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The Influence of Game-Based Learning Method on the Positive Attitudes of Eleventh Grade Students in Islamic Religious Education at Senior High School Muhammadiyah 1 Pontianak for the 2025/2026 Academic Year

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ABSTRACT

This study aims to investigate and analyze the effect of the application of the Game-Based Learning (GBL) method on the positive attitudes of Grade XI students in the subject of Islamic Religious Education (*Pendidikan Agama Islam*/*PAI*) at *SENIOR HIGH SCHOOL* Muhammadiyah 1 Pontianak for the 2025/2026 Academic Year. The research method employed is quantitative with a quasi-experimental design. The research population comprised all Grade XI Social Studies (*Ilmu Pengetahuan Sosial*/*IPS*) students, with samples selected using a purposive sampling technique, namely Class XI *IPS* 1 as the experimental group and Class XI *IPS* 2 as the control group. Data were collected through a questionnaire measuring three indicators of positive attitudes: perceptions of teachers and instructional methods, responsibility toward academic tasks, and consistency of learning behavior. The data analysis technique applied was the Mann-Whitney U non-parametric statistical test, as the data did not satisfy the assumption of normal distribution. The results revealed that the positive attitude of students in the control class fell within the moderate category, with a mean score of 77.83, while the experimental class achieved the good-to-very-good category, with a mean score of 89.63. The hypothesis test yielded an asymptotic significance value of *Asymp. Sig.* (2-tailed) = 0.001 < 0.05; therefore, H_0 is rejected and H_a is accepted. It can thus be concluded that the application of the Game-Based Learning method has a significant positive influence on the improvement of students' positive attitudes in *PAI* subjects at Senior High School Muhammadiyah 1 Pontianak.

Keywords: *Game Based Learning, Positive Attitude, Islamic Religious Education, Pseudo-Experiment, High School Students.*

INTRODUCTION

Education is one of the primary factors in shaping the personality and character of students. According to Septiani (2025), Islamic Religious Education (*Pendidikan Agama Islam*/PAI) plays a central role in developing students' character, morals, and spirituality. *PAI* not only imparts religious knowledge but also serves as a process of personality formation that fosters positive attitudes balanced across cognitive, affective, and psychomotor dimensions. As stipulated in *Permendikbud* Number 37 of 2018, *PAI* holds a strategic role in instilling the values of faith, piety, and noble morals (*akhlak mulia*) in students. *PAI* learning is therefore not solely oriented toward knowledge acquisition but is also directed at cultivating positive attitudes toward religious values so that these may be practiced in daily life (Ajzen & Fishbein, 2020).

The *PAI* learning process in schools often faces various challenges. Based on preliminary observations conducted by the researcher in July 2025 at *SMA* Muhammadiyah 1 Pontianak, it was found that the *PAI* learning process is still dominated by conventional methods, such as lectures, question-and-answer sessions, and individual assignments (Ramdhan & Hapsari, 2023; Sardiman, 2018; Sari, 2021). The use of interactive learning media

remains limited, and learning activities tend to be teacher-centered. As a result, students appear less engaged, are prone to boredom, and do not demonstrate full involvement in the learning process (Nugroho, 2024; Putri & Arifin, 2023).

Observations in Grade XI revealed that only approximately 25–30% of students were actively engaged in learning activities, such as asking questions, answering, or responding to material presented by the teacher. Furthermore, results from a pre-research questionnaire administered to 30 students showed that only 40% expressed enjoyment in attending *PAI* lessons, while the remaining 60% reported low motivation and found *PAI* learning to be insufficiently engaging. Positive attitudes such as responsibility, cooperation, and honesty were also not optimally demonstrated in the learning process.

These conditions indicate that students' positive attitudes toward *PAI* lessons still need to be improved, particularly with respect to interest, participation, and learning motivation (Hapsari, 2023; Imran et al., 2023). Accordingly, instructional innovations are needed that can enhance active student involvement and foster positive attitudes toward *PAI* subjects. One learning method that is relevant to these needs is Game-Based Learning (GBL) (Munandar, 2024).

According to Maharani et al. (2024), GBL is capable of creating a conducive and enjoyable learning atmosphere that encourages active interaction among students. This interactive process builds a sense of responsibility and cooperation. Bandura (in Schunk, 2012) further asserts that positive behavior can be acquired through observation and imitation within social activities, such as educational games. In addition, Rahayu (2023) explained that the presence of rewards and competitive elements in games can enhance students' intrinsic motivation. High motivation, in turn, encourages the emergence of positive attitudes, including enthusiasm for learning and self-confidence.

Research by Maharani et al. (2024) demonstrates that the application of the GBL method significantly enhances students' positive attitudes compared to conventional learning, with students showing increased motivation, enthusiasm, and positive dispositions during the learning process. However, most prior studies have focused predominantly on cognitive learning outcomes, while affective aspects—such as motivation, responsibility, and cooperation—have not been examined in depth, particularly in the context of *PAI* learning at the Senior High School level (Bandura, 2012).

Several previous studies have examined the application of the GBL method in *PAI* learning. Septiani (2023), in her research entitled "The Relevance of the GBL Method in *PAI* Learning," found that GBL effectively increases students' learning motivation and active participation in understanding the concepts of Islamic teachings. Meanwhile, Septiani and Jamaludin (2024), through a literature review published in the *Indonesian Journal of Islamic Education* (IJIE), demonstrated that the application of GBL not only improves cognitive learning outcomes but also cultivates positive social attitudes, such as cooperation, responsibility, and sportsmanship in the learning process. Furthermore, Hidayati (2023), in her study on the effect of Game-Based Learning on students' positive attitudes in *Akīdah Akhlak* learning, found that the GBL method contributed significantly to increasing student engagement and enthusiasm for learning. Prasetyo (2022) also revealed that the teacher's role in implementing GBL greatly determines the success of forming positive student attitudes, as

teachers must be able to design games that are relevant to the subject matter and student characteristics.

Nevertheless, most prior studies have focused predominantly on cognitive learning outcomes, while affective aspects—such as motivation, responsibility, and cooperation—remain underexplored, particularly in *PAI* learning at the Senior High School level. Studies that specifically examine the influence of the GBL method on students' positive attitudes as an affective dimension, especially in *PAI* learning at *SMA* Muhammadiyah 1 Pontianak, remain relatively scarce (Hamari et al., 2016). Furthermore, empirical research focusing specifically on Grade XI students in this context has not been widely conducted. The present study therefore offers a distinctive contribution by focusing on the influence of the GBL method on the improvement of positive attitudes among Grade XI students in *PAI* subjects at *SMA* Muhammadiyah 1 Pontianak. Based on the foregoing, the GBL method holds considerable potential for enhancing students' positive attitudes toward *PAI* lessons. Accordingly, the researcher undertook a study entitled "The Influence of Game-Based Learning Method on the Positive Attitudes of Eleventh Grade Students in Islamic Religious Education at *SMA* Muhammadiyah 1 Pontianak for the 2025/2026 Academic Year."

This study aims to describe the positive attitudes of control class students who participate in learning using conventional methods and experimental class students who participate in learning using the Game-Based Learning method, as well as to analyze the significant influence of the application of the GBL method on the positive attitudes of Grade XI students in *PAI* subjects at *SMA* Muhammadiyah 1 Pontianak for the 2025/2026 Academic Year. Theoretically, this research is expected to contribute to the development of educational science, particularly with regard to innovative instructional methods and the cultivation of students' positive attitudes in Islamic Religious Education, as well as to enrich the scholarly literature on the application of Game-Based Learning in the context of Islamic education. Practically, this research is expected to benefit teachers by providing input and alternative innovative instructional methods to enhance students' positive attitudes in *PAI* learning; school administrators as a consideration in developing learning policies and improving the quality of *PAI* instruction; the researcher by broadening insight and experience in the application of quantitative research methods; other researchers as a reference and source of inspiration for further studies; and students, insofar as the application of the GBL method is expected to enhance their positive attitudes, motivation, and learning outcomes in *PAI* subjects.

METHOD

This section describes the method, research design, and approach employed in this study. This study aimed to determine the influence of the Game-Based Learning (GBL) method on the positive attitudes of Grade XI students in the subject of Islamic Religious Education (*Pendidikan Agama Islam*/PAI) at *SMA* Muhammadiyah 1 Pontianak for the 2025/2026 Academic Year. This study employs a descriptive method.

According to Ajat Rukajat (in Rikza Haddad Alwi, 2022), descriptive research is research that seeks to describe phenomena occurring in a real, realistic, and current manner. The purpose of this approach is to produce a systematic, factual, and accurate depiction of the facts, characteristics, and interrelationships among the phenomena under investigation.

In terms of research design, this study employs a quasi-experimental design. According to Arikunto (2019), a quasi-experimental design is a form of experimental research that does not employ random assignment but still involves an experimental group and a control group in order to compare the effects of treatment. This design was selected because the researcher was unable to control all extraneous variables or randomly assign students to groups. The experimental group received instruction using the GBL method, while the control group continued to receive conventional instruction. Following the treatment, the results of both groups were compared to identify differences in students' positive attitudes.

The approach used in this study is a quantitative experimental approach, which aims to test hypotheses based on numerical data obtained from the field. Prasetyo and Sari (2020) explained that the quantitative experimental approach enables researchers to examine cause-and-effect relationships between variables specifically, the GBL method as the independent variable (X) and students' positive attitudes as the dependent variable (Y). Through this approach, the researcher can empirically determine whether the applied method has a significant influence on the variable under study.

By employing this combination of method, design, and approach, the study is expected to yield accurate, measurable, and scientifically accountable data. Furthermore, the findings of this study are expected to serve as constructive input for teachers and school administrators in selecting more appropriate and engaging instructional methods, particularly in *PAI* learning, which students often perceive as insufficiently stimulating.

The research design notation is as follows:

T2 = post-test (measurement of positive attitudes following treatment)

XE = treatment administered to the experimental class, employing the Game-Based Learning method

XK = treatment administered to the control class, employing the conventional instructional method

According to Arikunto (2019), quasi-experimental research is a study that aims to determine the effect of a given treatment on specific variables by involving an experimental group and a control group, without the complete randomization of subjects. In a quasi-experimental study, the experimental group receives a designated treatment while the control group receives a different treatment or no treatment at all; the outcomes of both groups are then compared to identify differences attributable to the treatment administered.

RESULTS AND DISCUSSION

Description of Research Results

This research was carried out at Senior School Muhammadiyah 1 Pontianak in the 2025/2026 academic year using data collection techniques in the form of questionnaires that have gone through validity and reliability tests. The research subjects in this study are students of class XI IPS 1 as an experimental class and XI IPS 2 as a control class. Meanwhile, class XI IPS 3 is used as an instrument test class, which does not include the main research subject, but is used for the purpose of testing the quality of research instruments.

The total number of students involved in this study was 90 students, consisting of 30 students in the experimental class, 30 students in the control class, and 30 students in the instrument trial class. The research instrument in the form of a questionnaire was used to

measure variable X, namely the application of the GBL method, and variable Y, which is the positive attitude of students in PAI subjects.

The positive attitude questionnaire was prepared in the form of statements with alternative answers using the Likert scale, namely: strongly agree (4), agree (3), disagree (2), and strongly disagree (1). The data obtained from the results of the questionnaire distribution in the experimental class and the control class were then processed and analyzed in a descriptive statistical manner using IBM SPSS Statistics version 26 for Windows (Ghozali, 2016). The results of data analysis are presented in the form of a table of frequency distribution, minimum, maximum, mean, and standard deviation, in order to provide an overview of students' positive attitudes after the application of the GBL method in PAI learning.

Based on the results of the instrument validity test carried out on 30 statements in the questionnaire, the results were obtained that there were 1 statement item that was declared invalid and 29 statements that were declared valid. The determination of whether or not a statement item is valid is based on the comparison between the calculated r value and the table r value at a predetermined significance level. Thus, only 29 valid statements were used as research instruments, while 1 invalid statement was not used because it did not meet the validity criteria. The use of valid statement items aims to ensure that research instruments are really able to measure students' positive attitudes appropriately and accurately. The results of the descriptive statistical analysis of students' positive attitudes in PAI subjects in experimental classes using the GBL method and control classes are presented in the following table.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Red	Std. Deviation
Control Class	30	76	80	77.83	.834
Experimental Classes	30	83	93	89.63	2.157
Valid N (listwise)	30				

Source: Results of SPSS Data Processing, 2026

Based on table 1, it shows that the number of respondents in each class is 30 students. In the control class, which did not use the GBL method, a minimum score of 76 and a maximum score of 80 were obtained, with an average score of 77.83 and a standard deviation of 0.834.

Testing Data Analysis Requirements

Data Validity Test

The results of the validity test of the research instrument to measure students' positive attitudes in PAI subjects were carried out using IBM SPSS Statistics 26 by comparing the values of r calculated and r tables at $\alpha = 5\%$. Of the 30 questions, 29 were declared valid, while 1 item was invalid so it was not used in the research.

Table 2. Data Validity

No. Item Questions	Choral coefficients		Remarks
	r count	*r Table*	
1	0,511	0,361	Valid
2	0,575	0,361	Valid
3	0,462	0,361	Valid
4	0,377	0,361	Valid

No. Item Questions	Choral coefficients		Remarks
	r count	*r Table*	
5	0,429	0,361	Valid
6	0,740	0,361	Valid
7	0,665	0,361	Valid
8	0,383	0,361	Valid
9	0,613	0,361	Valid
10	-0,110	0,361	Invalid
11	0,577	0,361	Valid
12	0,473	0,361	Valid
13	0,743	0,361	Valid
14	0,755	0,361	Valid
15	0,754	0,361	Valid
16	0,679	0,361	Valid
17	0,750	0,361	Valid
18	0,445	0,361	Valid
19	0,574	0,361	Valid
20	0,615	0,361	Valid
21	0,692	0,361	Valid
22	0,570	0,361	Valid
23	0,449	0,361	Valid
24	0,673	0,361	Valid
25	0,570	0,361	Valid
26	0,692	0,361	Valid
27	0,398	0,361	Valid
28	0,630	0,361	Valid
29	0,426	0,361	Valid
30	0,623	0,361	Valid

Source: Results of SPSS Data Processing, 2026

Data Reliability Test

After obtaining the results of the validity test of the research instrument, then a reliability test of the instrument is carried out. The reliability test aims to determine the level of consistency and consistency of the instrument in measuring the variables being studied. Reliability testingwas performed using IBM SPSS Statistics version 26 for Windows through the Analyze → Scale → Reliability Analysis menu, using Cronbach's Alpha formula.

A research instrument is declared reliable if it has a reliability coefficient value of Cronbach's Alpha > 0.6, as stated by Syofian Siregar in his book Descriptive Statistics for Research. Based on the results of the reliability test that has been carried out, a Cronbach's Alpha value of 0.922 was obtained with a total of 30 items of statements, as presented in the table below.

Table 3. Data Reliability

Cronbach's Alpha	N of Items
.922	30

Source: Results of SPSS Data Processing, 2026

Based on the table above, it shows that the value of the reliability coefficient > 0.6, so it can be concluded that the research instrument has a very high level of reliability. Thus, the research instrument was declared reliable and suitable for use as a data collection tool to measure students' positive attitudes on PAI subjects.

Data Normality Test

Table 4. Data Normality

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Control Class	.379	30	.001	.750	30	.001
Experimental Classes	.167	30	.031	.922	30	.031

a. Lilliefors Significance Correction

Source: Results of SPSS Data Processing, 2026

Based on the results of the data normality test using the Kolmogorov-Smirnov test, the posttest significance value was 0.001 and 0.031 in the experimental class. The significance value in the control class was less than 0.05 (Sig. < 0.05), so the posttest data of the control class was declared not to be normally distributed. Similarly, the significance value in the experimental class was also less than 0.05 (Sig. < 0.05), so the posttest data of the experimental class were not normally distributed.

Because both data groups had a significance value of less than 0.05, statistically the assumption of normality in this study was not met. Thus, hypothesis testing cannot use a parametric test (t-test), but must instead use a nonparametric statistical test, namely the Mann-Whitney U test.

Uji Wilcoxon Signed Rank Test

Table 5. Mann-Whitney Test

	Classes	N	Mean Rank	Sum of Ranks
Post Test Scores	1	30	15.50	465.00
	2	30	45.50	1365.00
	Total	60		

Source: Results of SPSS Data Processing, 2026

Based on Table 5, the results of the analysis were obtained in the experimental class of 30 respondents (N) with a mean rank of 15.50 and a sum of ranks of 465.00. Meanwhile, in the control class, the number of respondents (N) was 30 students with a mean rank of 45.50 and a sum of ranks of 1365.00. The significant difference in mean rank values between the experimental class and the control class showed that there was a difference in the distribution of students' positive attitude values in the two groups. This indicates that in general there is a difference in the level of positive attitudes of students between the experimental class and the control class. As presented in the table below:

Table 6. Test Statistics

	Post Test Scores
Mann-Whitney U	.001
Wilcoxon W	465.000
Z	-6.813
Asymp. Sig. (2-tailed)	.001

a. Grouping Variable: Class

Source: Results of SPSS Data Processing, 2026

The results of the Mann-Whitney test showed a significance value of $p = 0.001 < 0.05$, so H_0 was rejected and H_1 was accepted. This indicates that there is a significant difference between the positive attitude of students in the experimental and control classes, showing that the Game Based Learning method has a significant effect on the positive attitude of students in PAI subjects at SENIOR HIGH SCHOOL Muhammadiyah 1 Pontianak.

Positive attitude of control class students in the subject of Islamic Religious Education class XI Senior High School Muhammadiyah 1 Pontianak Academic Year 2025/2026.

Positive attitudes in learning are part of the affective aspects that affect student learning success. According to Schunk, Meece, and Pintrich (2020), learning attitudes reflect students' emotional, motivational, and behavioral readiness in following the learning process. A positive attitude is characterized by discipline, responsibility, interest in learning, and seriousness in doing tasks. In PAI learning, positive attitudes are also related to the formation of religious character, noble morals, and moral awareness of students in daily life. Learning that is still teacher-centered tends to provide less space for students to develop affective aspects optimally.

Based on the results of descriptive analysis using IBM SPSS Statistics version 26 for Windows, it is known that the number of students in the control class was 30 people, with a minimum score of 76, a maximum score of 80, and a mean score of 77.83 with a standard deviation of 0.834. The data showed that the positive attitudes of the control class students were in the category of sufficient and relatively homogeneous. The results of the questionnaire also showed that students were quite disciplined and obedient to school rules, but were still less active in asking questions, discussing, and expressing opinions during learning.

The results of this study are in line with the theory of Schunk et al. (2020) which states that positive attitudes develop through active involvement in learning. The conventional learning that is predominantly used in the control class has not fully encouraged student participation, so the positive attitudes that are formed are still in the category of adequate. According to Darling Hammond et al. (2020), learning that is less contextual and less actively involved in students can hinder the development of affective aspects. Thus, the results of the study show that conventional methods are not optimal in shaping students' religious and social attitudes as a whole.

Positive attitude of students of the experimental class in the subject of Islamic Religious Education class XI SENIOR HIGH SCHOOL Muhammadiyah 1 Pontianak Academic Year 2025/2026.

The GBL method provides a stronger stimulus to these aspects as students engage directly in challenging and fun gaming activities. Thus, the results of this study strengthen the theory that active and innovative learning can increase students' positive attitudes more

optimally. GBL is a learning method that integrates elements of games into learning activities to increase student motivation and involvement. According to Plass, Homer, and Kinzer (2020), game-based learning is able to create an interactive, challenging, and fun learning environment. Kapp and Coné (2021) explain that GBL can form positive attitudes such as cooperation, confidence, responsibility, and sportSenior High Schoolnship. In PAI learning, this method can help students understand Islamic values through contextual and meaningful learning experiences.

The results of descriptive analysis using IBM SPSS Statistics version 26 for Windows showed that the number of students in the experimental class was 30 people, with a minimum score of 83, a maximum score of 93, a mean score of 89.63 and a standard deviation of 2.157 The average score was higher than that of the control class, thus showing that the positive attitude of the students of the experimental class was in the good to very good category. The results of the questionnaire showed that students were more enthusiastic, actively discussed, dared to ask questions, and showed high responsibility in participating in learning.

The findings of this study are in accordance with the theory of Plass et al. (2020) which states that game-based learning is able to increase students' emotional engagement and intrinsic motivation. The implementation of GBL in experimental classrooms provides a fun and challenging learning experience, so that students are more actively engaged. According to Kapp (2022), a positive learning experience will strengthen the formation of attitudes and character. Thus, the results of the study prove that the GBL method is effective in increasing students' positive attitudes in PAI learning.

The effect of the Game Based Learning method on students' positive attitudes in the subject of Islamic Religious Education class XI SENIOR HIGH SCHOOL Muhammadiyah 1 Pontianak Academic Year 2025/2026.

The influence of learning methods on students' attitudes can be explained through the theories of social constructivism and 21st century learning. According to the OECD (2021), modern learning must emphasize active engagement, collaboration, creativity, and reflection. Darling Hammond et al. (2020) stated that experiential learning is able to shape students' positive character and attitudes more effectively. GBL is in line with this theory because it provides students with the opportunity to learn through hands-on experience and social interaction.

The results of the reliability test showed that Cronbach's Alpha value was 0.922, so the research instrument was declared very reliable. Meanwhile, the normality test showed that the control class and experimental class data were not distributed normally, because the significance value was less than 0.05. Therefore, the hypothesis test was carried out using the Mann-Whitney U test. The test results showed that the Mean Rank value of the control class was 15.50 and the experimental class was 45.50. Asymp value. Sig. (2-tailed) is $0.001 < 0.05$, so that the alternative hypothesis is accepted and the null hypothesis is rejected.

The results of this study strengthen the theory of Darling-Hammond et al. (2020) and OECD (2021) which emphasize the importance of active and meaningful learning. The significant difference between the control class and the experimental class shows that the GBL method is able to significantly increase students' positive attitudes. According to Kapp (2022), game-based learning can build long-term engagement and high learning motivation. Thus, the

results of the study prove that the GBL method has a significant influence on students' positive attitudes in PAI learning.

CONCLUSION

Based on the results of research and discussion on the influence of the Game Based Learning method on students' positive attitudes in the subject of Islamic Religious Education class XI SENIOR HIGH SCHOOL Muhammadiyah 1 Pontianak for the 2025/2026 Academic Year, the following conclusions can be drawn: The positive attitude of control class students who participated in learning with conventional methods was in the sufficient category. This is indicated by an average score of 77.83. Students have shown a disciplined attitude and obeyed the rules, but are still less active in asking questions, discussing, and expressing opinions. Teacher-centered learning causes student involvement in the learning process to be not optimal, so the development of students' positive attitudes is still limited. The positive attitude of students in the experimental class who participated in learning with the GBL method was in the good to very good category. This is indicated by an average score of 89.63. Students look more enthusiastic, active, responsible, and have the courage to express their opinions. The application of the GBL method is able to create a fun, interactive, and meaningful learning atmosphere, thereby encouraging the formation of positive attitudes optimally. There is a significant influence of the GBL method on the positive attitude of students in the PAI subject class XI of Senior High School Muhammadiyah 1 Pontianak for the 2025/2026 Academic Year. This is proven by the results of the Mann-Whitney U test which shows a significance value of 0.001 < 0.05. Thus, the alternative hypothesis is accepted and the null hypothesis is rejected. The GBL method has been proven to be more effective than conventional methods in increasing students' positive attitudes. Based on these three conclusions, it can be concluded that the use of the GBL method in PAI learning has a positive and significant contribution in shaping students' religious, social, and academic attitudes. This method can be used as an innovative learning alternative to improve the quality of learning processes and outcomes at school.

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