

The Role of digital Based Learning (PBL) Technology in Islamic Learning in the Kurikulum Merdeka

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Abstract:

The Role of Technology in Problem-based Learning for Quality Islamic Religious Education within the scope of the Independent Curriculum (Kurikulum Merdeka), a new curriculum implemented in the education system in Indonesia, involves training students to solve problems. Using the Problem-Based Learning model can enhance students' critical thinking skills, especially in problem-solving. This research employed a qualitative approach, a process to sift through words whose key elements could be extracted and developed, focusing on discussing the implications of technology in Islamic religious education in the era of digitization. The analysis aimed to understand the implications of technology on Islamic religious education, especially in the current era of strong digitization, progress, technological advancements, and modernization, where approximately 60% of life relies on technology. Thus, the significant role that can make Islamic Religious Education quality is through technology-based Problem-Based Learning. This research analysis focuses on the context of quality Islamic Religious Education. Data required for this study were gathered through observation and data analysis, news, opinions, and journals from official websites. This research explains that with technology integration, Islamic Religious Education becomes a quality learning experience, further enhanced by the current independent curriculum, which allows students to choose their interests and talents freely, provided teachers guide and monitor them. The

advancements in Information and Communication Technology have facilitated numerous changes, including the emergence of Problem-Based Learning in the field of education.

Keywords: Technology, Islamic Religion, Quality Education, Independent Curriculum

Introduction

Islam is a universal religion, commonly known as rahmatan lil 'alamiin (a mercy to the world). Islam is deeply concerned with education. Education holds an immensely strategic position in the effort to build the civilization of humanity. Islamic education is based on the Qur'an, Hadith, and reason. These foundations must be sequential, with the Qur'an foremost as the source of all sources. If something is not found or unclear in the Qur'an, it should be sought in the Hadith. If it is still unclear or not found in the Hadith, reason (thinking) should only be employed. However, the findings of reason must not contradict the essence of the Qur'an or the Hadith.

Nowadays, the world has developed rapidly and quite well, particularly in the field of technology. In Islamic religious education, we can leverage technology to explore knowledge from various sources. However, there are fundamental challenges, namely the improvement of quality and the expansion of learning opportunities through the utilization of educational technology. This is

because not all places or regions can adapt to technology effectively. Therefore, not all education can progress when technology becomes a tool for efficient and effective learning. To address various issues in the field of education, both currently and in the future, various methods of utilizing media and technology for education are needed.

In this regard, at least two things need to be considered:

1. The use of media and technology in the overall education process. Can media and technology create quality education? Essentially, it involves the delivery system as a tool for conveying what is in this independent curriculum.
2. The role of media and technology in the entire education process, being able to achieve educational goals. Considering Indonesia's geographical conditions and the scarcity of teachers, the potential use of media and technology for education needs to be studied and developed to ensure equal learning opportunities.

Although globalization has brought significant changes to the societal environment in the application of technology, especially in Islamic education, it has affected performance quality and increased community resources. By daring to step out of the comfort zone and embrace new teaching methods, the introduction of Islamic education into the life guide of the millennial generation has been achieved without compromising its values.

In Indonesia, specifically, there is a new curriculum known as the Independent Curriculum (*Kurikulum Merdeka*). The curriculum holds a highly strategic position and elaborates the vision, mission, and objectives of education within educational institutions. A curriculum is a collection of courses or a large number of academic subjects organized systematically to provide a specific program for completing a degree. It is a planning document that contains information about the goals to be achieved, the materials and learning activities to be completed by teachers, the strategies and methods that can be used, the evaluation to be conducted to collect data on goal achievement, and the implementation of the document that must be evaluated appropriately.

In the current era of globalization, competitiveness and the need to outperform in the education sector require innovative learning systems based on information technology. Project-based learning (PBL) is a learning model that uses projects or activities as a medium. According to the Ministry of Education and Culture (Kemdikbud, 2013), learners engage in exploration, assessment, interpretation, synthesis, and information processing to produce various forms of learning outcomes. Therefore, several types of digital era technologies can be utilized in education, including:

1. E-learning: This technology enables students and teachers to access learning materials through digital platforms, such as websites, applications, or e-books.
2. Mobile learning: This technology allows students and teachers to access learning materials through mobile devices, such as smartphones or tablets. (Nurdin, 2016)

We can use these two types in Islamic education, such as in schools implementing the Independent Curriculum. For example, students may be assigned a task to explore what *Isra' Mi'raj* (Night Journey and Ascension of Prophet Muhammad (peace be upon him)) is. In this case, students can expand their knowledge by utilizing E-learning searching for reliable sources on websites or e-books. Additionally, Mobile learning can be used when the teacher wants to convey or add supplementary materials that may not have been covered in class. In this way, the teacher can use mobile learning to deliver the content, allowing students to access it easily, anywhere and anytime.

Aligned with the Islamic ideals that form the foundation of Islamic education, the priority of Islamic education activities should be directed toward achieving the goal of producing graduates who possess a broad and comprehensive understanding of Islamic teachings. These graduates should be capable of applying these teachings according to the student's age level and the developments of the times. Given the numerous challenges posed by technological advancements in this era of globalization, it is crucial to be wise in utilizing these evolving technologies. With the Independent Curriculum, students should be able to make the most of these learning opportunities. Certainly, guidance and direction from a teacher are essential in this process.

Research Questions: 1) What is the role of technology-based learning in the quality of Islamic religious education? 2) How are quality models and learning media incorporated into the Independent Curriculum using technology-based learning in education? Research Objectives: 1) To determine the role and technology-based learning media that will be applied to enhance the quality of Islamic religious education; 2) To elucidate quality models and learning media based on technology in the context of Islamic religious education, especially in the era of the Independent Curriculum.

Research Method

This research employed a qualitative approach, a process for sifting through words, where the key elements could be extracted and developed. The focus was on discussing the implications of technology in Islamic religious education in the era of digitization. The goal of the analysis was to understand the various forms of technological implications on Islamic religious education, especially in the era of strong digitization, progress, technological ubiquity, modernization, and globalization, where approximately 60% of life relied on technology. Therefore, it was crucial and necessary for us to be wise in using technology in accordance with our needs. The research focus in this analysis is in the context of Islamic religious education. The data required for this study was gathered through observation and data analysis, news, opinions, and journals from official sites, including <https://kurikulum.kemdikbud.go.id/>. This research aimed to explain that with the presence of technology, Islamic religious education became a quality learning experience, especially with the Independent Curriculum that greatly assisted students in freely choosing their learning path. However, it is important to note that students need guidance and attention from teachers.

Result and Discussion

1. Quality Education Through Technology-Based Learning

Technology in education serves as a vessel to facilitate the learning process, enabling it to be used as a learning source to establish efficient and effective education. This educational technology has the ability to simplify the independent learning program. In line with this, educational technology can enhance education within the educational domain. The role of technology in education is as follows: (Mardiana et al., 2021)

- a. Can enhance teaching standards by supporting teachers in allocating their time efficiently, advancing the learning process, and reducing lecture-based activities to engage students more actively.

- b. Identifying answers for personalized learning that, for instance, allows students to explore their interests, abilities, and potentials while still under the guidance of educators.
- c. Fundamental ideas of scientific education are implemented through systematic program planning and the creating of teaching materials based on scientific ideas.
- d. Can provide specific teaching insights to educators to maximize existing competencies.
- e. Prioritizes the quality of education.

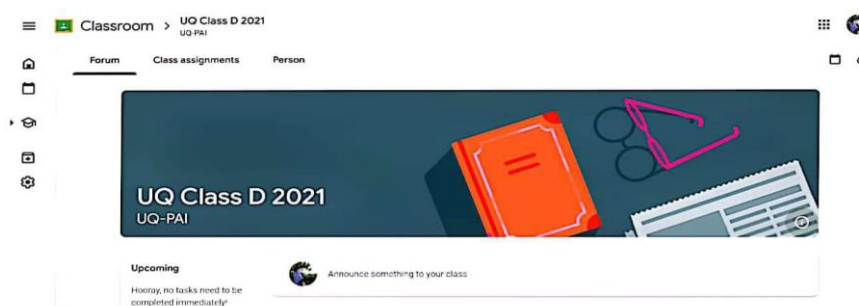


Figure 1. Google Classroom

This application can be utilized in the field of technology education (Google Classroom), which serves as a platform for various comprehensive teaching and learning activities.

The above e-learning platform can be used during online classes. Educators can easily organize assignments and grades. This is one of the quality learning-based on learning platforms. Educators can monitor students' academic progress anywhere and anytime, providing guidance remotely (Utara, 2023)

Quality Improvement Strategies and Measurement Methods in Islamic-Styled Leading Schools sometimes experience ups and downs. Therefore, in order for these schools to remain existent, resilient, and capable of responding to the needs of society in every era, they must have effective quality improvement strategies and measurement methods. One of the learning models is based on the application that students can use for quality learning, especially in Islamic religious education.

Basically within the Institution responsible teacher education completely regarding everything related with their students. A teacher must able to have a strategy in each lessons in increasing interest in learning students, especially Religious Education teachers Islam is a good role model to students, and at the same time responsible for cultivating enthusiasm learn it. Islam commands that teachers not just teaching, but more in-depth to educate. Especially deep increase interest in learning. Therefore, there are applications that support learning that can be accessed anywhere easily and not boring because they use software such as cellphones and iPads. (Qoridah & Dartim, 2023)

Local-based learning applications that can be utilized as a quality Islamic religious education learning media. It can be used and accessed anytime and anywhere. The presence of local applications that facilitate learning can be done anywhere. It can broaden the perspective of Islamic religious education in a good and quality manner. Where students not only acquire knowledge at school but can also utilize educational technology anywhere and anytime. This is evidence or one

example of the quality of Islamic religious education in an era where technology is rapidly advancing.

To improve the quality of education in Indonesia, the Minister of Culture has implemented the Freedom to Learn (*Merdeka Belajar*) program. The concept of Merdeka Belajar (Freedom to Learn) was initiated by Mr. Nadiem Anwar Makarim with the hope that it could enhance personalities in line with cultural values, making individuals faithful and devout to the One Almighty God, healthy, good character, competent, knowledgeable, innovative, creative, independent, and contributing to a democratic and responsible society (Info & Novibriawan, 2023).

According to Mustaghfiroh, Freedom to Learn (Merdeka Belajar) is freedom of thinking that specifically allows policy adjustments to restore the essence of learning assessments (Aminudin, 2014). Freedom to Learn is one of the efforts to create quality education. It is designed to shape learning in the present time. Freedom to Learn is a strategic government policy that supports the program's implementation, with accreditation procedures tailored to organizational needs.

Islamic religious education in schools can be of high quality because teachers can incorporate technological adaptation within the scope of the Independent Curriculum. Students will be presented with problem-based learning, such as searching for the rules of Tajwid in a specific Surah in the Quran. Learning Tajwid through applications becomes more engaging for students due to the inclusion of photos and videos, making it easier to understand, especially for students who tend to get bored easily.

If we look at the previous research, namely the effectiveness of Islamic applications conducted by involving 85 respondents from the Muslim Generation Z through an online survey, it involved data on features or facilities in Islamic applications with the results of the previous research survey:

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Table 1. Data On Features Or Facilities In Islamic Applications Used By Generation Z (Ari Hartawan ET AL., 2022)

NO.	Feature	Number of User Respondents
1.	Quran Reading	67
2.	Prayer Schedule/Reminder	39
3.	Murattal Quran	29
4.	Qibla Direction Indicator	21
5.	Quran Tajwid	2
6.	Recitation of Maulid Diba	2
7.	Dhikr (Remembrance of Allah)	1
8.	Collection of Duas (Prayers)	2

We can observe the results of the previous research survey, indicating that the above is an example of the lack of maximum implementation for student users in Islamic applications, particularly in the field of Quran *Tajwid* features. However, the importance of *Tajwid* knowledge for us in worship is crucial, as it is obligatory to apply *Tajwid* when reading the holy book of the Quran.

As we know, all students are millennials or the younger generation, distinguished by their familiarity with and use of digital technology, media, and communication on a larger scale. While becoming smart, millennials in the "current era" need to uphold moral values, and students must cultivate good manners and politeness. The young Muslim generation, bound by the perspective that faith and modernity can coexist, should strive to maintain moral integrity in this digital age.

From the Islamic perspective, upholding the Sharia based on a strong foundation of faith produces virtuous values. Therefore, it is doubtful that someone with noble aspirations will emerge if they are unaware of the importance of correct faith (*aqidah*) and Sharia in their lives. Education generally means demonstrating the growth of character (inner strength, moral qualities), intellect (intellectual capacity), and a child's body. The foundation of ethics or character is crucial because humans, as social beings, cannot be separated from their social environment. Morality is prioritized over intellect because many individuals are intelligent but lack a strong moral foundation.

Therefore, the role of technology in problem-based learning is crucial for students to foster not only academic development but also the refinement of their character in accordance with Islamic beliefs and Sharia, as taught and explained in the holy book, the Quran. Especially in the era of the "Merdeka" curriculum, students will innovate and learn independently to solve learning problems using applications and the evolving technology of the present time (Gussevi & Muhfi, 2021)

Furthermore, there is a more engaging and efficient learning approach for students, with a more interesting and high-quality learning model or media that trains students' creativity in learning through game-based methods suitable for all ages, such as Quizizz (Pelajaran et al., 2021).

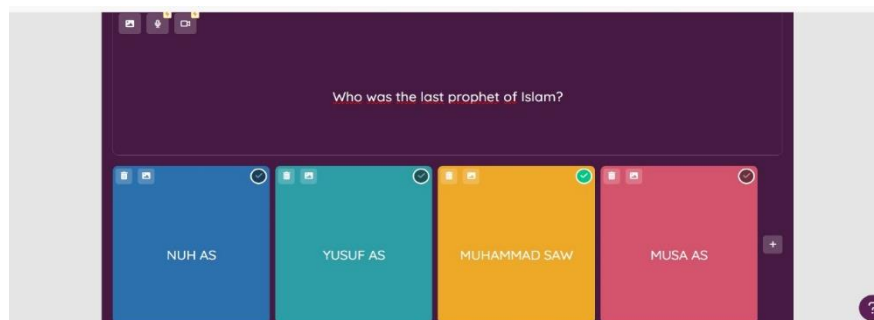


Figure 2. Quizizz Online

Quizizz is an online application for creating interactive quiz games that can be used in both classroom and extracurricular learning. This application is accessible through the Play Store or the web, and learning with Quizizz can also be an alternative for teachers to prevent students from getting easily bored.

To inspire students to learn, observe how the level of student activity has grown in previous studies, given the fact that in online learning through the educational game Quizizz, its implementation combines learning and is conducted as a multi-game activity. In addition to being user-friendly and providing quick result procedures, the Quizizz application allows educators to assess how well their students understand the subject matter. It makes learning more enjoyable, interactive, and effective (Suharsono & Budiarto, 2018).

The advancement of Information and Communication Technology has driven numerous changes, including in the field of education, giving rise to the concept of e-learning. With e-learning, learning becomes more effective and efficient. Information and Communication Technology also greatly enables its utilization in religious-focused schools, such as madrasahs (school), secondary-level madrasahs (junior high school), and high-level madrasahs (senior high school).

The presence of technology provides students and teachers with various benefits, including the flexibility of educational programs, Islamic propagation (*da'wah*), and study materials that can be made more engaging and impactful. The integration of information and communication technology in education enhances the quality of education and facilitates Islamic propagation. The impact of technology integration in Islamic religious education is an improvement in the quality of Islamic religious education learning and the quality and attractiveness of propagation studies. (Primadoniati et al., 2020)

Students can be guided and directed by teachers in the use of technology for quality learning. Introduce them to age-appropriate e-learning applications tailored to their subjects and the current era. This enables them to learn anywhere and anytime, making it practical, efficient, and high-quality. Especially with the Independent Curriculum, they are given the freedom to learn not only monotonous classroom materials but also various freedoms in learning. They can choose their interests and talents and engage in more practical activities rather than just theory.

Various digital learning media are extensive and diverse, allowing students to enjoy the practicality of e-learning in the problem-based learning (PBL) model and enabling teachers to have digital tools that assist and affect the development of teaching quality. One such application is the

Independent Curriculum, which can be downloaded from the Play Store and used on mobile phones or computers.

The Freedom to Learn (Merdeka Belajar) Platform provides references for teachers to develop teaching practices in accordance with the Independent Curriculum. In the Teaching feature, there is a Teaching Tool feature that can be used by teachers and educational staff to enhance their professional development.

Digitalization features can assist teachers in enhancing the quality of Islamic religious education. These features have numerous references to active, innovative, and creative learning activities. Consequently, teachers can boost students' interest in learning, leading to a higher quality of education. This goes beyond learning models focused solely on text within books, as it can leverage technological adaptation and educational digitalization features with a problem-based learning (PBL) model (Assegaff & Sontani, 2016).

2. Quality Islamic Religious Education With Technology (PBL) In The Era Of The Independent Curriculum

The Independent Curriculum Provides Teachers And Students With The Flexibility For Quality Learning.

Table 2. Characteristics Of The Independent Curriculum (Journal et al., 2022)

Development of Soft Skills and Character	Development through Pancasila student profile project
Focus on Essential Materials	To build innovation and creativity
Flexible Learning	In accordance with the level of achievement and adjustment to the context and local content.

In the Independent Curriculum, education is based on the essence of learning, recognizing that each child is unique and has their own talents, passions, and interests. Therefore, the benchmarks applied to assess each learner with different interests are different. Consequently, each child cannot be standardized. They cannot be forced to learn all learning materials or be compelled to excel in every field.

The Independent Curriculum provides space for freedom in developing ideas in learning. The teacher's ability must be developed to manage learning, which becomes crucial in independent learning. With this, teachers can utilize technology and the problem-based learning model (Jumadi, 2018) in learning activities. Leveraging effective and efficient learning technologies and applications for use in the era of the Independent Curriculum.

The learning model is a conceptual framework used to guide systematic learning to achieve learning objectives related to syntax, social systems, reaction principles, and supporting systems (Joice & Wells) (MUJIBURRAHMAN et al., 2023). Additionally, a learning model is a teaching method employed by educators when instructing students in a particular subject (material), and the choice of models needs to be adapted to the subject matter initially.

Steps of the Project-Based Learning Model

Stage 1: Project Determination

The educator delivers the theoretical topic, followed by students asking questions about how to solve problems. In addition to posing questions, students must also identify suitable steps in problem-solving.

Stage 2: Planning Project Completion Steps

The educator groups students according to the project creation procedure. In implementing effective communication, the educator demonstrates cognitive dissatisfaction. Subsequently, students engage in problem-solving through discussions and even direct field involvement.

Stage 3: Project Implementation Schedule Development

Determining the steps and schedule for project completion is done collaboratively between the educator and students. After setting a deadline, students can arrange the steps and schedule for implementation (Anggraini & Wulandari, 2021).

PBL PROSESS

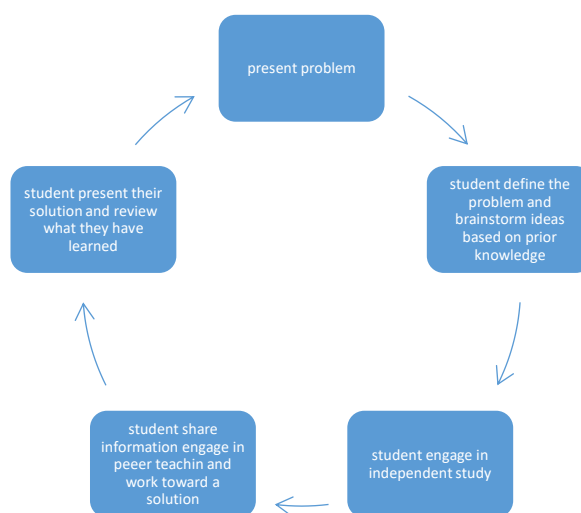


Figure 3. PBL Proses

Conclusion

The research highlights the crucial role of technology in education, aiming to enhance teaching effectiveness, foster personalized learning, and improve the quality of education. Educational technology supports teachers in managing time efficiently, reducing lecture-based activities, and creating engaging learning environments. It also helps personalize learning experiences, allowing students to explore their interests and potential under the guidance of educators. Moreover, technology facilitates the integration of scientific concepts into teaching and enhances teacher competencies through platforms like Google Classroom, Quizizz, and local Muslim life applications. In Islamic religious education, technology plays a vital role in making learning more engaging, impactful, and modern, while also improving accessibility and student learning outcomes. The research suggests that the adoption of innovative learning models, such as Problem-Based Learning

(PBL), and the effective use of digital tools can significantly enhance educational standards, especially in Islamic-themed schools. Future research could explore the effectiveness of these technologies in improving student engagement, teacher development, and making education more inclusive and accessible, particularly in resource-limited regions, as well as the impact of automation in educational tasks.

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