING OUTCOMES AT MA RIYADLUSHALIHIN NWDI DASAN LEKONG

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Abstract: *This study aims to evaluate the impact of the TPACK (Technological Pedagogical Content Knowledge) learning model on students' learning outcomes in English at MA Riyadlushalihin NWDI Dasan Lekong. The research method employed is a pre-experimental design using a pretest-posttest model. The sample consists of students from the XI IPS class. The analysis results show a significant increase in students' average scores after the implementation of the TPACK model. These findings indicate that the application of the TPACK model not only enhances academic learning outcomes but also creates a more interactive and relevant learning experience. This study recommends the use of the TPACK model in English instruction to improve student engagement and understanding.*

Keywords: *TPACK, Learning Outcomes, English Language Learning.*

Abstrak: Penelitian ini bertujuan untuk mengevaluasi dampak model pembelajaran TPACK (Technological Pedagogical Content Knowledge) terhadap hasil belajar siswa dalam mata pelajaran Bahasa Inggris di MA Riyadlushalihin NWDI Dasan Lekong. Metode penelitian yang digunakan adalah desain eksperimen pra-eksperimental dengan model pretest-posttest. Sampel penelitian terdiri dari siswa kelas XI IPS. Hasil analisis menunjukkan peningkatan signifikan pada skor rata-rata siswa setelah penerapan model TPACK. Temuan ini menunjukkan bahwa penerapan model TPACK tidak hanya meningkatkan hasil belajar akademik tetapi juga menciptakan pengalaman belajar yang lebih interaktif dan relevan. Penelitian ini merekomendasikan penggunaan model TPACK dalam pengajaran Bahasa Inggris untuk meningkatkan keterlibatan dan pemahaman siswa.

Kata Kunci: TPACK, Hasil Belajar, Pembelajaran Bahasa Inggris.

INTRODUCTION

Learning English means developing the ability to use English, including grammar, vocabulary, speaking, listening, reading, and writing skills. The goal of learning English is to communicate with others in English, both orally and writing. Learning English is very important in this modern era because English can open up huge opportunities both in education and career. In addition, learning English is also a valuable

investment that can provide long-term benefits for the future. English, as the most commonly used language worldwide since the middle of the century until now (Damanik, 2019), plays an important role to be learned from an early age. Mastery of a foreign language, especially English, is essential in improving the quality of human resources in education (Niah et al., 2017). This ability not only enhances global communication and provides access to various

educational resources and wider learning opportunities, but also opens up new job opportunities (Dwihartanti & Nur Faizah, 2019). English language proficiency is crucial from an early age because it improves the quality of human resources and opens access to various global opportunities. Thus, investment in English language learning is key to improving individual competitiveness and the quality of education in the era of globalization.

The condition of learning English at MA Riyadlushalin NWDI Dasan Lekong was still stuck on traditional methods, where students memorized more vocabulary from textbooks. With this traditional method, learning English felt monotonous because it only focused on grammar and translations from textbooks. The limited learning resources meant that students used only textbooks to learn English, without any interesting variations. Even though textbooks were the main source, teachers at MA Riyadlushalihin NWDI Dasan Lekong tried to create an interactive learning atmosphere but were still constrained by conventional teaching methods.

The problems faced at MA Riyadlushalihin were: first, the lack of textbooks hindered students from accessing adequate English learning. Second, the unavailability of a language laboratory at MA Riyadlushalihin made it difficult for students to practice their listening and speaking skills in a supportive environment. Third, the minimal use of technology in learning made the English learning process feel less interesting and less relevant to the development of the times. The combination of the lack of textbooks, the absence of laboratories, and the lack of technology-based learning at MA Riyadlushalihin created a major challenge in improving the quality of English learning.

Therefore, researchers offered the application of the TPACK learning model as an innovative solution by integrating technology

such as LCD, social media, and YouTube videos into English learning, so that the material became more interesting and relevant for students. By adopting the TPACK model, MA Riyadlushalihin NWDI Dasan Lekong overcame resource limitations and created a more dynamic English learning environment, where students actively interacted through social media, watched educational videos, and utilized LCDs for interesting presentations. This study used quantitative data to measure the impact of implementing the TPACK model on English learning outcomes at MA Riyadlushalihin NWDI Dasan Lekong.

This study aimed to test the effectiveness of the TPACK learning model in improving students' learning outcomes at MA Riyadlushalihin. In line with the view of Safitri et al. (2022) that TPACK is an appropriate approach to improving learning outcomes through technology, the study of TPACK provided a strong theoretical basis and justification for research on the impact of the TPACK learning model on students' learning outcomes. Thus, this study helped in the analysis and interpretation of findings and enhanced the research validity. Research on the impact of the TPACK learning model at MA Riyadlushalihin was important for improving the quality of learning and teacher professional development. The results of this research could also serve as the basis for educational policies that supported the use of technology in learning. This study hypothesized that the application of the TPACK learning model could significantly improve students' English learning outcomes at MA Riyadlushalihin NWDI Dasan Lekong. By implementing the TPACK learning model, it was hoped that teachers could create a more interactive and relevant learning environment, which could improve students' understanding of aspects of English such as comprehension, speaking, listening, and writing skills.

This study focused on the application of the TPACK learning model in English learning in the eleventh grade of MA Riyadlushalihin NWDI Dasan Lekong, to improve students' abilities in using technology such as LCD, social media, and YouTube videos as learning aids. The scope of this study included an analysis of the effectiveness of the TPACK model in improving the English learning outcomes of eleventh-grade students at MA Riyadlushalihin.

RESEARCH METODOLOGY

A. Research Design

Research design was a series of procedures and methods that analyzed and collected data and determined the variables that were the topic of research. Research design was a crucial step that not only determined the quality of the data produced but also affected the accuracy of the analysis in achieving research objectives. A systematic and objective research design was very important because it not only helped in solving problems but also ensured valid and reliable results in hypothesis testing. Research design referred to the design of data collection, processing, analysis, and presentation activities that were carried out systematically and objectively to solve a problem or test a hypothesis in order to develop general principles (Herdayati & Syahril, 2023). Thus, the importance of good research design greatly influenced the success of a study in producing useful and applicable findings.

This study used a pre-experimental design with a single-group pretest-posttest model. Students were given a pre-test to measure their understanding of English before using the TPACK model. After that, students learned with the TPACK approach for some time. After the learning was complete, they were given a final test (post-test) to evaluate learning outcomes. In this way, the study could see changes in students' understanding due to the application of the

TPACK model, so that it assessed the effectiveness of the method. To be clearer, the design of the research was described in Table 1.

Table 01

	Pre-test	Treatment	Post-test
V	T1	X	T2

- V : Experimental group.
- T1: pre-test : To assess the students' ability before treatment with TPACK method.
- X: Treatment : To affect students' English learning outcomes using TPACK method.
- T2: post-test : To assess the students' progress after treatment.

B. Setting of the Study

The setting of this research was conducted at MA Riyadlushalhi NWDI Dasan Lekong, located on Jalan Manunggal II Timuk Jero, Dasan Lekong, Sukamulia District, East Lombok Regency, West Nusa Tenggara Province. The participants involved in this study were 11th grade students majoring in social studies, who were selected because they had not experienced the application of the TPACK learning method. This study aimed to determine significant differences in students' English learning outcomes compared to previous learning methods. It was hoped that the results obtained from this study would meet expectations and provide a positive contribution to the development of learning methods in schools.

C. Population and Sample

Population is the entire subject or object that has certain characteristics that are the focus of the research. The population can include humans, animals, plants, or other objects that share the same characteristics and attract the attention of researchers. Population refers to all members of a group of humans, animals, events, or objects that live together in a planned place to form the conclusions of a study (Amin et al.,

2023). The population is often associated with the concept of a sample, where a sample is part of a population that represents the population as a whole. Population includes all subjects or objects that have certain characteristics and are the focus of a study. Meanwhile, a sample is part of a population that is selected to represent the characteristics of the entire population. In conclusion, understanding population and sample is very important in research, because both help researchers identify relevant subjects and generalize findings from samples to larger populations.

Sampling in this study was conducted in class XI IPS MA Riyadlushalihin NWDI Dasan Lekong by involving a total of 22 students as research subjects. These students were selected randomly from the class, so that they were expected to represent the characteristics of the student population in this school. With a relatively small sample size, this study aimed to gain in-depth insight into the impact of the TPACK model on English learning outcomes, while still considering the limitations of generalization of the findings. Through the selection of the right sample, it was hoped that the results of the study could provide an accurate picture of the effectiveness of the applied learning methods.

D. Data Collection

1. Identification of Variables

In the study on the impact of the TPACK model on students' English learning outcomes, there were two main variables. The independent variable was the TPACK model, which was tested to see its effect. The dependent variable was students' English learning outcomes, which were measured to determine the impact of implementing the TPACK model. This study focused on the relationship between the implementation of the TPACK model and the improvement of students' English learning

outcomes, to provide information on the effectiveness of the learning methods used.

2. Definition of Variables

Variables are characteristics, attributes, or factors that can be measured or observed in a study. Variables can be numbers, categories, or even immeasurable factors such as feelings or perceptions. The variables used in a study are basically anything that can be determined by the researcher to be studied so that information about it can be obtained and then conclusions can be drawn (Liana, 2009). In the context of research, understanding variables is very important to determine what will be measured and how the relationships between them will be explored. In conclusion, variables play an important role in research, because they help researchers formulate questions, collect data, and analyze results.

TPACK (Technological, Pedagogical, and Content Knowledge) was a framework that integrated knowledge of technology, pedagogy, and content to design and implement effective learning. On the other hand, English learning outcomes referred to the abilities achieved by students after following the learning process, including knowledge, skills, attitudes, and values related to English. In the context of this study, TPACK as an independent variable was expected to influence English learning outcomes as a dependent variable, thus providing a better understanding of the effectiveness of the applied learning methods.

3. Instrument of the Study

The research instruments used for the study on the impact of the TPACK model on students' English learning outcomes included the following tools:

a. Test

A test is a tool or procedure used to measure or find out something in a predetermined way and with rules. In the study on the impact of the TPACK model on students' English learning outcomes, students were given

two tests, namely a pre-test before treatment to determine students' basic understanding, and a post-test after treatment to measure the effect on their learning outcomes. Each test consisted of 15 questions designed to evaluate important aspects of English comprehension. With this approach, researchers could analyze differences in student learning outcomes before and after the implementation of the TPACK model, providing deeper insight into the effectiveness of the learning methods applied.

b. Technique of Collecting Data

There was several data collection techniques used in this study as follows:

a. Pre-test

The pre-test is an initial measurement conducted before treatment was given, aimed at determining the initial condition of the research subjects. In the context of research on the impact of the TPACK model on students' English learning outcomes, this pre-test was presented in multiple-choice form. By using this format, researchers could easily assess students' basic understanding of English material before implementing the TPACK model. The results of this pre-test served as a reference for evaluating changes that occurred after treatment, thus providing a clear picture of the effectiveness of the learning method used.

b. Treatment

The treatment is an intervention applied to the research subjects. In the study on the impact of the TPACK model on students' English learning outcomes, researchers taught one of the English materials in several meetings, applying the TPACK model. Through this treatment, researchers aimed to improve students' understanding and skills in English, as well as evaluate how effective the TPACK model was in supporting the learning process. The results of this treatment were expected to provide deeper insight into the relationship between the use of

the TPACK model and improved student learning outcomes.

c. Post-test

The post-test is the final test given after the teaching process was completed. In the study on the impact of the TPACK model on students' English learning outcomes, after the pre-test and treatment, the researcher gave a post-test to the students. The purpose of this post-test was to measure students' understanding of the material taught with the TPACK model. By comparing the results of the pre-test and post-test, the researcher could assess how effective the TPACK model was in improving students' English learning outcomes.

E. Analyzing Data

1. Descriptive Statistics

According to the Big Indonesian Dictionary (KBBI), statistics is defined as data in the form of numbers that are collected, grouped, and tabulated to show information or conclusions related to a problem. A deep understanding of the basic elements in statistics is very important to ensure that data analysis is carried out correctly and effectively. There were three main components in statistics, namely: 1) Data, 2) Treatment of data, in the form of collection, processing/analysis, interpretation, and drawing conclusions; 3) Numbers (Nasution, 2020, p. 49). In the context of research on the effect of the TPACK model on students' English learning outcomes, statistical analysis was very important to evaluate data obtained from the results of the pre-test and post-test. The application used to process data in this study was SPSS 22 (Statistical Package for the Social Sciences), which allowed researchers to conduct complex statistical analyses and obtain accurate results. By using SPSS 22, researchers compiled and analyzed data effectively, enabling them to draw relevant conclusions regarding the effect of the TPACK model on improving student learning outcomes.

2. Statistics Required for Testing Hypothesis

a. Normality Testing

Normality testing in the study of the impact of the TPACK model on students' English learning outcomes was conducted using SPSS 22 for Windows. The researcher examined the distribution of pre-test and post-test data. The results of this normality test determined whether the data could be analyzed using parametric or non-parametric methods.

b. Homogeneity Testing

The homogeneity test in this study was conducted using SPSS 22 for Windows. The purpose of this test was to ensure that the variance of the pre-test and post-test data groups was the same. By knowing the homogeneity of variance, researchers could choose the appropriate statistical analysis method to test the hypothesis.

c. Testing Hypothesis

Hypothesis testing in this study was analyzed using SPSS 22 for Windows. The purpose of this test was to determine whether there was a significant difference between students' pre-test and post-test results after the implementation of the TPACK model. By using the t-test, researchers evaluated whether the treatment given had a positive impact on improving student learning outcomes.

After the application of TPACK, the average post-test score increased to 83.73, with a range between 75 and 93 and a standard deviation of 4.881. This increase showed that students were more consistent in understanding the material after learning.

The average score increase of 15.32 points from pre-test to post-test reflected the effectiveness of the TPACK model in improving students' understanding, especially in practical contexts such as invitation making. Although the average score showed good progress, the maximum score achieved in the post-test reached 93, indicating that some students managed to achieve excellent understanding. However, there were also students who remained at the bottom of the score distribution, so there were still opportunities for improvement in teaching. In line with this, Rahimi and Yadollahi (2018) mentioned that the use of TPACK in English classes not only improved learning outcomes but also helped students develop practical skills needed in real-life contexts.

Table 02

Descriptive Statistics of Pre-test and Post-test						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre-test	22	21	58	79	68.41	5.746
Valid N (list wise)	22					
Post-test	22	18	75	93	83.73	4.881
Valid N (list wise)	22					

RESULT AND DISCUSSION

A. Result

Based on the analysis of pre-test and post-test data, the application of the TPACK learning model showed a significant impact on student learning outcomes. The average student score on the pre-test was 68.41, with a range of scores between 58 and 79. The standard deviation of 5.746 indicated that the variation in students' scores was relatively small, but there were some students who had difficulty understanding the material before the application of the model.

Overall, the results of this study supported the hypothesis that the TPACK learning model could improve students' learning outcomes in English. The integration of technology in learning encouraged students to be more actively engaged, increased motivation, and enabled them to apply knowledge in real contexts. The findings provided a strong basis for recommending the use of this model in wider education, as well as opening up opportunities for further research to explore other factors that might affect learning outcomes.

Table 03

	Paired Samples Test							
	Paired Differences		Std. Error of the Difference	95% Confidence Interval		t	df	Sig. (2-tailed)
	Mean	Std. Deviation		Lower	Upper			
Pair 1. Pre-test - post-test	-15.318	2.457	.524	-16.408	-14.229	-29.243	21	.000

The paired t-test results displayed in Table 03 showed a significant difference between students' pre-test and post-test scores after the application of the TPACK learning model. The mean difference in scores between the pre-test and post-test was -15.318, indicating that the post-test scores were significantly higher compared to the pre-test scores. The standard deviation of 2.457 indicated that this measurement was consistent among students, with little variation in their score improvement.

The 95% confidence interval for the difference in mean values showed a range between -16.408 and -14.229. Since this interval value did not include zero, it could be concluded that there was a statistically significant difference between the two measurements. With a p-value (Sig. 2-tailed) of 0.000, which was far below the significance level of 0.05, we could strongly reject the null hypothesis that there was no difference between the learning outcomes before and after the application of the TPACK model.

This finding supported the hypothesis that the application of the TPACK model successfully improved students' learning outcomes in English language learning. The significant increase in the average score indicated that students not only understood the content taught but were also able to apply it in a more practical and relevant context. Hidayati, Syam, and Komariyah (2021) asserted that the use of e-learning and platforms such as Zoom could improve learners' learning outcomes, in line with the results of this study, which showed

that technology integration contributed to improving learning effectiveness. This result confirmed the importance of technology integration in education, which could contribute to improving learning effectiveness.

B. Discussion

The results show that the application of the TPACK learning model succeeds in improving student learning outcomes. The average student score before the application of the model (pre-test) is 68.41, while after the application of the model (post-test), the average score increases to 83.73. This increase of 15.32 points shows that students become more familiar with the material taught, especially in making invitations.

The paired t-test also supports this result, where the average difference in scores between the pre-test and post-test is -15.318. This value indicates that after learning, students score higher. With a p-value of 0.000, we can be confident that this improvement is real and not coincidental. This means that the TPACK model is effective in helping students learn English.

There are several reasons why learning outcomes improve. First, the use of technology in learning makes students more active and engaged. Second, the teaching methods used encourage students to work together and discuss, allowing them to understand the material better. Overall, this study shows that the TPACK model not only improves students' academic scores but also provides a better and more relevant learning experience.

CONCLUSION AND SUGGESTION

A. Conclusion

This study aims to evaluate the impact of the TPACK learning model on students' learning outcomes in English language learning. The results of the analysis show that the application of the TPACK model significantly improves

students' learning outcomes, where the average student score increases from 68.41 in the pre-test to 83.73 in the post-test. This improvement reflects that students not only progress in grades but also in their understanding of the material taught.

This finding confirms the importance of integrating technology and interactive pedagogical approaches in learning. By using the TPACK model, students become more engaged and motivated in the learning process. Therefore, it is recommended that teachers apply this model in their teaching to improve learning outcomes, not only in English subjects, but also in various other subjects.

B. Suggestion

After conducting the research, there are several suggestions for the future. First, teachers are advised to continue developing skills in the use of educational technology, especially in the TPACK learning model. By understanding how to integrate technology in accordance with content and pedagogy, teachers can create a more interactive and engaging learning experience for students. It is important for teachers to conduct regular evaluations of the teaching methods applied in order to adjust learning strategies according to students' needs.

Second, students are expected to actively take part in the learning process by utilizing available technology. Using e-learning platforms and learning apps can help students to understand the material more deeply and practically. In addition, collaborating with classmates on projects and assignments can enrich the learning experience. By increasing engagement in technology-based learning activities, students will not only improve their academic learning outcomes, but also develop the necessary skills to face challenges in the real world.

Finally, for future research, researchers are advised to explore various other factors that may

affect student learning outcomes, such as educational background, motivation, and learning style. Identifying these factors will provide a deeper understanding of how the TPACK model can be effectively applied in various contexts. Research involving more students from different schools can also provide a more comprehensive picture of the effectiveness of this model, thus creating a more holistic and effective learning environment.

In addition, further research can be conducted to evaluate the application of the TPACK model in different learning contexts, such as at higher education levels or in other subjects. By considering variations in different learning environments and educational policies, this research can help explore the challenges faced and strategies that can be adopted to improve overall student learning outcomes.

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