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Integrating YouTube into Project-Based Learning to Enhance Students' Interest in Islamic Religious Education at a Vocational Secondary School

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A B S T R A C T

This study examines the effectiveness of integrating YouTube-based Project-Based Learning (PjBL) to enhance students' interest in Islamic Religious Education (IRE). A quasi-experimental post-test-only control group design was employed, involving tenth-grade students at SMK Geomatika Lampung, a vocational secondary school in Indonesia. Students' learning interest was measured using a validated Likert-scale questionnaire, and the data were analyzed through normality, homogeneity, and independent samples t-tests. The findings revealed a statistically significant difference in learning interest between students taught using YouTube-based PjBL and those taught through conventional methods ($p < 0.05$). The integration of project-based learning with digital video media promoted active engagement, motivation, and positive affective responses in IRE learning. However, since the study was conducted in a single vocational school context, the findings should be interpreted cautiously and may not be generalized to all vocational secondary schools without further empirical validation. Future research involving broader and more diverse samples is recommended to strengthen generalizability.

Keywords
Project-Based Learning, YouTube, Learning Interest, Islamic Religious Education

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1. INTRODUCTION

The digital transformation occurring in the Society 5.0 era has brought significant impacts on various aspects of human life, including the field of education (Rohayati, 2024). This era requires the integration of technological advancement with humanistic values, positioning education not merely as a medium for knowledge transfer but also as a space for character formation that is adaptive to societal change (Nadeak, 2024). In this context, learning systems are no longer expected to be static; rather, they must be innovative, flexible, and responsive to the needs and characteristics of digital-generation learners (Al-anezi & Alajmi, 2021). Contemporary learners, often referred to as Generation Z, grow and develop within an environment that is highly digitalized and rapidly evolving. Therefore, conventional teacher-centered approaches with minimal interaction are increasingly

perceived as less relevant and tend to reduce students' motivation and participation in the learning process (Ruiz-cantisani, 2024).

One instructional approach that has emerged in response to these challenges is the Project-Based Learning (PjBL) model (Silma et al., 2023). This model positions students as active subjects in the learning process, encouraging them to explore, design, and complete projects that are directly connected to real-life contexts (Sulthon, 2025). Through PjBL, students not only acquire theoretical knowledge but also develop critical thinking, collaboration, communication, and creativity skills (Ruiz-cantisani, 2024). This model is highly relevant to the digital era as it can be integrated with various technological media, one of which is YouTube (Rozal et al., 2021).

YouTube is a video-based digital platform that enables the delivery of learning materials in a narrative and communicative manner (Rachman et al., 2024). Unlike purely visual or text-based media that demand full visual concentration, YouTube can be accessed flexibly in various situations, such as during travel, leisure time, or independent study (Agung, 2021). Several previous studies, including those conducted by Anggraeni and colleagues, Rachman et al., and Pratama et al., indicate that the use of digital media (including YouTube within the PjBL framework) contributes significantly to enhancing students' learning interest, engagement, and comprehension across subjects. YouTube is capable of creating more personal and enjoyable learning experiences by fostering emotional connectedness through communicative narration (Hayirli, 2025).

However, despite the widely acknowledged potential of YouTube as a learning medium, most existing studies still focus on general or technical learning domains, such as language skills, science, or technology. Research explicitly examining the utilization of YouTube to support Islamic Religious Education (IRE) remains very limited. In fact, amid globalization and cultural value challenges, IRE plays a strategic role in instilling spiritual, moral, and ethical values in students. In the Society 5.0 era (where the integration of technology and humanity is paramount) IRE learning must be designed through relevant and engaging approaches so that it not only emphasizes cognitive aspects but also touches students' affective and spiritual domains.

Unfortunately, the challenges of teaching IRE in vocational high schools (SMK) remain quite complex. Many students demonstrate low learning interest in IRE because instructional practices tend to rely heavily on lecture-based delivery and offer limited interactivity. Moreover, the minimal integration of digital media in religious instruction often makes IRE appear rigid and disconnected from vocational students' professional aspirations. In the context of vocational education, the principle of *link and match* emphasizes the alignment between school learning outcomes and the competencies required in the labor market, including soft skills such as integrity, responsibility, collaboration, ethical awareness, and communication. These competencies are closely related to the moral and spiritual values promoted in IRE and are increasingly demanded in the Society 5.0 era, where technological expertise must be balanced with character and humanistic values (Susanti et al., 2025). Therefore, IRE learning in vocational schools should not be positioned merely as normative instruction but as a foundation for professional ethics and workplace character formation. In this regard, integrating YouTube-based Project-Based Learning offers a relevant approach that connects religious values with real-life vocational contexts. Through project production and digital content creation, students engage not only cognitively but also collaboratively and reflectively, thereby

fostering both learning interest and essential soft skills needed in the contemporary workforce (Zaqiah, 2024).

Based on this background, this study is directed at examining the effectiveness of a YouTube-based Project-Based Learning model in improving students' learning interest in Islamic Religious Education. This research is expected to provide significant contributions to the development of contextual and relevant IRE instructional strategies aligned with contemporary learner characteristics. Furthermore, the findings are expected to enrich the body of literature in technology-based learning innovation that continues to uphold spiritual and moral values in the digital era.

2. METHOD

This study adopted a quantitative approach employing a quasi-experimental method. The research design applied was a post-test-only control group design, which compares two groups: an experimental group that received treatment in the form of a YouTube-based PjBL instructional model, and a control group that received conventional instruction. This design was selected to evaluate the effect of the YouTube-based PjBL model on students' learning interest in Islamic Religious Education. The population of this study comprised all tenth-grade students of SMK Geomatika Lampung in the 2025/2026 academic year. The sample was selected using a simple random sampling technique to ensure proportional representation of the population. The sample consisted of three tenth-grade classes: X.1 and X.3 as the experimental groups, and X.2 as the control group. Class selection was conducted based on the list of active students without specific stratification to maintain comparability across groups.

Data were collected using a learning interest questionnaire developed based on indicators proposed by Winkel, including perseverance, discipline, enthusiasm, active participation, perception, comprehension, and self-confidence. The instrument employed a four-point Likert scale. In addition to questionnaire data, classroom observations and field notes were used to support and contextualize the quantitative findings. Prior to the primary data collection, the instrument underwent validity testing using Pearson Product–Moment correlation analysis to examine item validity. Reliability was subsequently assessed using Cronbach's Alpha to measure internal consistency. The instrument was considered acceptable when it met established statistical validity and reliability criteria.

Data analysis began with assumption testing, including normality testing using the Shapiro–Wilk test and homogeneity testing using Levene's test to ensure variance equivalence between groups. After meeting these assumptions, the data were analyzed using an independent samples t-test to determine whether there was a statistically significant difference in learning interest between the experimental and control groups. All statistical analyses were conducted at a 5% significance level ($\alpha = 0.05$).

3. RESULTS AND DISCUSSION

Normality test

A normality test was conducted to examine whether the collected data followed a normal distribution. Data were regarded as normally distributed when the significance value exceeded 0.05. Table 1 presents the results of the Shapiro-Wilk normality test.

Tabel 1. Shapiro-Wilk Normality Test Results

Group	Statistic	df	Sig.	Distribution
Experimental	0.948	33	0.118	Normal
Control	0.959	33	0.246	Normal

The results in Table 1 show that the significance values for the experimental and control groups were 0.118 and 0.246, respectively. Since both values were greater than 0.05, it can be inferred that the data from both groups were normally distributed.

Homogeneity Test

A homogeneity test was performed to determine whether the variances between the two groups were equivalent. The data were considered homogeneous when the significance value was greater than 0.05. The outcomes of Levene's test are presented in Table 2.

Table 2. Levene's Test for Homogeneity of Variances

Based on	Levene Statistic	df1	df2	Sig.
Mean	3.308	1	64	0.074

As shown in Table 2, the significance value was 0.074, which exceeds the 0.05 threshold. This indicates that the variances of the two groups were homogeneous, fulfilling the assumption required for further parametric analysis.

Independent sample t-test

An independent samples t-test was conducted to compare the mean scores between the experimental and control groups. The hypothesis testing was carried out using the pooled variance approach.

Table 3. Independent Samples t-Test Results

Model Assumptions	t	df	Sig. (2-tailed)	Mean Difference
Equal variances assumed	2.67	64	0.01	2.394

The results in Table 3 indicate that the null hypothesis was rejected, suggesting a statistically significant difference between the two groups. The obtained p-value (0.010) was below the 0.05 significance level, demonstrating that the experimental treatment produced a significantly different mean score compared to the control group. Overall, these findings indicate that the assumptions for parametric testing were met and that the YouTube-based PjBL intervention significantly influenced students' learning interest.

The present study demonstrates that the integration of PjBL with YouTube media significantly enhanced students' learning interest in IRE at SMK Geomatika Lampung. The statistical evidence, indicated by the independent samples t-test ($p = 0.010$), confirms a meaningful difference between students exposed to YouTube-based PjBL and those taught through conventional instruction. This finding reinforces the growing body of literature suggesting that the integration of innovative pedagogical models with digital platforms can positively influence students' affective learning outcomes.

The credibility of these findings is strengthened by the fulfillment of prerequisite statistical assumptions, including normal data distribution and homogeneity of variances. The Shapiro–Wilk test results indicated that both experimental and control group data were normally distributed, while Levene's test confirmed homogeneous variance between groups. These results suggest that the observed improvement in learning interest was attributable to the instructional intervention rather than methodological or statistical bias. The increased learning interest observed in the experimental group can be explained by the pedagogical characteristics of PjBL, which positions learners as active participants in the learning process. Through project planning, implementation, and presentation, students are encouraged to take responsibility for their learning tasks, thereby fostering ownership and intrinsic motivation (Azzahra et al., 2024). This student-centered approach contrasts sharply with traditional teacher-centered instruction, which often limits student autonomy and engagement.

Furthermore, the integration of YouTube as a digital learning medium contributed substantially to students' learning interest. YouTube facilitates the presentation of IRE content in visual, narrative, and contextualized formats, which helps students better understand abstract religious concepts (Birgante et al., 2024; Nafilah & Sakti, 2022). Given that YouTube is deeply embedded in students' daily digital practices, its use in instruction made learning experiences more relatable and engaging, thereby reducing monotony and enhancing emotional involvement (Technology, 2021; Sma et al., 2025). However, considering that YouTube is an open-access platform containing diverse religious interpretations, the role of the teacher becomes crucial as a content curator and epistemic filter. In this study, students were guided to access and reference Islamic channels that are academically credible and aligned with moderate (*wasathiyah*) Islamic perspectives. The teacher provided criteria for evaluating content, including the credibility of the speaker, alignment with recognized Islamic scholarship, and consistency with national religious education standards. This guidance ensured that digital exploration did not lead to fragmented or extreme interpretations but instead supported balanced and authoritative understanding.

These findings are consistent with field-based observations indicating that students' low interest in IRE is often associated with lecture-dominated instructional practices and limited integration of digital media. Prior to the intervention, IRE learning was perceived as theoretical, monotonous, and disconnected from vocational students' real-life contexts (Awaluddin, 2024). Through structured YouTube-based PjBL activities, students were not only encouraged to engage with digital content but also trained to critically assess and contextualize religious information. The model therefore functioned not merely as a motivational tool, but also as a mechanism for cultivating digital religious literacy and responsible content consumption (Melisa et al., 2024; Ayudyaningsih et al., 2024). More specifically, the structured guidance provided by the teacher during the YouTube-based PjBL implementation was reflected in measurable improvements in students' learning interest. Improvements were observed across several indicators, including perseverance, discipline, enthusiasm, participation, comprehension, and self-confidence (Trikawati et al., 2025). Students in the experimental group demonstrated greater participation in discussions, stronger enthusiasm for completing projects, and higher confidence when presenting their work outcomes (Khairani & Tressyalina, 2020). These results suggest that the combination of PjBL and YouTube not only stimulates situational interest but also

supports deeper and more sustainable learning engagement, which is essential for the internalization of moral and spiritual values in IRE (Ryand, 2024).

The successful implementation of YouTube-based PjBL also indicates that IRE instruction can be innovatively designed without compromising Islamic values. On the contrary, this approach enables religious teachings to be delivered in a more humanistic, reflective, and contextual manner that aligns with the characteristics of digital-native learners (Maulidya et al., 2023). This study provides practical implications for educators, particularly IRE teachers, by offering an alternative instructional strategy that effectively enhances students' learning interest in vocational education contexts (Kampong et al., 2022). Educators are therefore encouraged to integrate digital media and active learning models to create more meaningful and engaging learning environments. For students, YouTube-based PjBL offers a learning experience that is enjoyable, challenging, and relevant to their daily lives, thereby fostering intrinsic motivation and sustained learning interest (Rifai et al., 2024). For future researchers, this study provides empirical evidence for the development of technology-enhanced IRE learning research, particularly studies focusing on affective learning dimensions such as learning interest and motivation. Overall, this research contributes to the advancement of instructional practices and enriches scholarly discourse on innovative approaches to IRE learning in the digital era.

Compared with previous studies that examined PjBL or digital media independently, this study contributes by integrating PjBL with YouTube in the context of religious education, which remains underexplored. However, this study is limited to a single vocational school and focuses only on learning interest as an affective outcome. Future research should examine other affective and cognitive outcomes and employ longitudinal designs to investigate the sustainability of learning interest over time.

4. CONCLUSION

This study concludes that the integration of PjBL with YouTube media is effective in enhancing students' learning interest in IRE at SMK Geomatika Lampung. The experimental findings demonstrated a statistically significant difference in learning interest between students who experienced YouTube-based PjBL and those who received conventional instruction, confirming the pedagogical potential of combining active learning models with digital media in religious education contexts. The observed improvement in students' learning interest was associated with several pedagogical factors, including students' active participation in project activities, the visual and contextual representation of learning content through YouTube, and the compatibility of the instructional approach with the characteristics of digitally oriented learners. These results suggest that YouTube-based PjBL can serve as an effective instructional alternative for enhancing affective learning outcomes, particularly students' interest in IRE learning.

Despite these contributions, this study has several limitations. The investigation focused only on learning interest as an affective variable and was conducted within a single vocational school context. Future studies are encouraged to explore additional variables, such as learning motivation, religious attitudes, and academic achievement, as well as to employ more rigorous experimental designs, including pretest–posttest control group models and larger, more diverse samples to improve generalizability. Further research may also develop more interactive and diversified YouTube-based learning media and integrate

them with other pedagogical approaches to strengthen innovation and effectiveness in Islamic Religious Education in the digital era.

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