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The Influence of Project-Based Learning and Recitation Model on Pre-Service Islamic Religious Education Teachers' Ability to Develop Teaching Modules

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Abstract

Curriculum development affects teachers' abilities to develop teaching modules as part of lesson planning, including those of students as pre-service teachers. Therefore, innovative efforts are needed to realize these abilities. This study aims to analyze students' ability to develop teaching modules using Project-Based Learning (PjBL) and recitation models. The study employs a non-experimental quantitative correlational method to identify and describe data related to the research variables. A total sampling technique was used to obtain 40 respondents. The obtained data were analyzed using descriptive statistics, normality tests, and ANOVA. The results determined that students' average ability to develop teaching modules was 60.35, with a standard deviation of 7.614. The normality test showed that the data were normally distributed, with a skewness value of 0.020 and kurtosis of -0.775. ANOVA produced a significance value of <0.001, indicating that PjBL and recitation have a significant effect on students' ability to develop teaching modules. The coefficient of determination (R-square) was 0.439; this was the result of squaring the correlation coefficient (R), which was 0.662 × 0.662 = 0.439. The coefficient of determination represented 43.9% of the variation in the independent variable. The two independent variables' combined contribution to the dependent variable was 43.9%; the remaining 56.1% was influenced by other factors.

Keywords: *Teaching Modules; Project; Based Learning; Recitation*

Abstrak

Pengembangan kurikulum mempengaruhi kemampuan guru dalam mengembangkan modul pengajaran sebagai bagian dari perencanaan pembelajaran, termasuk mahasiswa sebagai calon guru. Oleh karena itu, diperlukan upaya inovatif untuk mewujudkan kemampuan tersebut. Penelitian ini bertujuan untuk menganalisis kemampuan mahasiswa dalam mengembangkan modul ajar dengan menggunakan model Project-Based Learning (PjBL) dan resitasi. Penelitian ini menggunakan metode korelasional kuantitatif non-eksperimental untuk mengidentifikasi dan mendeskripsikan data yang berkaitan dengan variabel penelitian. Teknik pengambilan sampel total sampling digunakan untuk mendapatkan 40 responden. Data yang diperoleh dianalisis dengan menggunakan statistik deskriptif, uji normalitas, dan ANOVA. Hasil penelitian menunjukkan bahwa rata-rata kemampuan mahasiswa dalam mengembangkan modul ajar

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adalah 60,35, dengan standar deviasi 7,614. Uji normalitas menunjukkan bahwa data terdistribusi secara normal, dengan nilai skewness sebesar 0,020 dan kurtosis sebesar -0,775. ANOVA menghasilkan nilai signifikansi <0,001, yang menunjukkan bahwa PjBL dan resitasi memiliki pengaruh yang signifikan terhadap kemampuan mahasiswa dalam mengembangkan modul ajar. Koefisien determinasi (R-square) adalah 0,439; ini merupakan hasil dari pengkuadratan koefisien korelasi (R), yaitu 0,662 × 0,662 = 0,439. Koefisien determinasi mewakili 43,9% dari variasi variabel independen. Kontribusi gabungan kedua variabel independen terhadap variabel dependen adalah 43,9%, sedangkan sisanya sebesar 56,1% dipengaruhi oleh faktor lain.

Kata kunci: Modul Ajar; Proyek; Pembelajaran Berbasis Proyek; Hafalan.

I. Introduction

Developing or changing a curriculum certainly impacts how teachers develop lesson plans. It is hoped that the Merdeka Curriculum will bring innovation to education in Indonesia. The current digital revolution has transformed the way we access, disseminate, and consume knowledge. This ultimately requires schools to integrate technology into learning (Thoyib et al., 2024). Technological developments greatly benefit teaching and education (Onele & Ogbuanya, 2025) by enabling teachers to continuously improve their skills, thereby enhancing learning quality, which is essential for developing and advancing a nation (Umar & Ko, 2022). To achieve this, teachers must be competent in using technology to plan learning.

Proper learning planning is essential; otherwise, the delivery of material to students will be unstructured, leading to an imbalance in interactions (Salwihas & Jannah, 2024). Teachers must design learning activities that are appropriate for the level and abilities of students. This includes incorporating teaching modules into the Merdeka curriculum (Pradnyana & Amanda, 2023). Developing these modules is a pedagogical competency that educators must possess because realizing students' abilities in the 21st century begins with modules developed by teachers (Nesri & Kristanto, 2020). These modules are key to facilitating teachers' learning design (Pepin et al., 2017). Several difficulties are encountered when designing teaching modules, including determining objectives, models, learning steps, media references, and assessments (Amelia, 2024). Another problem is that only 25% of teachers understood the components and teaching modules. 25% percent understood the components but not the teaching modules, while 45% did not understand either the components or the teaching modules. (Taufiq et al., 2023).

Pre-service teachers need to be equipped with a variety of knowledge in order to effectively plan their lessons. One way to achieve this is by taking the Islamic Religious Education Learning System Planning course. Learning how to plan is an integral part of implementing a lesson plan. Teachers must prepare annual programs, semester programs, and teaching modules before beginning the learning process to use as references and guidelines for implementation (Miatun et al., 2024). Project-based learning is a model that can help students develop their ability to design lesson plans.

This model focuses on a project as the core activity to generate good results (Pohan & Sembiring, 2024). Project-based learning models generate creative ideas and foster critical thinking, independence, and contextual learning (Rodiyah et al., 2021). In this process, students identify questions, problems, or topics, and then strive to build the knowledge and skills necessary to create a product (Sefton et al., 2020).

Recently, project-based learning (PjBL) has emerged as a promising approach in higher education because it improves learning outcomes (Batubara et al., 2023). The PjBL model is widely recognized in higher education as a way to meet student needs (Nugraha et al., 2024). These needs include communication, collaboration, critical thinking, creativity, and problem-solving (Pramudita et al., 2021). One challenge that prospective Islamic Religious Education teachers must address is developing teaching modules.

According to Hendro Widodo et al., critical, creative, and innovative thinking skills can be developed through project-based learning, thus promoting 21st-century learning skills (Widodo et al., 2024). This model plays a strategic role in developing individuals with high capabilities and various abilities, such as analysis, problem-solving, and innovative thinking. Thus, it empowers them to compete in a wider environment (Alpindo et al., 2024). Additionally, Hossein's research suggests that learning projects can positively influence learning outcomes (Hossein-Mohand et al., 2021).

In addition to this learning model, recitation is implemented as a lecture method designed to develop students' ability to create lesson plans and teaching modules. Recitation is an assignment completed by educators (Rizqi et al., 2022). Recitation is an off-schedule lecture format that provides feedback to individuals (Auna Hidayati & Taqwa, 2023). This method is appropriate for higher education because it makes students more active learners, shifting the focus away from the lecturer (Ali Ma'sum dan Endin Mujahidin, 2024). Auna et al.'s research shows that recitation improves student understanding by an average of 96.6% (Auna Hidayati & Taqwa, 2023). In the research of Husaini et al., using the recitation method improved student learning outcomes from 28% in the initial observation to 64% in cycle one and 88% in cycle two (Tonaiyo et al., 2020).

These two learning concepts are implemented in the lecture process of the Islamic Religious Education (PAI) Study Program in the Islamic Religious Education Learning System Planning course. This project-based learning model is well-suited to students because it allows them to create products appropriate to the real world (Romadhon et al., 2023), such as teaching modules that serve as a main tool for teachers in the learning process. Meanwhile, recitation is a learning method that enables students to complete learning assignments well and utilize their free time effectively (LUBIS, 2019). According to Hani Hadiati Pujawardani et al., this recitation method can significantly increase student motivation (Pujiwardani & Hervina, 2022). It is hoped that, with this recitation

method, students will be motivated enough to compile teaching modules as part of the learning tools that teachers must prepare.

No research has been found on the combination of project-based learning models and recitation, and their impact on the ability to develop lesson plans or teaching modules. Based on a literature review, the author identified several studies that address one of the research variables, for instance, Romadhan et al. who examined the impact of the project-based learning model on critical thinking skills in prospective elementary school teachers (Romadhon et al., 2023). Another study, entitled "Project-Based Learning (PjBL) Learning Model in Science Learning: Literature Review" (Nurhidayah et al., 2021). Another study is entitled "Project-Based Learning (PjBL) Learning Model in Science Learning: Literature Review" (Nurhidayah et al., 2021). Another study examined the effectiveness of project-based learning integrated STEM-PjBL in physics education (Roslina et al., 2022). Another study examined the effect of the recitation method on student learning motivation in Islamic religious education subjects for class X at SMKN 14 Bandung (Pujiwardani & Hervina, 2022).

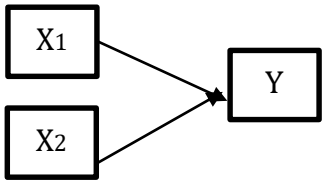
Based on the above problems and literature review, no research has been found that focuses on the ability to compile teaching modules as teacher learning tools. This research is novel in its innovative combination of the PjBL and recitation models to develop the ability of prospective Islamic religious education teachers to compile teaching modules. The PjBL model is often used to solve complex, real-world problems, and recitation is often used to strengthen memory. These two models are combined to develop students' ability to compile teaching modules as pre-service teachers. Therefore, the author aims to examine how students' abilities to compile teaching modules are impacted by the implementation of project-based learning and recitation. The study aims to explore the impact of the PjBL and recitation models on students' ability to compile teaching modules.

This research aims to address the needs and challenges of the educational world by enabling prospective Islamic Religious Education teachers to develop lesson plans and teaching modules. After their professional careers, they will be able to create engaging learning experiences that meet expectations. Theoretically, the research findings provide practical recommendations for developing learning models and can serve as a resource for educators in other instructional courses when designing and developing effective learning strategies. Furthermore, this research can enrich the discourse on learning innovation in higher education by shaping and developing the competencies of future teachers through effective, participatory, and collaborative approaches).

II. Research Methods

This type of research is non-experimental quantitative. It is a study that does not conduct trials or experiments. This study attempts to describe, analyze, and present facts based on research variables. This study uses a correlational design to measure the

relationship between the research variables (Kholidah, Hidayat, Jamaludin, Leksono & ISSN, 2023). The causal relationship between two independent variables—Project Based Learning and Recitation—is related to one dependent variable: the ability to compile student teaching modules. In addition to testing this relationship, the study examined the extent to which the two independent variables influence this ability simultaneously in the Islamic Religious Education Learning System Planning course. Through this design, researchers can provide in-depth information about each independent variable's contribution to the ability to compile student teaching modules for prospective Islamic Religious Education teachers. The research variables are shown in the following figure.



X_1 : Project-based learning

X_2 : Recitation

Y : Ability to compile teaching modules

Figure 1. Research Design

This research focuses on students in the Islamic Religious Education Study Program at the State Islamic Institute (abbreviated as IAIN in Indonesian) of Curup who are currently taking the Islamic religious education learning system planning course. This study uses total sampling, selecting classes 4F and 4G, for a total of 40 participants. This method was chosen because the entire population had characteristics relevant to the research focus who were taking the lecture course. This method can produce valid and representative data according to the needs analysis.

Table 1. Research Population and Sample

Class	Total
PAI 4 F	19
PAI 4 G	21
Total Sample	40

Source: List of Classes

Research data were collected through a closed questionnaire with a Likert scale. The research instrument was developed based on the indicators of each variable. Seven indicators were used for the project-based learning variable: basic questions, designing a project plan for a specified problem, preparing a project schedule, implementing the project, monitoring project progress, assessing project results, and evaluating activities. For the recitation variable, three indicators were used: giving assignments, carrying out assignments, and being accountable for assignments. For the ability to compile teaching modules, five indicators were used: analyzing the characteristics of students, teachers, and educational units; describing the dimensions of the "Pancasila Student Profile";

explaining the learning target procedure; designing teaching modules based on existing aspects; implementing teaching and learning activities; and conducting evaluations and follow-ups.

Table 2. PjBL indicators, recitation, and the ability to compile teaching modules.

PjBL	Recitation	Ability to compile teaching modules	Measurement Scale
Asking basic question	Assigning task	Analyzing the characteristics of students, teachers, and educational units.	Likert Scale 1-5
Designing a project plan for the specified problem.	Execution of tasks	Outlining the "Profile of Pancasila Students"	Likert Scale 1-5
Developing a project schedule	Report of Accountability	Explaining the target or *ATP* procedure.	Likert Scale 1-5
Implementing projects		Designing teaching modules according to existing aspects.	Likert Scale 1-5
Monitoring project progress		Carrying out learning activities	Likert Scale 1-5
Assessing project results		Conducting evaluation and follow-up	Likert Scale 1-5
Evaluating activities			Likert Scale 1-5

Source: PjBL Theory, Recitation, and Compilation of Teaching Modules

The developed instrument was tested for validity and reliability with a group of students outside the research sample. Pearson Product Moment Correlation was used to analyze the validity of the test items and Cronbach's Alpha Coefficient was used to assess their reliability. If the correlation value is above the r value in the table at a 5% significance level, the instrument is considered valid. If the alpha value is greater than or equal to 0.7, the instrument is considered reliable (Limberg et al., 2021).

After the validation test, a reliability test was conducted using the Cronbach's alpha formula to determine the consistency of the measurement results. The instrument can be used repeatedly if the value is ≥ 0.70. The results of the test using SPSS 26 are shown in the table below:

Table 3. Reliability Test Results

Variable	Cronbach Alpha	Criterion
Project-based learning	0.920	Reliable
Recitation	0.860	Reliable
Compiling teaching moduls	0,880	Reliable

Data Source: Test results using SPSS 26

The collected data were analyzed using multiple linear regression with SPSS version 26. This analysis measured the simultaneous contributions of project-based learning and recitation to developing teaching modules. The analysis results are displayed in tables and graphs to facilitate interpretation based on statistical significance and the strength of the relationship between variables (Sullivan, 2024). Using a systematic and structured methodological approach, this study contributes to the development of more reflective,

participatory, and effective learning strategies so that prospective Islamic Religious Education teachers can develop teaching modules in the future.

III. Result and Discussion

Designing teaching modules that students will complete after taking the Islamic Religious Education Learning System Planning course is part of the learning planning process. Lectures that focus on project-based activities and assignments are a familiar 21st-century learning model because they can develop students' critical thinking, creativity, problem-solving, collaboration, communication, and independence skills. Additionally, recitation is a method used during lectures to help students understand the course material.

This study aims to explain the relationship between project-based learning and recitation and its influence on students' ability to develop teaching modules in the Islamic Religious Education learning system planning course. The study sample consisted of 40 students from two classes, selected through total sampling. Data were collected using a closed-ended questionnaire with a five-point Likert scale that had been tested for validity and reliability. The results of the data analysis are presented below:

A. Descriptive Statistical Test of Research Variable

Descriptive statistical analysis is the initial step in processing data, aiming to describe its basic characteristics. This analysis summarizes information using statistical measures such as mean, median, mode, standard deviation, variance, minimum, and maximum values (Ab Rahman, 2021). The main goal of this analysis is to represent the distribution model, central tendency, scattered data observations, and preliminary stages of inferential analysis comprehensively (Sciberras & Dingli, 2023).

Descriptive statistics is a method by which researchers can gain an understanding of real data, identify potential outliers, and evaluate whether the data aligns with statistical assumptions (Velec & Huang, 2014). This information is important for developing further approaches to data analysis and selecting the best statistical methods for hypothesis testing.

Table 4. Descriptive Statistical Test

Descriptive Statistics

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosis Std. Error
Ability to plan learning	40	44	73	60.35	7.614	.020	.374	-.775	.733
Valid N (listwise)	40								

Based on data from 40 respondents, information was obtained regarding students' ability to compile modules. Specifically, 44 minimum and 73 maximum scores were

achieved. The average score was 60.35, with a standard deviation of 7.614. These values illustrate a moderate tendency for focus and distribution of respondent data to vary among students.

The next step was to assess whether the data were normally distributed based on an analysis of the Skewness and Kurtosis values. The Skewness value analysis measures the degree of asymmetry of the data, while the Kurtosis analysis describes the level of sharpness of the distribution compared to a normal distribution (Velec & Huang, 2014). From a statistical analysis perspective, the data distribution is considered normal if the skewness value is 0.020 and the kurtosis value is -0.775. The skewness and kurtosis values are still within acceptable limits for assuming normality. Therefore, it can be concluded that the students' ability to compile teaching modules is distributed close to normal and worthy of further analysis through parametric statistical testing.

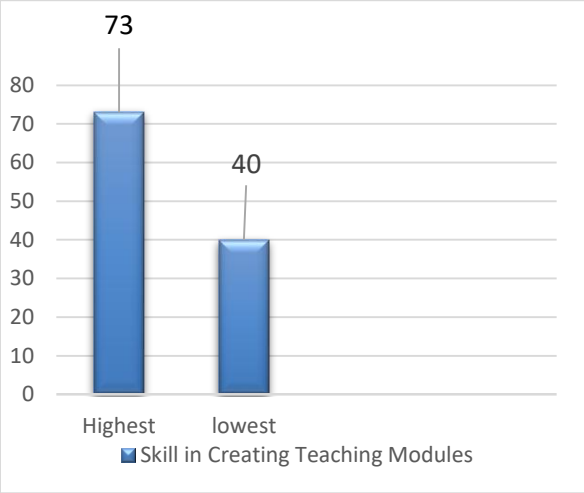


Figure 2. Students' Ability to Develop Teaching Modules

B. Test of Normality Variables X1 (PjBL) and Y (Skills in Preparing Teaching Modules)

Data collected from a population can be considered normally distributed if a normality test has been performed. This test is crucial because parametric statistical testing assumes normality to ensure the analysis's validity and scientific acceptance of its interpretation (Slater & Hasson, 2025). Once the data distribution is close to normal, the researcher proceeds to the next stage of analysis, taking into account the basic statistical assumptions.

To ensure the accuracy and consistency of the obtained results, it is necessary to meet the normality assumption. Therefore, improving the validity of the conclusions is essential. In quantitative research, normality testing is essential for data analysis procedures that use parametric statistics (Velec & Huang, 2014).

Table 5. PjBL Normality Test and Skills for Developing Teaching Modules

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			40
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		6.50812926
Most Extreme Differences	Absolute		.061
	Positive		.059
	Negative		-.061
Test Statistic			.061
Asymp. Sig. (2-tailed)[c]			.200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		.970
	99% Confidence Interval	Lower Bound	.966
		Upper Bound	.974

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Based on the results displayed in Table 5 above, the Asymp**.** Sig. (2-tailed) value was found to be 0.200. Since 0.200 is greater than the commonly applied significance limit of 0.05, it can be concluded that the data has a normal distribution.

These results indicate that the Kolmogorov-Smirnov normality test meets the criteria for normal distribution when project-based learning is variable X1 and Skills in Developing Teaching Modules is variable Y. Since normality is assumed, the basic requirements for using a parametric regression model are met. Thus, the estimates obtained from the regression model are valid, reliable, and interpretable from a research perspective.

C. Test of Normality Variables X2 (Recitation) and Y (Ability to Compile Teaching Modules)

Table 6. Normality Test for Recitation and Teaching Module Development Skills

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			40
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		5.86287228
Most Extreme Differences	Absolute		.085
	Positive		.063
	Negative		-.085
Test Statistic			.085
Asymp. Sig. (2-tailed)[c]			.200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		.649
	99% Confidence Interval	Lower Bound	.637
		Upper Bound	.662

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 299883525.

Refer to Table 6 above, the significance value of Asymp. Sig (2-tailed) is 0.200. Since this value is greater than the significance level of 0.05, it can be concluded that the data are normally distributed. In other words, the Kolmogorov-Smirnov normality test shows that the distribution of recitation as the X2 variable and the ability to compile teaching modules as the Y variable meets the assumption of normality.

Thus, the basic assumptions required for regression analysis, especially normality of data distribution, have been met. Meeting these assumptions is crucial for ensuring the validity of the estimation results and interpretation of the regression model used in the study.

D. Homogeneity Test

The purpose of the homogeneity test is to determine if the data being compared is uniform. This test plays an important role in determining the feasibility of using parametric statistical analysis techniques because it requires equality of variance as one

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			40
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		5.86287228
Most Extreme Differences	Absolute		.085
	Positive		.063
	Negative		-.085
Test Statistic			.085
Asymp. Sig. (2-tailed)[c]			.200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		.649
	99% Confidence Interval	Lower Bound	.637
		Upper Bound	.662

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

of its main prerequisites (Clarke & Collier, 2015). Once each variance is homogeneous, the next step is to perform an analysis with a high level of consistency or reliability.

The groups being compared are the responses from Classes 4F and 4G. Ensuring the homogeneity of variance assumption is met between these two groups is key to valid and accurate statistical conclusions, especially those concerning variances. The homogeneity test is a crucial step in validating all research results.

Table 7. Group Homogeneity Test

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Ability to compile moduls	Based on Mean	.190	1	38	.665
	Based on Median	.189	1	38	.666
	Based on Median and with adjusted df	.189	1	37.234	.666
	Based on trimmed mean	.184	1	38	.670

As shown in the table above, the significant value for the variable of skills in compiling teaching modules for local students F and G is 0.665. Based on these data, the results of the hegemony test indicate that the variance data from the above class is not significant because the significant value (Sig.) of 0.665 is greater than the threshold value of 0.05. Therefore, the variance of skills in compiling teaching modules between local students F and G is considered uniform or homogeneous.

Based on the output results listed in Table 8, a significance value of 0.665 was obtained for the module preparation skill variable among students in classes F and G. Since the significance value is greater than the 0.05 threshold, according to the homogeneity test rules, it can be concluded that the variance data from these classes is not significantly different. Therefore, the variance of module preparation skills between classes F and G is homogeneous. These results support the homogeneity assumption required for parametric statistical tests in comparative group analyses.

E. Multiple Linear Regression Test

If there is simultaneous influence or relationship between two independent variables (project-based learning as variable X1 and recitation as variable X2) on one dependent variable (the ability to compile teaching modules as variable Y) within a linear model framework, then a multiple linear regression test is carried out. This analysis aims to determine the extent to which the independent variables influence the variability of the dependent variable and to explain any causal correlations between the variables (Watson, 2015).

This test yields regression coefficients representing the direction and strength of influence of an independent variable on a dependent variable, as well as statistically significant values. Multiple linear regression is an important analytical tool for predicting the value of the dependent variable based on a combination of existing independent variables. This provides a more comprehensive understanding of the relationship between the variables within the context of the research.

Table 8. Multiple Linear Regression Analysis

ANOVA[a]

Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	992.405	2	496.203	14.471	<,001[b]
	Residual	1268.695	37	34.289		
	Total	2261.100	39			

Based on the ANOVA output in the above table, the significance value (Sig.) for the F test is less than 0.001. Since this value is smaller than the 0.05 significance threshold, according to the criteria for interpreting F-test results, the variables X1 (project-based learning) and X2 (recitation) have a significant influence on Module Compiling Skills (Y). This means that the variables X1 and X2 have a real influence on explaining variations in the dependent variable. These results also indicate that the coefficient of determination value for the multiple linear regression model has been met. This indicates that the model is suitable for predictive and inferential analyses in this study's context.

Table 9. Determination Coefficient Value

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.662[a]	.439	.409	5.856

a. Predictors: (Constant), RECITATION (X2), PjBL (X1)

b. Dependent Variable: Ability to compile teaching moduls (Y)

Based on the results in Table 9, the coefficient of determination (R^2) was found to be 0.439. This value is the square of the correlation coefficient (R), which is 0.662^2. The R-squared value represents 43.9% of the variance in the Y variable (i.e., the skill of compiling teaching modules) that can be simultaneously explained by two independent variables: X1 (Project Based Learning) and X2 (Recitation). Thus, the combined contribution of these two independent variables to the dependent variable is 43.9%. The remaining 56.1% (100%-43.9%) comes from other elements of the regression model, i.e., elements not included in this area of research.

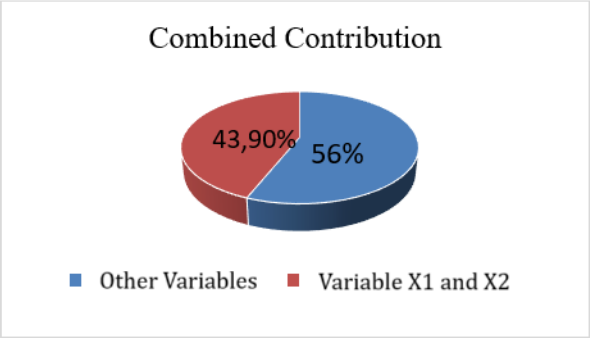


Figure 3. Combined Contribution

Table 10. Multiple Linear Regression Equation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.505	10.792		.232	.818
	PjBL (X1)	271	.187	.220	1.448	.156
	RECITATION (X2)	1.164	.348	.509	3.343	.002

a. Dependent Variable: ABILITY TO COMPILE TEACHING MODUL (Y)

Table 10 shows the regression equation and whether variables X1 (PjBL) and X2 (Recitation) influence variable Y (ability to compile teaching modules) separately (partially). The formula is as follows:

Y = a+b1x1+b2x2 atau Y = 2,505 + 0,271 + 1,164

The research results revealed that project-based learning and recitation significantly influenced students' ability to compile teaching modules simultaneously. This indicates that both independent variables clearly and tangibly contribute to the dependent variable. This finding aligns with constructivist learning theory, which posits that students, as subjects in this project-based learning model, can construct knowledge from their experiences. Empirically, this project-based learning model can also create meaningful experiences (C. Chiang,. et al., 2016). Embodying knowledge in meaningful experiences is a characteristic of contextual learning. Students not only obtain knowledge from the teacher but also from themselves through their experiences, which is the essence of collaboration (Mazrur, 2023). Project-based learning improves collaboration skills because it involves working in groups and establishing communication channels (Priatna et al., 2017). This is a key characteristic of the project-based learning model: students conduct collaborative group investigations to solve problems and form relationships between their original ideas to develop new skills (Zhou & Li, 2022).

Essentially, the project-based learning model provides a significant opportunity for students to express their ideas, listen to others, and ultimately solve problems.

Furthermore, students' critical thinking and creativity improved after using this project-based learning model. This learning model aims to foster critical thinking skills by encouraging students to develop a deeper understanding of a subject (Alpindo et al., 2024). Research by Ummu Kultsum et al. also demonstrated that project-based learning significantly impacts learning discipline and provides motivation for problem-solving. (Kultsum et al., 2022).

Based on the data, recitation, a method used by lecturers in the learning process, significantly influences students' ability to compile teaching modules, with a significant Asymp., Sig (2-tailed) = 0.200, which is greater than the significant value of 0.05. Recitation is a development and application of projects carried out by students. Although project-based learning and recitation are two different approaches, they have the potential to complement each other in the learning process. Project-based learning emphasizes meaningful, practical learning experiences through project completion. Recitation helps students master material and apply it (Wibowo & Hermawan, 2014). Integrating these two approaches into the learning process helps students maximize their potential. When students encounter obstacles while working on a project, they can address them through recitation activities, either individually or in groups. Similarly, when students encounter obstacles in completing assignments or recitations, they can collaborate to resolve them, ultimately enabling them to develop effective and accurate teaching modules.

Although project-based and recitation learning models positively contribute to student competency in developing teaching modules, several challenges must be overcome in their implementation. Among these challenges are: First, students have different abilities to understand learning outcomes and break them down into learning objectives and learning objective flow. This difference certainly has implications for determining class levels in certain phases. Second, the PAI learning system planning course requires the comprehensive design of various learning tools, such as mapping learning outcomes, learning objectives, and learning objective flow; preparing annual and semester programs; determining effective learning weeks; designing learning instruments and models; and compiling student worksheets. All of these tasks require time, energy, and thought. Consequently, the opportunity to maximize the learning tool design process is limited.

IV. Conclusion

Based on the results of this study, the calculated F-test result was 14,471, with a significance level of 0.001 ($p < 0.05$). This indicates that project-based learning and recitation have a significant simultaneous effect on the ability of Islamic Religious

Education students to compile teaching modules. Thus, students' ability to plan learning through the compilation of teaching modules can be developed through project-based learning and the recitation method. The recitation method is applicative and develops projects carried out by students, so it has a significant impact on students' ability to plan learning.

Students' ability to plan their learning by compiling teaching modules through project-based learning and recitation can solve today's teachers' problems with module compilation and will certainly contribute to educational institutions once the students become teachers. This research has several implications. For lecturers and educational institutions, it is recommended that these two models be used in an integrated manner because doing so can significantly improve students' ability to compile teaching modules. For students who are prospective Islamic Religious Education teachers, this research strengthens their awareness of the importance of developing critical thinking skills, creativity, and the ability to apply knowledge by designing effective teaching materials through real projects.

The research was limited to 40 fourth-semester students enrolled in the Islamic Religious Education Learning System Planning course. The material and skills studied related to learning planning, specifically the development of Islamic Religious Education teaching modules. For future research, the researcher recommends combining the project-based learning (PjBL) model with other models or approaches and adding variations, such as incorporating feedback or developing information technology–based teaching modules.

Bibliography

Ab Rahman, J. (2021)... Quantitative Methods in Global Health Research. In Handbook of Global Health: With 362 Figures and 152 Tables (pp. 191–212). https://doi.org/10.1007/978-3-030-45009-0_9..

Ali Ma'sum dan Endin Mujahidin. (2024). Metode resitasi berbasis teknologi dalam pembelajaran Al-Qur ' an di perguruan tinggi. 13(5), 376–387. https://doi.org/10.32832/tadibuna.v13i4.18018

Alpindo, O., Istiyono, E., ..Widihastuti, & Andriyanti, E. (2024). Can Critical-thinking Skills be Measured by Analyzing Metacognition? Journal of Teaching and Learning, 18(2), 194–211. https://doi.org/10.22329/JTL.V18I2.8813..

Amelia, E. (2024)... Analisis Kesulitan Guru di Sekolah Dasar dalam Menyusun Modul Ajar Kurikulum Merdeka. BASICA Journal of Arts and Science in Primary Education, 3(2), 199–212. https://doi.org/10.37680/basica.v3i2.4597..

Auna Hidayati, R., & Taqwa, M. R. A. (2023)...Computer Based Recitation Program Development With Feed Back in Newton's Law Topic. International Journal of Education and Teaching Zone, 2(1), 113–129. https://doi.org/10.57092/ijetz.v2i1.49..

Batubara, I. A., Musthafa, B., & Gunawan, W. (2023)...Implementation of Project-Based Learning in Teaching Writing: Key Concepts and Stages. IJEE (Indonesian Journal of English Education), 10(2), 301–322. https://doi.org/10.15408/ijee.v10i2.32452..

Chiang, C. L., & Lee, H. (2016). The Effect of Project-Based Learning on Learning Motivation and Problem-Solving Ability of Vocational High School Students. International Journal of Information and Education Technology, 6(9), 709–712. https://doi.org/10.7763/ijiet.2016.v6.779

Hossein-Mohand, H., Trujillo-Torres, J. M., Gómez-García, M., Hossein-Mohand, H., & Campos-Soto, A. (2021). Analysis of the use and integration of the flipped learning model, project-based learning, and gamification methodologies by secondary school mathematics teachers. Sustainability (Switzerland), 13(5), 1–18. https://doi.org/10.3390/su13052606

Kholidah, Hidayat, Jamaludin, Leksono, 4Universitas Sultan Ageng Tirtayasa 2023.KAJIAN ETNOSAINS DALAM PEMBELAJARAN IPA UNTUK MENUMBUHKAN NILAI KEARIFAN LOKAL DAN KARAKTER SISWA SD CHANOS CHANOS).MELALUI SATE BANDENG. Jurnal Ilmiah Pendidikan Dasar, & ISSN. (2023). 細川康二 ＊1, 2 菊谷知也 ＊3 小畑友里江 ＊4. Jurnal Pendidikan Dasar Dan Sosial Humaniora, 43(4), 342–346.

Kultsum, U., Defianty, M., & Nadrah, N. (2022). The Application of Project-Based Learning (PBL) in Teaching English for Specific Purposes (ESP) in Higher Education in Indonesia. TARBIYA: Journal of Education in Muslim Society, 8(2), 155–166. https://doi.org/10.15408/tjems.v8i2.25043

LUBIS, M. (2019). Penerapan Metode Resitasi Dan Drill Dalam Meningkatkan Aktivitas Pembelajaran Psikologi Pendidikan Pada Mahasiswa Pendidikan Ekonomi Universitas Pamulang. Pekobis : Jurnal Pendidikan, Ekonomi, Dan Bisnis, 4(1), 35. https://doi.org/10.32493/pekobis.v4i1.p35-43.2770

Mazrur. (2023). Inovasi Pembelajaran PAI Berbasis IT (Surawan (ed.); Pertama). K. Media.

Miatun, A., Khusna, H., Ulfah, S., & Siswanto, R. D. (2024). Workshop penyusunan modul ajar pada kurikulum merdeka pada guru sekolah menengah pertama. BERDAYA: Jurnal Pendidikan Dan Pengabdian Kepada Masyarakat, 6(2), 211–220. https://doi.org/10.36407/berdaya.v6i2.1283

Nesri, F. D. P., & Kristanto, Y. D. (2020)... Pengembangan Modul Ajar Berbantuan Teknologi untuk Mengembangkan Kecakapan Abad 21 Siswa. AKSIOMA: Jurnal Program Studi Pendidikan Matematika, 9(3), 480. https://doi.org/10.24127/ajpm.v9i3.2925..

Nugraha, T. C., Abdel Rahim, E. S. E. S. A., & Lukman, F. (2024). Integrating Problem-Based and Flipped Learning in Islamic Religious Education: a Pathway To Achieving Sustainable Development Goals. Jurnal Pendidikan Islam, 10(1), 125–136. https://doi.org/10.15575/jpi.v10i1.35204

Nurhidayah, I. J., Wibowo, F. C., & Astra, I. M. (2021). Project Based Learning (PjBL) learning model in science learning: Literature review. Journal of Physics: Conference Series, 2019(1). https://doi.org/10.1088/1742-6596/2019/1/012043

Onele, N. O., & Ogbuanya, T. C. (2025)... The Effect of Gender and Teaching Methods on Academic Success in Virtual Reality to Reduce Gender Disparity in Technology...

Journal of Teaching and Learning, 19(2), 5–23. https://doi.org/10.22329/jtl.v19i2.8841

Pepin, B., Choppin, J., Ruthven, K., & Sinclair, N. (2017)... Digital curriculum resources in mathematics education:.. foundations for change. ZDM - Mathematics Education, 49(5), 645–661. https://doi.org/10.1007/s11858-017-0879-z..

Pohan, J. E., & Sembiring, Y. B. (2024). "Pengaruh Model Pembelajaran Project Based Learning Terhadap Keterampilan Menulis Teks Cerita Pendek Pada Siswa." 10(3), 1008–1014.

Pradnyana, P., & Amanda, S. (2023). Analisis Peran Dan Upaya Guru Dalam Mengatasi PermasalahanBelajar Siswa Kelas Ii Sdn 1 Sulahan Tahun 2023. Dharmas Education Journal, 4(2), 961–971. http://ejournal.undhari.ac.id/index.php/de_journal

Pramudita, I. F. E., Praherdhiono, H., & Adi, E. P. (2021). Studi Keterampilan Abad 21 Mahasiswa Dalam Memilih Peminatan. JKTP: Jurnal Kajian Teknologi Pendidikan, 4(3), 251–259. https://doi.org/10.17977/um038v4i32021p251

Priatna, I. K., Putrama, I. M., & Divayana, D. G. H. (2017)... "Pengembangan E-Modul Berbasis Model Pembelajaran Project Based Learning Pada Mata Pelajaran Videografi untuk Siswa Kelas X Desain Komunikasi Visual di SMK Negeri 1 Sukasada"... Jurnal Nasional Pendidikan Teknik Informatika (JANAPATI), 6(1), 70. https://doi.org/10.23887/janapati.v6i1.9931

Pujiwardani, H. H., & Hervina, E. (2022). Pengaruh Metode Resitasi Terhadap Motivasi Belajar. 4(3), 40–55.

Rismawanda, H., & Mustika, D. (2024)... "Kemampuan Guru dalam Menyusun Modul Ajar pada Kurikulum Merdeka di Sekolah Dasar"... Aulad: Journal on Early Childhood, 7(1), 32–42. https://doi.org/10.31004/aulad.v7i1.575

Rizqi, H. Y., Hawa, A. M., & Putra, L. V. (2022). Systematic Literature Review : Penerapan Metode Resitasi Berpendekatan Open-Ended Dalam Meningkatkan Hasil Belajar Dan Kemampuan Komunikasi Matematis. Jurnal of Primarary and Children's Education, 5(1), 10–18. http://jurnal.unw.ac.id/index.php/janacitta

Rodiyah, H., Abdullah, A., & ... (2021)... "Pengaruh Model Pembelajaran PjBL (Project Basedlearning) Terhadap Kreativitas Siswa Pada Tema 8 Kelas V"... Jurnal DIDIKA …, 7(2), 347–357. http://e-journal.hamzanwadi.ac.id/index.php/didika/article/view/4941

Romadhon, K., Yuliawati, F., Fatonah, S., Nurjanna, U. A., Jannati, P., & Iskandar, R. (2023). Model Project Based Learning dan Dampaknya terhadap Kemampuan Berpikir Kritis Mahasiswa sebagai Calon Guru Madrasah Ibtidaiyah. Jurnal Imiah Pendidikan Dan Pembelajaran, 7(3), 483–492. https://doi.org/10.23887/jipp.v7i3.62361

Roslina, R., Samsudin, A., & Liliawati, W. (2022). Effectiveness of Project Based Learning Integrated STEM in Physics Education (STEM-PJBL): Systematic Literature Review (SLR). Phenomenon : Jurnal Pendidikan MIPA, 12(1), 120–139. https://doi.org/10.21580/phen.2022.12.1.11722

Salwihas, U., & Jannah, I. (2024). Analisis Kompetensi Profesional Guru Dalam Menyusun Modul Ajar di SD Negeri 15 Banda Aceh. 12(2), 122–129.

Sefton, T., Smith, K., & Tousignant, W. (2020)..." Integrating Multiliteracies for Preservice Teachers Using Project-Based Learning"... Journal of Teaching and Learning, 14(2), 18–32. https://doi.org/10.22329/jtl.v14i2.6320

Taufiq, Andang, & Imansyah, M. N. (2023). ANALISIS KESULITAN GURU DALAM MENYUSUN MODUL AJAR BERBASIS Kurikulum Merdeka : : Pelaksanaan kurikulum merdeka di sekolah memiliki keterkaitan erat dengan kemampuan guru dalam menyusun modul ajar . Guru diharuskan memiliki keterampilan untuk menyusun modu. Jurnal Pendidikan Dan Media Pembelajaran (JUNDKIMA), 02(03), 48–54.

Thoyib, M., Ngoh, B., Badrudin, & Karisma, L. A. (2024). Innovative Change Strategies for Excellence in Islamic Education: Insights From Indonesia and Thailand. Jurnal Pendidikan Islam, 10(1), 63–74. https://doi.org/10.15575/jpi.v10i1.24909

Tonaiyo, H., Ilato, R., & Isa, R. (2020)... "Penerapan Metode Resitasi Dalam Meningkatkan Hasil Belajar Siswa"... Jambura Economic Education Journal, 2(1), 12–18. https://doi.org/10.37479/jeej.v2i1.4468

Umar, M., & Ko, I. (2022). E-Learning: Direct Effect of Student Learning Effectiveness and Engagement through Project-Based Learning, Team Cohesion, and Flipped Learning during the COVID-19 Pandemic. Sustainability (Switzerland), 14(3). https://doi.org/10.3390/su14031724

Wibowo, D. A., & Hermawan, Y. (2014). Penerapan Metode Resitasi Dan Diskusi Untuk Meningkatkan Prestasi Belajar Mahasiswa Program Studi Ilmu Keperawatan Universitas Galuh the Application of Recitation and Discussion Method To Improve Sophomore Students Achievement in Nursing Program At Galuh . Jurnal Pendidikan Dan Kebudayaan, 20(3), 328–339.

Widodo, H., Jailani, M., & Huda, M. (2024). The Implementation of Project Based-Learning as ISMUBA Curriculum Development in Muhammadiyah Schools. TADRIS: Jurnal …, 142–160. https://doi.org/10.19105/tjpi.v19i1.10169

Zhou, L., & Li, J. (2022)... "Developing Core Competence With Project-Based Learning: Voices From Chinese High School Students Serving Visually Impaired Students"... ECNU Review of Education, 5(2), 383–389. https://doi.org/10.1177/20965311211005478.