



Project-Based Learning's Role in Muhammadiyah Education

Heni Ani Nuraeni

*Corresponding author email: henianinuraeni@uhamka.ac.id

Faculty of Islamic Religion, Muhammadiyah University Prof. Dr. Hamka, Indonesia

Abstract. This study examines the implementation of Project-Based Learning (PjBL) within the context of Muhammadiyah's educational framework, aiming to address the challenges of student passivity and lack of real-world experience. Muhammadiyah, a significant religious organization in Indonesia, emphasizes societal empowerment through various sectors, including education. Despite its active role, educators within Muhammadiyah institutions face hurdles in engaging students with practical, real-world issues, particularly those affecting economically disadvantaged communities. Adopting a qualitative descriptive approach, this research explored the efficacy of PjBL in enhancing student activity by involving them in tasks that address real-world problems, thereby bridging the gap between theoretical knowledge and practical application. Data were collected through observations and interviews with families experiencing economic hardships, revealing that PjBL not only boosts student engagement but also contributes to their understanding and resolution of community challenges. The findings advocate for the broader application of PjBL in Muhammadiyah's educational practices to cultivate more active, experience-rich learning environments.

Keywords: Muhammadiyah, learning model, project-based learning, student activity

1 Introduction

[1] state that the application of knowledge in more or less realistic situations has been proven to be important for the development of complex skills. Skill development theory states that students acquire high levels of expertise in complex problem-solving tasks if they have sufficient prior knowledge and engage in a lot of practice. Practice opportunities ideally cover authentic problems related to the professional field. But in higher and further education programs, opportunities to engage in real-life problem solving are limited. In addition, practicing in real-life situations without systematic guidance can burden learners and pose risks and ethical issues. For example, when working with real students or patients without systematic preparation. Additionally, real-life situations do not always provide sufficient practice opportunities. For example, critical situations arise less frequently or require a significant amount of time before decisions produce observable consequences.

These limitations make practice in real-life situations an inaccessible and sometimes suboptimal learning space, especially for novice learners. In higher education, students need to be prepared for their future professions and their professional competencies must involve a complex set of skills. The importance of 21st century skills goes beyond secondary education and is also frequently discussed in higher and further education. Critical thinking, problem solving, communication, and collaboration appear to be the most relevant skills that learners

must acquire during their education in addition to domain-specific knowledge and skills to be able to make professional decisions and implement solutions [1].

[2] stated that in an educational business, media is a means of conveying messages or information that teachers want to convey to targets or recipients of messages or students. This media is used to convey the presentation of teaching and learning process material, so that students can understand the concepts being explained. Delivery of material using multimedia is more interesting and easy for students to understand. For example, an assignment can be given to students and they are required to be able to present the material in the form of a presentation. Media has been included as a very important component of education in learning. It can be seen that its function is as a teaching tool that can influence students' motivation, conditions and learning environment.

To achieve learning goals, teachers can choose several learning models. One of them is project-based learning (PjBL) which uses problems as the first step in collecting and integrating new knowledge based on students' experiences. In implementing PjBL, media is needed that can facilitate student learning. Teachers can deliver the material in the form of presentations, so that students can understand the concepts being explained. Combining multimedia elements makes the delivery of material more interesting and easy for students to understand. Apart from that, students can also be given assignments and require them to be able to present material in the form of presentations [2].

The project-based learning model (PjBL) is a learning model that involves focusing on meaningful questions and problems. Problem solving, decision making, the process of searching for various sources, providing opportunities for members to work collaboratively, and closing with a real product presentation. The underlying principle is that with these complex activities, most of the learning processes that occur are not well structured. Project-based learning can also increase students' self-confidence, motivation to learn, creative abilities, and self-admiration [3]. Material in the field of education, both religious and general, is very diverse and requires innovation in its delivery so that it is hoped that it can also give rise to creativity in students. This research seeks to explore project-based learning (PjBL) as a learning model for delivering material in the teaching and learning process [2]. The learning model is expected to create student creativity in the learning process. This learning model uses a project or activity as the medium. Students can explore, assess, interpret, synthesize and produce various forms of learning outcomes.

2 Theoretical Basis

2.1. Understanding Project Based Learning (PjBL)

The project-based learning (PjBL) learning model is a learning model that provides teachers with the opportunity to manage learning in the classroom by involving project work. [4] states in his study that, "project-based learning is a methodical approach to teaching and learning that involves students in challenging real-world assignments that produce a finished product or a presentation to an audience, allowing them to learn knowledge and skills that will improve their quality of life." Where project-based learning is a methodical teaching and learning approach that engages students in challenging real-world tasks to create a product or presentation to an audience, and allows them to gain knowledge and skills that help improve the quality of life. Project work is a form of work that contains complex tasks based on very challenging questions

and problems and guides students to design, solve problems, make decisions, carry out investigative activities, and provides students with opportunities to work independently [5].

The project-based learning method is a learning method that refers to philosophical constructivism, namely that knowledge is the result of cognitive construction through student activities which include scientific skills and attitudes so that students can construct their own and meaningful knowledge through real experience. In connection with that matter, Chen & Yang explain as follows, "In the project-based learning process, students must define problems, discuss solutions, develop inquiries, gather and analyze data, and present findings to their peers." So during project-based learning, students must identify problems, discuss solutions, develop questions, collect and analyze data, and present the results to classmates. The project-based learning model has steps that differentiate it from other learning models such as the discovery learning model and the problem-based learning model. The steps for the project-based learning model are as follows:

1. **Determining Basic Questions (Start With The Essential Question)**
This step begins by asking important questions, especially efforts to understand students' knowledge, answers, comments and ideas related to the project topic to be discussed.
2. **Creating a Project Design (Design A Plan For The Project)**
At this stage, students plan the project they will work on. This process is carried out collaboratively with agreement between the teacher and students. This planning can include the rules of the game, selection of activities that will answer important questions, and knowledge of the tools and materials that will be used to complete the project.
3. **Arranging Scheduling (Create Schedule)**
At this stage, the steps and schedule are identified between the teacher and students to complete the project. Once the deadline is met, students can prepare the steps and completion time.
4. **Monitoring Project Progress (Monitoring)**
At this stage, the teacher plays a very important role in monitoring student activities while completing the project. Therefore, it can be said that the teacher acts as a guide or coordinator of student activities. To facilitate the process of monitoring students, teachers can create rubrics that are used to record all activities carried out by students.
5. **Results Assessment (Assess The Outcome)**
This step is taken by teachers to measure standard results and evaluate student progress through assessments. In addition, this assessment is intended to provide feedback on the level of understanding achieved by students and help teachers develop deeper learning strategies.
6. **Evaluation of Experience (Evaluate The Experience)**
This step ends with the educator providing guidance on the project presentation process, then reflecting and summarizing what has been achieved through the educator's observation sheet.

2.2. Muhammadiyah Learning

[5] explained that Muhammadiyah education is a means for delivering Muhammadiyah education. The aim of Muhammadiyah education is of course always related to the outlook on life adopted by the Muhammadiyah organization itself. Muhammadiyah is made a main subject with the aim that it can be observed, understood and appreciated by every student. Apart from that, it is hoped that in the future students will be willing to voluntarily practice various principles of belief and ideals of the Muhammadiyah Association.

There are three main methods of approaching Muhammadiyah learning, namely: (1) Historical approach, (2) Ideological approach, and (3) Structural approach which is closely tied to the scope of Muhammadiyah education. The main aspect in studying Muhammadiyah material through a historical approach focuses on the history of the birth of Muhammadiyah as an Islamic movement, which since its founding in 1912 was a missionary and *tajdid* movement to advance life in accordance with Islamic teachings, so that Muhammadiyah came to be known as an Islamic reform movement in various fields of life in the world. Islam. It contains learning about the background of its founding, history of development, various kinds of charitable efforts, and the results that have been achieved by Muhammadiyah. This approach also studies the special characteristics inherent in Muhammadiyah identity. This characteristic differentiates it from other movements, which have grown and developed in Indonesia and in the Islamic world [6].

2.3. Application of Project-Based Learning in Muhammadiyah

Project-based learning has been applied in the context of higher education. In Islamic universities, several studies report the implementation of project-based learning which facilitates comprehensive learning. That comprehensive learning is needed which includes theoretical and practical material in the field of education through project-based learning. To implement project-based learning in Muhammadiyah learning, real actions in the form of learning projects can be carried out by students and can be reflected in everyday life. This method is quite challenging and is considered an effective tool for actively teaching Muhammadiyah to students because they are encouraged not to depend completely on the teacher, but are directed to learn more independently. Muhammadiyah project work contains complex tasks based on questions and problems that are very challenging and require students to design, solve problems, make decisions, carry out investigative activities, and provide opportunities for students to work independently [7].

Project-based learning requires a comprehensive teaching approach where the student's learning environment needs to be designed so that students can carry out investigations into authentic problems, including deepening material on a subject topic, and carrying out other meaningful tasks. Usually Muhammadiyah project-based learning requires several stages and several durations, not just a series of class meetings, as well as collaborative group learning. The project focuses on developing understanding of Muhammadiyah or performance. In general, students carry out activities: organizing their group learning activities, conducting studies or research, solving problems, and synthesizing information. This is what makes students jump in and understand directly related to Muhammadiyah [8].

3 Research Methods

The approach used in this research is a qualitative descriptive approach, where research findings are interpreted descriptively in an effort to understand reality through an inductive thinking process [9]. In qualitative research, researchers conduct research objectively. Therefore, qualitative research often places a lot of emphasis on processes, events, and authenticity. This research data source is included in the primary data source, where research data is obtained from observations using observer techniques as participants. According to [10] In his study, the participant observation technique involved observers entering the group and

openly stating their identity as observers. This participant observation technique refers to the practice of observing research subjects for a very short period of time, such as conducting structured interviews. The subjects of this research are poor families in the surrounding area.

In obtaining data for this research, researchers went through three stages. First, providing data. At the data provision stage, researchers determined the research population, namely poor families around Jakarta and Bekasi. After that, several student groups were formed to carry out observations and interviews with designated poor families. So four research samples were obtained, namely four poor families from the total research population. After observing and interviewing the research sample, the data was then analyzed to obtain final results. These data are processed qualitatively, so that the results of observations and observations of the poor can be presented descriptively.

4 Results And Discussion

4.1. *Project Based Learning* In Muhammadiyah Learning

The Project-Based Learning (PjBL) learning model has become a very effective approach in the context of modern education. This project-based learning model is used as a tool to bring students closer to the values and goals of Muhammadiyah, and also to understand them better. This model encourages students to actively participate in field da'wah projects, which is an integral part of this learning. The application of project-based learning (PjBL) in Muhammadiyah learning has the main aim of integrating Muhammadiyah values into the student learning experience. Thus, project-based learning (PjBL) is the right method because it emphasizes active participation and project-based learning, which is in accordance with Muhammadiyah values. The steps for the project-based learning model are as follows:

First, determine the basic questions. This step begins by asking important questions, especially efforts to understand students' knowledge, answers, comments and ideas related to the project topic that will be discussed. These questions are designed to stimulate students' critical thinking, encourage them to seek knowledge, and inspire deep discussion. In its application, educators stimulate students' knowledge about problems in the real world that they know about. After the discussion process, it was decided that problems regarding the economy of the poor would be the topic of this project assignment. So that in learning based on Muhammadiyah, students will be invited to empower the poor in the student environment.

Second, create a project design. At this stage, students are actively involved in planning the project they will work on. Collaboration between teachers and students is key in producing relevant and meaningful project designs. As a first step, educators explain the criteria points for poor families who receive assistance. After that, students can ask questions and input so that deliberation occurs in determining these criteria. Furthermore, it was also discussed what assistance would later be distributed to the family so that it could help their economy for a long period of time. Based on the results of deliberations and discussions regarding the empowerment of poor families, each group can select a poor family according to predetermined criteria, as follows:

Table 1. Student Group Project Design

Student Group	Problems of Poor Families	Distributed Assistance
Group 1	A middle-aged woman Live alone Does not have a permanent residence. Just relying on under the bridge as a place to live Low economy	The aid distributed is in the form of basic necessities for the daily needs of poor families.
Group 2	A widow Having short-sightedness Doesn't have a permanent job Low economy	The aid distributed is in the form of basic necessities for daily needs or business capital for poor families.
Group 3	A widow Live alone Does not have a permanent residence. Just relying on under the bridge as a place to live Don't have a job Have a history of chronic diabetes Low economy	The aid distributed is in the form of basic necessities for the daily needs of poor families.
Group 4	A widow Having three children who are still in school requires a lot of money for school Living by relying on a small snack shop business Doesn't have much capital to develop his trading business	The assistance distributed is in the form of purchasing necessities to develop the trading business of the poor.

Third, arrange scheduling. At this stage, the steps and schedule are identified between the teacher and students to complete the project. Students and teachers need to jointly determine deadlines for each stage of the project. This involves determining when each stage starts and ends, as well as determining the date of presentation or delivery of project results. In its implementation, educators and students together discuss the schedule for carrying out empowerment and collecting the results of empowering reports for poor families. After discussion, it was determined that in implementing the empowerment of the poor, the same deadline was not determined between each group. Each group is given the freedom to carry out empowerment according to a schedule made with members of each group. The deadline determined simultaneously is the collection of the results of the empowerment report.

Fourth, monitor project progress. Although in implementing empowerment for the poor, the same deadline is not determined for each group. However, the role of educators still needs to be in place to monitor student activities while completing projects. In this stage, educators act as guides or coordinators of student activities, and through effective monitoring, they can help students achieve the learning goals that have been set. During implementation, educators always ask how the empowerment process for each group is progressing. Apart from that, educators

also provide input and criticism to help each group overcome the obstacles that occur during the project to empower poor families.

Sixth, assessment of results. After carrying out the empowerment process for poor families, each group submitted the results of their report. From the results of these reports, educators can assess the final results of the project and evaluate student progress throughout the lesson. At this stage, we can find out the level of students' understanding of the topic being studied and provide feedback on the level of understanding achieved by students to help educators develop deeper learning strategies.

Finally, evaluate the experience. This step ends with the educator providing guidance on the project presentation process, then reflecting and summarizing what has been achieved through the educator's observation sheet. In addition, this evaluation process is also an opportunity to hear students' opinions about their experiences in project-based learning. The results of this evaluation can be used as a basis for improvements in the implementation of PBL in the future. Educators can identify areas that need improvement in learning design, assessment, or guidance to students. Thus, evaluation of experience is an essential step in the continuous cycle of project-based learning and ensures that education continues to progress towards the desired goals.

2.2. Benefits of Implementing Project-Based Learning (PjBL) in Muhammadiyah Learning

In implementing the project-based learning model, of course there are benefits that can influence Muhammadiyah learning. From these benefits, educators can see whether the implementation of the project-based learning model applied in Muhammadiyah learning can be said to have succeeded in achieving learning objectives or not. These benefits include:

1. A Deeper Understanding of Muhammadiyah

Through participation in field da'wah projects, students can gain a deeper understanding of the values, goals and principles of Muhammadiyah. Through direct experience in preaching and empowering the poor, students become closer to the core of Muhammadiyah's mission. They can understand how important social empowerment is in Muhammadiyah's view and how values such as justice, togetherness and caring are realized in field da'wah practices. Thus, student participation in field da'wah projects is not just an academic assignment, but also a valuable opportunity to deepen their understanding of Muhammadiyah, enrich their perspective on religious values, and imbibe social empowerment in real practice.

2. Practical Skills Development

Field da'wah projects provide opportunities for students to develop practical skills, such as communication, collaboration, and problem solving, which are highly relevant to the Muhammadiyah context. They have to interact with various parties, including poor groups, teammates and the general public. This involves the skills of speaking, listening, and explaining ideas effectively. Strong communication skills are very important in the Muhammadiyah context. Apart from that, field da'wah projects also improve students' collaboration skills. They learn to work as a team, share responsibilities, and overcome challenges together. Good collaboration is the key to success in field preaching, and students get a valuable opportunity to understand the dynamics of team work and hone their ability to work in groups.

3. Empowerment of the Dhuafa

PBL not only benefits students but also makes a positive contribution to society by empowering the poor through field da'wah projects. One important aspect of empowering

the poor is helping them improve their economic level. Through PBL projects, students can design economic assistance programs, such as small business development, providing business capital, or financial management training. This can help the poor to become more economically independent. Field da'wah projects can also be used to increase education and awareness of the poor about various social issues. PBL helps students design these programs with a participatory approach that involves the poor in the learning process.

In the context of Muhammadiyah learning, the implementation of the Project Based Learning (PBL) learning model has proven successful in helping students understand and get closer to the values of Muhammadiyah. PBL enables students' active participation in field da'wah projects, which not only increases their understanding of Muhammadiyah but also empowers them to make a positive impact on society. Thus, PBL becomes a very relevant tool for providing in-depth and meaningful learning experiences in understanding and applying Muhammadiyah concepts.

5 Conclusion

Muhammadiyah is a religious organization that adheres to *amar ma'ruf nahi munkar* and plays an active role in empowering society in the fields of religion, education, health, economics and other social aspects. Based on this description, it can be seen that Muhammadiyah has introduced problems that exist in the real world to members of its organization. This is also applied in Muhammadiyah learning at the tertiary level. Students are invited to look closely at problems that exist in the real world, especially economic problems for the poor. However, in the Muhammadiyah learning process, there are several challenges faced by educators. The challenge that occurs is the lack of activeness and experience of students to deal directly with problems in the real world

Knowing the problems that occur, to achieve learning goals, educators can choose several learning models. One learning model that can be offered as a solution to this challenge is project-based learning (PjBL) which uses problems as the first step in collecting and integrating new knowledge based on students' experiences. Muhammadiyah project work contains complex tasks based on questions and problems that are very challenging and require students to design, solve problems, make decisions, carry out investigative activities, and provide opportunities for students to work independently. For this reason, the application of the project-based learning model in Muhammadiyah learning is very necessary for the continuity of learning and teaching activities.

References

- [1] O. Chernikova, N. Heitzmann, M. Stadler, D. Holzberger, T. Seidel, dan F. Fischer, "Simulation-based learning in higher education: A meta-analysis," *Review of Educational Research*, vol. 90, no. 4, pp. 499–541, 2020.
- [2] A. S. Lestari, "The development of web learning based on project in the learning media course at IAIN Kendari," *Journal of Islamic Education*, vol. 5, no. 1, pp. 39–52, 2019.
- [3] N. Hakim, "Implementation of Project-Based Learning Combined with Group Investigation to Increase Motivation and Learning Outcomes of Biology Education Students at the University of Muhammadiyah Malang," *Biodic Journal*, vol. 1, no. 1, 2015.
- [4] C.-H. Chen dan Y.-C. Yang, "Revisiting the effects of project-based learning on students'

- academic achievement: A meta-analysis investigating moderators," *Educational Research Review*, vol. 26, pp. 71–81, Jan. 2019. [Online]. Available: <https://doi.org/10.1016/j.edurev.2018.11.001>
- [5] T. Fannani, "Development of Multimedia Learning Media Based on Project-based Learning in Muhammadiyah Education Lessons for Class X Students of SMA Muhammadiyah 1 Gresik," *Tamaddun*, vol. 19, no. 2, pp. 157–166, 2018.
- [6] R. Untari, W. Kamdi, A. Dardiri, S. Hadi, dan D. Nurhadi, "The Development and Application of Interactive Multimedia in Project-Based Learning to Enhance Students' Achievement for 2D Animation Making," *International Journal of Emerging Technologies in Learning (IJET)*, vol. 15, no. 16, pp. 17–30, 2020.
- [7] S. Sutrisno dan J. A. Nasucha, "Islamic Religious Education Project-Based Learning Model to Improve Student Creativity," *At-Tadzkir: Islamic Education Journal*, vol. 1, no. 1, pp. 13–22, 2022.
- [8] M. N. Adlini, A. H. Dinda, S. Yulinda, O. Chotimah, dan S. J. Merliyana, "Qualitative Research Methods Literature Study," *Edumaspul: Journal of Education*, vol. 6, no. 1, pp. 974–980, 2022. [Online]. Available: <https://doi.org/10.33487/edumaspul.v6i1.3394>
- [9] H. Hasanah, "OBSERVATION TECHNIQUES (An Alternative Method for Collecting Qualitative Data in the Social Sciences)," *At-Taquaddum*, vol. 8, no. 1, p. 21, 2016. [Online]. Available: <https://doi.org/10.21580/at.v8i1.1163>
- [10] P. Guo, N. Saab, L. S. Post, dan W. Admiraal, "A review of project-based learning in higher education: Student outcomes and measures," *International journal of educational research*, vol. 102, p. 101586, 2020.

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