



ANALYSIS OF THE IMPLEMENTATION OF PROBLEM BASED LEARNING ASSISTED BY MICROSITE ID ON THE UNDERSTANDING OF LEARNERS' CONCEPTS IN INFAQ AND ALMS MATERIALS

Muhammad Kharis Bad'ul Munir^{1*}, Citra Kurniawan²

^{1,2} Teknologi Pendidikan, Universitas Negeri Malang, Kota Malang, Jawa Timur, Indonesia

*Email corresponding author: muhammad.kharis.2201216@students.um.ac.id

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Article history: Received 17-02-2026 Revised 24-02-2026 Accepted 13-02-2026 Published 28-03-2026 How to cite: Munir, M. K. B., & Kurniawan, C. (2026). Analysis of the Implementation of Problem Based Learning Assisted by Microsite ID on the Understanding of Learners' Concepts in Infaq and Alms Materials. <i>Journal of Facilitating Learning and Improving Performance</i>, 1(1), 32–40. © The Author(s)  This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License	Learning the Qur'an Hadith at the MTS level still faces challenges in improving learners' understanding of concepts, especially in the materials of infaq and alms which are still learned through memorization. Therefore, a learning model is needed that is able to encourage active involvement of learners and relate the material to the real-life context. This study aims to analyze the difference in learners' understanding of concepts in infaq and alms materials between classes that use the Problem Based Learning (PBL) model assisted by Microsite ID and classes that use face-to-face learning. The research uses a quantitative approach with a quasi-experiment design in the form of a nonequivalent control group design. The research subjects consisted of two classes, namely the experimental class that received Problem Based Learning treatment assisted by Microsite ID and the control class that used the lecture and question and answer method. The research instrument is in the form of a multiple-choice concept understanding test that has gone through validity and reliability tests. Data analysis was carried out through normality, homogeneity, and hypothesis tests using t-tests. The results of the study show that there is a significant difference in conceptual understanding between the two classes. The experimental class showed a higher score increase than the control class. Keywords: <i>Problem Based Learning; Microsite ID; Concept Understanding.</i>

INTRODUCTION

Education in the current era of digital transformation demands the integration of technology that not only serves as a tool, but also as a catalyst in improving the quality of learners' understanding of concepts. In the context of Islamic Religious Education, infaq and alms materials play a crucial role in shaping the social character and generosity of learners, but the reality in the field shows that students' understanding is often trapped in the low-level cognitive realm or just memorizing definitions. The low understanding of this concept is generally triggered by the use of one-way face-to-face learning methods, so that students have difficulty contextualizing the values of social worship into real-life problems. Therefore, an instructional approach is needed that is able to trigger critical reasoning while utilizing the advancement of digital media to create a more meaningful and interactive learning experience.

Previous literature reviews have documented the effectiveness of the Problem Based Learning (PBL) model in improving various aspects of student competence, ranging from critical thinking skills to learning outcomes in various subjects (Salsabila & Muqowim, 2024). Previous studies have shown that PBL is able to shift the learning paradigm from passive to active by exposing students to authentic problems. On the other hand, the use of digital-based learning media such as Learning Management System (LMS) or Google Sites has also been proven to have a positive impact on learning motivation. However, most of the research still focuses on the field of science or mathematics, and the use of digital media in religious learning is often limited to a repository of static material without the integration of structured learning models. In addition, the use of specific platforms such as Microsite ID as a supporting medium for PBL in the material of sharing infaq and alms with sincerity is still very rarely explored in the current educational literature.

The statement of scientific novelty in this article lies in the strategic integration between problem-based learning models and the utilization of Microsite ID as a concise, accessible, and navigation-oriented instructional medium for Generation Z students. offers a more focused and directed interface to present problem scenarios in the PBL stages, especially in infaq and alms materials that require visualization and real case solving. This study attempts to fill the literature gap by examining the extent to which the synergy between the systematic PBL framework and the practicality of Microsite ID media can have a significant impact on the depth of students' conceptual understanding compared to the face-to-face method.

Based on the background and literature gap, the main problem raised in this study is whether there is a significant influence of the application of the Problem Based Learning model assisted by Microsite ID on the understanding of learners' concepts in infaq and alms materials. In line with this, the proposed research hypothesis is that there is a significant difference in conceptual understanding between students who learn using the Microsite ID- assisted PBL model and students who participate in learning using the face-to-face method. The main purpose of the study in this article is to analyze and prove the real influence of the application of the Problem Based Learning model assisted by Microsite ID media on increasing learners' understanding of the concept of infaq and alms materials at the Madrasah Tsanawiyah level.

METHODS

This study uses (*quasi experiment*) with model *Nonequivalent Control Group Design*. This design was chosen because it allowed researchers to compare the results of understanding concepts between experimental groups that received treatment in the form of application *Problem Based Learning* (PBL) assisted *Microsite ID* and control groups that apply *Problem Based Learning* without using *Microsite ID*, without going through a full process of randomizing the subject.

The selection of this design was seen as appropriate because the research was carried out in a real-world classroom context at MTs Hidayatul Mubtadiin which had limitations in the arrangement of random samples. Through the provision of pretests and posttests to both groups, researchers were able to identify differences in the level of understanding of concepts before and after treatment, so that the influence *of the use of Microsite ID* in learning could be analyzed objectively and measurably.

Table 1. Research Design

Classes	Pretest	Treatment	Posttest
Experiments	O ₁	Microsite ID-assisted Problem Based Learning learning model	O ₂
Controls	O ₃	Conventional Learning	O ₄

The subject of the study is grade VIII students of MTs Hidayatul Mubtadiin for the 2025/2026 school year with a total of 59 students divided into 2 classes. Class VIII A with a total of 29 students was designated as an experimental group, while class VIII C with a total of 29 students was designated as a control group. The selection of classes is carried out based on considerations of homogeneity of academic ability and suitability of the learning schedule. The number of students in each class is representative enough to provide an overview of the significant differences in learning outcomes.

The research instrument is in the form of a multiple-choice test developed based on indicators of problem-solving ability. There are two types of tests, namely pretest and posttest, where the pretest is given before learning begins and the posttest is given after the learning is completed to measure the improvement of problem-solving skills. Before being used for research, the test instrument is first tested on other classes that are not experimental or control classes to determine the validity and reliability of the results of the question items. After being tested, a test was carried out with the help of IBM SPSS Statistics 20 Software to find out how many valid questions were used in the study and whether the questions were reliable to use.

The data collection procedure in this study was carried out through several systematic stages. In the first stage, all learners in the experimental class and the control class were given a pretest to identify the initial ability to understand concepts in the infaq and alms materials. This stage aims to find out the initial condition of the two groups before being given treatment.

In the second stage, the experimental group participated in learning by implementing Problem Based Learning (PBL) assisted by Microsite ID, which is problem-based learning supported by web-based digital media that contains Qur'anic verses, translations, concise interpretations, case studies, and Student Worksheets (LKPD) in an integrated manner. Meanwhile, the control group followed the learning using the

Problem Based Learning (PBL) model without a Microsite ID, by utilizing conventional learning resources such as print modules and direct explanations from learners in class.

In the third stage, after the entire series of treatments has been given in accordance with the PBL syntax, the two groups obtain a posttest with equivalent instruments to measure the improvement of learners' understanding of concepts. The entire learning process is carried out in several meetings in accordance with the Learning Implementation Plan (RPP) which has been designed based on the learning objectives of infaq and alms materials.

Data analysis was carried out through several statistical techniques. Before hypothesis testing, analysis prerequisite tests in the form of normality tests and homogeneity tests are first carried out to ensure that the data meets the necessary statistical assumptions so that the test results can be interpreted validly. Once the prerequisites were met, a hypothesis test was performed using the Independent Samples t-test technique to determine whether or not there was a significant difference between the experimental group using Microsite ID and the control group not using Microsite ID.

Through a systematic research design that includes the determination of subjects, the preparation of instruments, implementation procedures, and appropriate data analysis techniques, this study is expected to be able to provide empirical evidence on the effect of the application of Problem Based Learning assisted by Microsite ID on improving learners' understanding of the concept of infaq and alms materials, as well as strengthening the development of digital learning media in the context of religious education Islam.

RESULTS

The results of this study analysis show that there is a significant difference between the experimental class that uses Microsite ID and the control class that uses conventional media. This can be seen from the research instruments used. However, before the instrument is used in the research, validity and reliability tests are carried out. The results of the validity test showed that all the question items used had a correlation value greater than the r -table, so it was declared valid. Furthermore, reliability tests using Cronbach's Alpha resulted in values greater than > 0.70 , which means the instrument has good internal consistency. Thus, the problem-solving ability test instrument is suitable to be used to measure research variables.

After that, a prerequisite test for data analysis is carried out to ensure that the data meets the basic assumptions required so that the results of the analysis can be interpreted appropriately and validly. Data analysis began with a normality test using Shapiro Wilk. The results showed that the pretest and posttest data in both classes had a Sig. value of > 0.05 , so it can be concluded that the data is normally distributed. In addition, the homogeneity test using Levene's Test yielded a Sig. value of > 0.05 , which means that the variance of data between the experimental and control classes was homogeneous. These two prerequisite tests ensure that the data are eligible for hypothesis testing with parametric techniques.

Hypothesis tests were carried out using Independent Samples T-test to find out the difference in problem-solving ability between the experimental and control classes.

Table 2. Independent Samples T-test Test Results

		Levene's Test for Equality of Variances		T-test for Equality of Means				
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Learning Outcomes	Equal Variances Assumed	.265	.609	3.941	56	.000	9.379	2.380
	Equal Variances Not Assumed			3.941	55.609	.000	9.379	2.380

Based on the Independent Samples T-test, a Sig. (2-tailed) value of 0.000 was obtained, which is smaller than $\alpha = 0.05$. The results of this statistic directly provide an empirical answer to the formulation of the research problem, namely that there is a significant difference in conceptual understanding between the application of the Problem Based Learning (PBL) model using Microsite ID and without using Microsite ID. This very real difference in average means that the excellence of learning outcomes in the experimental class does not occur by chance, but is a real impact of the digital media intervention used. The findings of this study show that the application of PBL assisted by Microsite ID has a significant influence on increasing learners' understanding of the concept of infaq and alms materials. Thus, an alternative hypothesis (H1) is accepted, so it can be concluded that the integration of Microsite ID in the PBL model has been shown to be statistically effective in improving learners' conceptual understanding compared to learning without such media support. This increase indicates that the use of structured digital media is able to facilitate the process of constructing learners' knowledge to be more optimal and deeper.

Overall, the results of the analysis show that the use of Microsite ID as a supporting digital media in problem-based learning is an effective strategy to deepen understanding of concepts. This platform is able to present Qur'anic verse material, translations, meaning content, and social case studies in a systematic and interactive manner, thus helping learners understand concepts more comprehensively. In addition, the structured and easily accessible presentation supports the process of information elaboration, increases active engagement, and facilitates the internalization of the value of infaq and alms in daily life.

Thus, the integration of Problem Based Learning and Microsite ID can be seen as a learning innovation that is relevant to the development of educational technology and the learning needs of the 21st century. This approach is an alternative solution to overcome the low conceptual understanding of learners in infaq and alms materials.

DISCUSSION

The results of this study show that the application of the Problem Based Learning (PBL) learning model assisted by Microsite ID media has a significant impact on the understanding of learners' concepts in infaq and alms materials. These findings are

evidenced by the striking difference in average scores between the experimental class and the control class, where students involved in the digital PBL learning ecosystem show superior cognitive performance. This phenomenon emphasizes that the effectiveness of Islamic Religious Education (PAI) learning in the modern era can no longer depend entirely on conventional lecture methods, but must be transformed into a process that challenges reason and is technology-based. Theoretically, the success of increasing the understanding of this concept can be explained through the lens of social constructivism. The PBL model places students as active subjects who build their own knowledge through interaction with authentic issues that exist in their social environment. In line with the thinking of Salsabila & Muqowim (2024), there is a very strong correlation between Lev Vygotsky's constructivist learning theory and the PBL model, where the problem-solving process allows for the internalization of concepts through discussion and collaboration. In the context of infaq and alms materials, students do not just memorize the postulates, but they are forced to think about how the economic solutions of the ummah can be solved through these instruments of worship. This transforms abstract knowledge into functional knowledge that is easier for learners to understand and remember.

The application of PBL in this study is more effective because it is supported by the use of Microsite ID media. This media acts as an information control center that makes it easier for students to access problem scenarios in a structured manner. Rohmiati (2025) in her study of the opportunities and challenges of digital media in PAI learning emphasized that the use of appropriate media can overcome the limitations of space and time in conveying complex religious materials. Microsite ID in this case acts as a navigation tool that guides students through the stages of PBL from problem orientation to evaluation without making students feel overwhelmed by excessive information. This is closely related to the principle of learning message design which must be able to minimize the cognitive load of learners so that their mental focus is fully poured into the problem-solving process (Astuti & Purnamasari, 2025).

When compared to similar research in the exact domain, such as those conducted by Putri et al. (2024) regarding the application of PBL in mathematics learning, a common thread was found that PBL is consistently able to improve students' analytical skills. However, in PAI materials such as infaq and alms, the novelty found in this study is how affective and cognitive aspects can be integrated. Students are not only intellectually intelligent in distinguishing the harmony and conditions of infaq, but also have social sensitivity because the issues presented in Microsite ID are taken from social realities that touch their empathy. The transformation from simply "knowing" to "understanding" and "aware" is the highest achievement of the conceptual understanding expected in value education.

The excellence of the experimental group is also influenced by the high motivation for learning that arises from the use of innovative learning media. Rohmah & Jatiningsih (2021) stated that there is a close relationship between learning readiness and motivation for learners' learning outcomes. The presence of Microsite ID accessible via mobile devices provides flexibility for students to learn anytime and anywhere, which in turn increases their readiness for the challenges of learning in the classroom. Generation Z learners have a natural tendency to be more interested in digital platforms that have

attractive and interactive interfaces. By tapping into this fascination, psychological barriers to studying religious material that are often considered "heavy" or "old-fashioned" can be significantly minimized.

Furthermore, the group discussion process in the PBL model assisted by Microsite ID facilitates the development of learners' soft skills. As noted by Sani et al., (2025), the development of students' soft skills through collaborative learning programs is crucial in forming characters who are ready to face the challenges of the times. When students discuss to find solutions to the problem of unequal distribution of alms, for example, they learn to communicate, negotiate, and respect the opinions of others. This social-cognitive activity enriches their understanding of the concepts of infaq and alms as collective worship, not just individual worship. Understanding concepts that are built collaboratively tends to be more resistant to forgetfulness because the process of constructing knowledge involves many points of view.

The increase in post-test scores in the experimental group also showed that Microsite ID media was effective in simplifying complex concepts. In the material of infaq and almsgiving, there are many details about the type of property, the provisions of nisab (in the context of its relation to zakat), and the priority of the recipient. Through the presentation of infographics and short videos embedded in Microsite ID, students' cognitive burden in understanding these details becomes lighter. This is in line with the principle of the cognitive theory of multimedia learning which states that the harmonious integration of visual and verbal elements can increase the working memory capacity in processing new information. A good understanding of concepts does not mean providing as much information as possible, but providing quality information that is easy to process by students' thinking schemes.

It is important to highlight the problem orientation phase in PBL that is run in this study. The problems presented through Microsite ID act as the "anchor" of learning. Without relevant issues, digital technology will only be a mere entertainment tool. However, when the problems faced by learners are real problems such as how to manage pocket money for alms in the midst of rising prices of necessities, the concept of infaq becomes very alive. Learners began to associate the concept with Islamic economic principles and social justice. This proves that the success of the PBL model depends heavily on the quality of the problem scenarios designed by the learner, and Microsite ID is a very efficient medium for distributing those scenarios to students personally.

Although this study showed positive results, there were interesting dynamics found during observations in the field. Control groups that used the face-to-face method tended to show faster levels of saturation. This validates the argument that one-way learning makes learners passive and simply puts them as "empty bottles" waiting to be filled with information. On the other hand, in the experimental class, the dynamics of the class look more lively with the debate and independent data search by the learner. These differences in learning environments systematically create disparities in learning outcomes. The understanding of concepts in the control group was superficial because it was only based on short-term memory, while in the experimental group, the understanding of concepts was relational because students understood why and how a concept worked.

The implications of these findings are very broad for the future development of PAI pedagogy. The integration of PBL and digital micromedia such as Microsite ID can become the new standard in designing inclusive and progressive learning implementation plans. The learner no longer serves as the sole source of truth, but as the architect of the learning experience. This research provides strong evidence that when students are given the trust to solve problems with the digital tools they love, they are able to achieve a level of conceptual understanding that goes beyond the minimum standards. This is an important step in creating lifelong learners who are not only cognitively intelligent, but also competent in using technology for the benefit of the people.

Overall, this discussion confirms that the significant influence found was not a coincidence, but the result of careful instructional design. The synergy between PBL as a strategy and Microsite ID as a means has succeeded in creating a transformative learning momentum. Students' understanding of concepts in infaq and alms materials has increased quantitatively in test scores and qualitatively in the depth of problem analysis. These findings are expected to motivate education practitioners to continue to explore the potential of educational technology in strengthening the noble values of religion in the midst of the onslaught of massive digitalization currents. The harmony between Islamic scientific traditions and technological innovation is the main key in producing a superior generation of Muslims in the future.

CONCLUSION

Based on the results of the study, it can be concluded that the application of the Problem Based Learning (PBL) media-assisted Microsite ID has a positive and significant influence on increasing learners' understanding of the concept of infaq and alms materials. This study successfully answered the hypothesis and achieved the research objective by showing a significant difference in achievement between the experimental class that used the media compared to the control class using conventional methods, where the average post-test score of the experimental group (86.07) was much higher than that of the control group (76.69). The findings of the study indicate that the integration of authentic problems with structured digital platforms can help learners understand the meaning of verses, the content of moral messages, and the social relevance of Islamic teachings more comprehensively than just memorization. As a suggestion for further ideas, it is suggested that educators integrate PBL models with similar digital media to encourage active engagement and critical thinking, while researchers can further explore the use of PBL Microsite ID on a wider scope of material or by measuring other 21st century competency variables.

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