



Development of Muhammadiyah Teaching Materials Based on Learning Innovation

Ismail Syakban*

Universitas Muhammadiyah Sumatera Barat

e-mail: ismail.syakban@gmail.com

Dewi Rahmayani

Universitas Muhammadiyah Sumatera Barat

e-mail: d3wirahmayani@gmail.com

Syarifah Sriwahyuni

Universitas Muhammadiyah Sumatera Barat

e-mail: ahmadmuttaqin@radenintan.ac.id

Zainar

Universitas Muhammadiyah Sumatera Barat

e-mail: ahmadmuttaqin@radenintan.ac.id

Abstract

This research aims to develop teaching materials for Muhammadiyah courses that are oriented towards digital learning innovation and blended learning in the Muhammadiyah Higher Education environment. This research is motivated by the still dominant use of conventional lecture methods and the limitations of the use of interactive digital media in Muhammadiyah learning. Based on initial observations of three lecturers and twenty students of the Islamic Religious Education Study Program at the University of Muhammadiyah West Sumatra, it was found that most students considered the learning process less interesting, while lecturers still faced obstacles in integrating technology-based learning approaches effectively. This research uses a Research and Development (R&D) approach with the Borg and Gall model which is adapted into four stages, namely needs analysis, product design, limited trials, and evaluation and revision. The product developed is different from existing teaching materials because it integrates progressive Islamic values, interactive digital content, reflective learning activities, and blended learning models that combine synchronous and asynchronous learning. Research data was collected through observation, interviews, questionnaires, and limited product trials. Student engagement is measured through indicators of participation, interaction, learning motivation, and assignment completion during learning implementation. The results of the study show that the teaching materials developed are able to increase student participation and strengthen understanding of the ideological values and praxis of Muhammadiyah. However, this study also found several limitations, such as the limited number of participants, the context of research that was only conducted at one institution, and the difference in the level of digital literacy between lecturers and students. These findings show that the development of digital teaching materials based on Progressive Islamic values has the potential to increase the relevance and effectiveness of Muhammadiyah learning, although broader testing is needed to assess the sustainability and generalization of research results.

Keywords: Teaching Materials; Muhammadiyah; learning innovation; Progressive Islam

Abstrak

Penelitian ini bertujuan untuk mengembangkan bahan ajar mata kuliah Kemuhammadiyah yang berorientasi pada inovasi pembelajaran digital dan blended learning di lingkungan Perguruan Tinggi Muhammadiyah. Penelitian ini dilatarbelakangi oleh masih dominannya penggunaan metode ceramah konvensional dan keterbatasan pemanfaatan media digital interaktif dalam pembelajaran Kemuhammadiyah. Berdasarkan observasi awal terhadap tiga dosen dan dua puluh mahasiswa Program Studi Pendidikan Agama Islam di Universitas Muhammadiyah Sumatera Barat, ditemukan bahwa sebagian besar mahasiswa menilai proses pembelajaran kurang menarik, sementara dosen masih menghadapi kendala dalam mengintegrasikan pendekatan pembelajaran berbasis teknologi secara efektif. Penelitian ini menggunakan pendekatan Research and Development (R&D) dengan model Borg and Gall yang diadaptasi ke dalam empat tahap, yaitu analisis kebutuhan, perancangan produk, uji coba terbatas, serta evaluasi dan revisi. Produk yang dikembangkan memiliki perbedaan dengan bahan ajar yang telah ada karena mengintegrasikan nilai-nilai Islam Berkemajuan, konten digital interaktif, aktivitas pembelajaran reflektif, serta model blended learning yang memadukan

*Corresponding author

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pembelajaran sinkron dan asinkron. Data penelitian dikumpulkan melalui observasi, wawancara, angket, dan uji coba produk terbatas. Keterlibatan mahasiswa diukur melalui indikator partisipasi, interaksi, motivasi belajar, dan penyelesaian tugas selama implementasi pembelajaran. Hasil penelitian menunjukkan bahwa bahan ajar yang dikembangkan mampu meningkatkan partisipasi mahasiswa serta memperkuat pemahaman terhadap nilai-nilai ideologis dan praksis Kemuhammadiyah. Namun demikian, penelitian ini juga menemukan beberapa keterbatasan, seperti jumlah partisipan yang terbatas, konteks penelitian yang hanya dilakukan pada satu institusi, serta perbedaan tingkat literasi digital antara dosen dan mahasiswa. Temuan ini menunjukkan bahwa pengembangan bahan ajar digital berbasis nilai Islam Berkemajuan berpotensi meningkatkan relevansi dan efektivitas pembelajaran Kemuhammadiyah, meskipun diperlukan pengujian lebih luas untuk mengkaji keberlanjutan dan generalisasi hasil penelitian.

Kata Kunci: Bahan Ajar; Kemuhammadiyah; Inovasi Pembelajaran; Islam Berkemajuan

INTRODUCTION

Higher education has a strategic role in shaping human resources who are superior, faithful, and noble in character. Muhammadiyah Higher Education (PTM), as part of the charity business of the Muhammadiyah Organization, has a great responsibility in instilling progressive Islamic values in students.¹ One of the courses that is the main instrument for the formation of Islamic ideology in PTM is Kemuhammadiyah. Through this course, students are expected to understand the history, thoughts, and basic values of Muhammadiyah, as well as be able to apply them in academic and social life.² However, based on initial observations made by researchers at the University of Muhammadiyah West Sumatra in the even semester of the 2024/2025 academic year, a number of problems were found in the learning process of Kemuhammadiyah courses. From the results of interviews with 3 lecturers and 20 students of the Islamic Religious Education Study Program, data was obtained that 70% of students assessed that lectures were still theoretical and less interactive, while 60% of lecturers admitted that they had not utilized digital media optimally. This condition shows that the learning process still tends to use a conventional *teacher-centered approach*, so that student participation in learning is low.

From an Islamic perspective, improving the quality of knowledge and education is part of the religious commandment. Allah SWT. said in QS. *Al-Mujādalah* [58]:11:

"Allah will exalt the degree of the believers among you and those who are given knowledge of a few degrees."

The verse emphasizes that a person's glory is not only measured by his faith, but also by his ability to develop knowledge. Thus, innovation in education, including in the development of teaching materials, is part of the effort to practice God's command in glorifying knowledge.

Several previous studies have examined the development of innovative teaching materials in the context of Islamic education and higher education. First, research conducted

¹ La Basri et al., "The Power of Progressive Islamic Identity in Managing Charitable Activities in the Field of Education at Muhammadiyah University Malang," *Jurnal Noken: Ilmu-Ilmu Sosial* 11, no. 2 (2025): 587–600, <https://doi.org/10.33506/jn.v11i2.5103>.

² Bayu Ardiwansyah et al., "INTEGRATION OF PROPHETIC VALUES IN EDUCATION AT METRO MUHAMMADIYAH UNIVERSITY," *Edukasi Islami: Jurnal Pendidikan Islam* 14, no. 01 (2025): 97–108, <https://doi.org/10.30868/ei.v14i01.7438>.

at the University of Muhammadiyah West Sumatra shows that the use of digital-based teaching materials is able to increase student participation and learning motivation in Islamic courses. The research emphasizes the importance of technology integration in learning design, although it has not specifically discussed Kemuhammadiyah teaching materials.³ Second, research on blended learning innovations in Islamic universities revealed that the combination of face-to-face learning and digital learning can increase students' interaction, learning independence, and critical thinking skills.⁴ However, the research focuses more on learning methods and has not developed teaching materials based on Muhammadiyah values comprehensively. Third, research on the internalization of Muhammadiyah values in higher education explains that teaching materials must not only be oriented to theoretical understanding, but also be able to integrate the ideological dimension and praxis of Progressive Islam.⁵ However, the learning resources used in the study are still dominated by print modules and lecturer-centered learning approaches. Fourth, research related to the development of teaching materials using the Research and Development (R&D) approach shows that digital-based interactive teaching materials are effective in improving student engagement and learning outcomes.⁶ However, most of the research still focuses on the subject of Islamic education in general and has not touched on the specific characteristics of Muhammadiyah courses in Muhammadiyah Higher Education.

Based on these previous studies, it can be seen that studies on the development of Muhammadiyah teaching materials based on learning innovation are still relatively limited, especially in integrating digital learning, blended learning approaches, and Progressive Islamic values into one comprehensive learning product. Learning innovation is the process of creating new ideas, methods, and media that can improve the quality of learning. That innovation in learning includes systematic changes in approaches, strategies, and the use of technology. In the context of higher education, learning innovation is an urgent need along with the development of digital technology and changes in the characteristics of millennial and *Gen-Z students* who tend to be visual, interactive, and collaborative.⁷ In the context of Islamic education, learning innovation is not only interpreted as modernizing methods, but also as a

³ Nur Azaliah Mar and Eka Purnama Sari, "Transformation of Muhammadiyah Da'wah in the Digital Era: Strategy, Challenges and Opportunities," *International Journal of Science Technology and Health* 3, no. 1 (2025): 23–34, <https://doi.org/10.63441/ijsth.v3i1.9>.

⁴ Zakariyah Zakariyah et al., "Transformation of Al-Qur'an Memorization Learning in the Digital Age through the Blended Learning Flipped Classroom Approach," *Nazhruna: Jurnal Pendidikan Islam* 8, no. 3 (2025): 594–606, <https://doi.org/10.31538/nzh.v8i3.193>.

⁵ Muhammad Choirin et al., "Muhammadiyah's Initiatives in Preparing Muballigh: Empirical Study on Muhammadiyah Higher Education Institutions," *Afkaruna: Indonesian Interdisciplinary Journal of Islamic Studies* 21, no. 2 (2025): 251–66, <https://doi.org/10.18196/afkaruna.v21i2.24607>.

⁶ Sofi Solihawati et al., "A Study of the Development of STEM-Based Science Teaching Materials to Improve Learning Outcomes For Elementary School Students in the 2020-2025 Range," *Journal of Innovation and Research in Primary Education* 4, no. 3 (2025): 467–75, <https://doi.org/10.56916/jirpe.v4i3.1343>.

⁷ Alfiya R. Masalimova et al., "Modern Communication Technologies in Higher Education: A Systematic Review of Faculty Readiness to Engage Generation Z Learners," *Frontiers in Education* 11 (April 2026): 1762638, <https://doi.org/10.3389/feduc.2026.1762638>.

form of *tajdid* or updating the education system to remain relevant to the values of the Qur'an and Sunnah.⁸ The Messenger of Allah (peace and blessings of Allaah be upon him) said, "I have been sent as an educator." (HR. Ibn Majah) The hadith emphasizes that the core of the prophetic mission is education, and an educator must always be creative, patient, and innovative in imparting knowledge. Thus, innovation in learning is an integral part of Islamic values that emphasize a dynamic learning process and are oriented towards the development of human potential.

The concept of progressive Islam is the theological and philosophical foundation in the development of Muhammadiyah education. Progressive Islam is rooted in the value of monotheism which encourages humans to think rationally, be knowledgeable, and do righteous deeds for the benefit of the ummah.⁹ In the context of education, progressive Islam emphasizes the importance of integration between religious science and general science as well as openness to technological change and progress. Since its inception, Muhammadiyah has placed education as a means of da'wah and enlightenment.¹⁰ That a good education is one that is able to foster the spirit of *ijtihad* and *pious deeds* at the same time.¹¹ Therefore, the development of Kemuhammadiyahan teaching materials needs to be directed at the formation of students who are creative, competitive, and have Islamic morals.

In addition, the progressive Islamic view also emphasizes the importance of an adaptive attitude to global developments without losing Islamic identity. This is in line with the results of students who participated in innovation-based learning with Islamic values showed a significant increase in spiritual literacy and critical thinking skills. Thus, the development of advanced Islamic-based teaching materials is a strategic solution to realize inclusive, modern, and competitive Islamic education.

RESEARCH METHOD

This research uses a descriptive qualitative approach that is integrated with the Research and Development (R&D) method.¹² The qualitative approach is used to understand in depth the learning conditions of Muhammadiyah, the needs of lecturers and students, as well as various challenges in the use of teaching materials in Muhammadiyah Higher Education. Meanwhile, the R&D method is used to develop teaching material products based on learning innovations that are relevant to academic needs and educational technology developments.

⁸ Irwan Hasibuan et al., "Modernization of Islamic Education Curriculum Reform, Reformers (Muhammad Abduh and Ahmad Dahlan)," *Darul Ilmi: Jurnal Ilmu Kependidikan Dan Keislaman* 13, no. 2 (2025): 200–216, <https://doi.org/10.24952/di.v13i2.18785>.

⁹ Vernon James Schubel, "Islam's Diverse Paths, Part One: Patterns of Belief," in *Teaching Humanity*, by Vernon James Schubel (Springer International Publishing, 2023), https://doi.org/10.1007/978-3-031-22362-4_2.

¹⁰ Yeri Utami and Yunanto Andang Tri, "Muhammadiyah And Islamic Education Reform," *JURNAL PEDAGOGY* 18, no. 1 (2025): 53–63, <https://doi.org/10.63889/pedagogy.v18i1.313>.

¹¹ Prayitno Prayitno et al., "Islamic Education as a Catalyst for Societal Transformation in the Digital Age," *Interdisciplinary Journal and Humanity (INJURITY)* 5, no. 3 (2026): 147–61, <https://doi.org/10.58631/injury.v5i3.1528>.

¹² Massinissa Si Mehand et al., "The WHO R&D Blueprint: 2018 Review of Emerging Infectious Diseases Requiring Urgent Research and Development Efforts," *Antiviral Research* 159 (November 2018): 63–67, <https://doi.org/10.1016/j.antiviral.2018.09.009>.

The integration of the two approaches is carried out gradually, where the results of qualitative exploration at the initial stage are used as the basis for the process of designing, developing, and evaluating teaching material products. The research was carried out at the Islamic Religious Education Study Program, University of Muhammadiyah West Sumatra in the even semester of the 2024/2025 academic year.

The type of research used is research and development (R&D) by adapting the model of Borg and Gall.¹³ The model is simplified into four main stages, namely needs analysis, product design, limited trials, and evaluation and revision. The simplification of the model is carried out by considering time limitations, the scope of research, and the focus of research that is still in the preliminary product development stage. Nevertheless, the core stages of product development are maintained so that the development process runs systematically and in a directed manner. The needs analysis stage is carried out through initial observation, in-depth interviews, and documentation studies to identify learning conditions, the characteristics of the teaching materials used, and the need for learning innovation. The product design stage includes the preparation of material structure, integration of progressive Islamic values, development of interactive e-modules, learning videos, case studies, and reflective activities based on blended learning. Furthermore, the product was tested on a limited basis to students and lecturers to obtain feedback related to the content, appearance, ease of use, and relevance of teaching materials. The evaluation and revision stage is carried out by improving the product based on the results of user input and the results of research data analysis.

Data collection was carried out through observation, interviews, documentation, and questionnaires.¹⁴ Observations are used to identify the level of student participation during the learning process. The interview was conducted to explore the perception of lecturers and students regarding the need and effectiveness of innovative teaching materials. Documentation is used to review RPS, learning modules, and other learning tools. The questionnaire was given after the product trial using a five-level Likert scale to measure indicators of student involvement, learning motivation, ease of use of teaching materials, and understanding of the values of Muhammadiyah. Indicators of student engagement include active participation in discussions, learning interactions, assignment completion, and responses to reflective activities during the learning process. Data analysis was carried out using the Miles and Huberman interactive model which includes data reduction, data presentation, and conclusion drawn. In the data reduction stage, the researcher grouped the data based on key themes such as learning needs, teaching material effectiveness, and user response. The presentation of data is carried out in the form of descriptive narratives, tables, and thematic interpretations so that the relationships between findings can be understood in more depth. Conclusions are drawn

¹³ K. A. Aka, "Integration Borg & Gall (1983) and Lee & Owen (2004) Models as an Alternative Model of Design-Based Research of Interactive Multimedia in Elementary School," *Journal of Physics: Conference Series* 1318, no. 1 (2019): 012022, <https://doi.org/10.1088/1742-6596/1318/1/012022>.

¹⁴ Sukmawati Salmia Sudarmin, "DEVELOPMENT OF QUALITY INSTRUMENTS AND DATA COLLECTION TECHNIQUES," *Jurnal Pendidikan Dan Pengajaran Guru Sekolah Dasar (JPPGuseda)* 6, no. 1 (2023): 119–24, <https://doi.org/10.55215/jppguseda.v6i1.7527>.

through repeated interpretation of data by linking the results of observations, interviews, documentation, and questionnaires to obtain a comprehensive understanding of the effectiveness of the developed product.

RESULTS AND DISCUSSION

Analysis of the Needs of Teaching Materials

The results of this study include the process of developing and implementing Kemuhammadiyah teaching materials based on digital learning innovations in students of the Islamic Religious Education Study Program at the University of Muhammadiyah West Sumatra. The development of teaching materials is carried out through the stages of needs analysis, product design, validation, limited trials, and product revisions until teaching materials that are suitable for use in learning are obtained. The initial stage of the research was carried out to identify the potential and problems in the learning of Kemuhammadiyah courses.¹⁵ Based on the results of observations on the learning process, it is known that lectures are still dominated by lecture methods and the use of conventional print modules. Lecturers convey more material theoretically so that learning interactions have not taken place optimally. In addition, the results of interviews with lecturers show that most lecturers still experience limitations in the development of digital learning media. This condition has an impact on the low variety of learning methods used in lectures. On the other hand, students stated that Kemuhammadiyah learning is less interesting because of the lack of use of interactive media and the lack of connection of the material with the social reality of contemporary Islam.

Analysis of the Semester Learning Plan (RPS) document shows that learning outcomes focus more on cognitive aspects, while affective aspects and reflective skills of students have not been optimally accommodated.¹⁶ Therefore, it is necessary to develop teaching materials that are able to integrate the values of Progressive Islam with digital, interactive, and participatory learning approaches. The data collection stage was carried out through observation, interviews, and documentation studies. Observations were carried out to obtain an overview of the implementation of Muhammadiyah learning in the classroom. Interviews were conducted with lecturers and students to find out the learning needs and obstacles faced during the lecture process. Meanwhile, documentation studies were carried out on learning tools, such as RPS, learning modules, and teaching materials used previously. The results of data collection show that students need teaching materials that are more flexible, easily accessible digitally, and able to connect Kemuhammadiyah materials with the context of social life. Based on these findings, the researcher developed digital teaching materials that are

¹⁵ Gumilang Wibowo, "Implementation of Al-Islam Kemuhammadiyah and Arabic Language (ISMUBA) Curriculum and Hizbul Wathon Scouting Movement Program in Character Building of Junior High School Students," *Scaffolding: Jurnal Pendidikan Islam Dan Multikulturalisme* 5, no. 1 (2023): 206–23, <https://doi.org/10.37680/scaffolding.v5i1.2368>.

¹⁶ Karnedi Karnedi and Natalia Fitriani, "Training in Preparing Semester Learning Plans and Lecture Contracts," *ABDISOSHUM: Jurnal Pengabdian Masyarakat Bidang Sosial Dan Humaniora* 4, no. 4 (2025): 618–27, <https://doi.org/10.55123/abdisoshum.v4i4.6989>.

not only oriented to the delivery of material, but also encourage active student involvement in the learning process.

Product Development of Teaching Materials

Based on the results of needs analysis and data collection, the researcher then prepared a product design in the form of Kemuhammadiyah digital teaching materials in the form of an interactive e-module. The preparation of the material is adjusted to the learning outcomes of the Muhammadiyah course which includes the history of Muhammadiyah, Progressive Islam, tajdid, the Muhammadiyah da'wah movement, and the implementation of *the value of amar ma'ruf nahi munkar* in social life.¹⁷ The product is designed using the Google Sites and Canva for Education platforms to make it easily accessible to students through digital devices. In its development, teaching materials are equipped with learning videos, infographics, online quizzes, value reflection, and social project-based assignments. The development of teaching materials is directed to create independent, interactive, and contextual learning through a blended learning approach.

The product development stage is carried out after the researcher obtains data from needs analysis and field information collection. Based on these findings, the researcher prepared a product design in the form of Kemuhammadiyah digital teaching materials in the form of an interactive e-module developed to support the learning process at the University of Muhammadiyah West Sumatra. Product development is carried out by referring to the learning outcomes of Muhammadiyah courses and the characteristics of students in Muhammadiyah Universities. The material in the teaching materials is systematically arranged based on the main subject of the Muhammadiyah course, including the history of Muhammadiyah, the concept of Progressive Islam, Muhammadiyah tajdid, the amar ma'ruf nahi munkar da'wah movement, and the implementation of Muhammadiyah values in social life. The preparation of the material is not only oriented to the cognitive aspect, but also directed to develop the affective aspects and reflective abilities of students towards Islamic social issues.

The teaching materials products are developed using the Google Sites and Canva for Education platforms to be flexibly accessed through students' digital devices. In its development, the e-module is equipped with various interactive learning components, such as learning videos, infographics, online quizzes, value reflection, and social project-based assignments. The integration of these various media aims to create more independent, participatory, and contextual learning through a blended learning approach. After the product design is completed, the next stage is product validation by material experts and learning media experts. Validation is carried out to determine the level of feasibility of the product before it is tested on students. The validation process uses an assessment sheet that includes aspects of material content, presentation, language, media display, and ease of use.

The results of the validation of the material experts show that the teaching materials developed are in accordance with the learning outcomes of the Kemuhammadiyah course. In

¹⁷ M. Amin Abdullah, "The Manhaj of Muhammadiyah Progressive Islam: Theological, Philosophical, and Ethical Perspectives," *Progresiva: Jurnal Pemikiran Dan Pendidikan Islam* 13, no. 02 (2024): 165–80, <https://doi.org/10.22219/progresiva.v13i02.33887>.

addition, the material is considered to have been able to integrate the values of Progressive Islam systematically and relevant to the needs of students in Muhammadiyah Higher Education. The structure of the material is also considered to be quite coherent, communicative, and supports the reflective learning process. Meanwhile, the results of the validation of media experts show that the teaching materials have an attractive visual appearance, communicative use of language, and navigation that is easy for users to understand. The use of digital media in e-modules is considered to be able to support student interaction during the learning process.

Nonetheless, validators provide some input and suggestions for improvements to the developed product. These suggestions include simplifying the appearance of the navigation menu, adding visual illustrations to several materials, and strengthening reflective activities based on Islamic social cases so that students can more easily connect the material with the reality of life. Based on the results of the validation, the researcher revised the product by improving several parts according to the validator's input. Revisions are made so that the teaching materials developed are more effective, interactive, communicative, and easy to use before entering the product trial stage. Thus, the products produced have met the initial eligibility criteria to be implemented in the Muhammadiyah learning process.

Test Results

The product trial stage was carried out after the Kemuhammadiyah digital teaching materials were declared feasible based on the results of validation of material experts and media experts. The product trial aims to determine the level of implementation, user response, and initial effectiveness of teaching materials in supporting the learning process at the University of Muhammadiyah West Sumatra. The trial was carried out in a limited manner to one class of students of the Islamic Religious Education Study Program which amounted to 20 people involving 3 lecturers teaching Kemuhammadiyah courses. The trial was carried out through a blended learning approach that integrates face-to-face learning and online learning during two meetings. At this stage, students are given access to interactive e-modules that have been developed. The digital teaching materials contain learning materials, interactive videos, infographics, online quizzes, reflective activities, and social project-based assignments that can be accessed through students' digital devices.

During the learning implementation process, the researcher observes student activities to see their level of involvement in the learning process. The results of the observation showed that students showed higher enthusiasm for learning compared to previous learning using conventional methods. Students are seen to be more active in participating in group discussions, expressing opinions, doing reflective assignments, and participating in digital learning activities available in e-modules. In addition to observation, the initial effectiveness of the product was also measured through a student engagement questionnaire using a five-level Likert scale. The questionnaire included several indicators, namely participation in discussions, learning interactions, use of digital media, learning motivation, and completion of reflective tasks. The results of the questionnaire analysis showed an increase in student involvement after the use of innovative digital-based teaching materials.

Prior to the implementation of the product, the student engagement rate was in the medium category with an average percentage of 48%. After the implementation of digital teaching materials, the student engagement rate increased to 82% with a high category. The most significant increase occurred in aspects of digital media use, learning interactions, and participation in group discussions. The data shows that the use of digital teaching materials based on blended learning is able to create a more active, interactive, and participatory learning atmosphere. In addition, the results of interviews with the lecturers show that digital teaching materials help the process of delivering material to be more systematic and easy to understand by students. Lecturers also stated that the use of digital media in learning facilitates the creation of two-way communication between lecturers and students, especially in discussion activities, learning reflection, and assignment completion based on social projects. The results of this trial show that Muhammadiyah's teaching materials based on learning innovation have the potential to increase the effectiveness of the learning process, especially in increasing student involvement and motivation to learn. However, the trial was still limited because it only involved one class with a relatively small number of participants. Therefore, wider trials are needed in different contexts and subjects in order to obtain more comprehensive data on the effectiveness and sustainability of the use of the teaching materials developed.

Discussion

The results of the study show that the development of Muhammadiyah teaching materials based on learning innovation makes a positive contribution to improving the quality of the student learning process at the University of Muhammadiyah West Sumatra. The use of digital teaching materials in the form of interactive e-modules is able to create a more active, flexible, and participatory learning atmosphere compared to the use of conventional teaching materials in the form of printed modules. The integration of digital media such as learning videos, online quizzes, reflective activities, and social project-based assignments helps students gain a more contextual learning experience and is relevant to educational developments in the digital age.¹⁸ The improvement in the quality of learning can be seen from the increase in student involvement during the lecture process. Students become more active in participating in group discussions, expressing opinions, and completing reflective assignments provided in the e-module.¹⁹ This condition shows that the use of teaching materials based on learning innovations can encourage the creation of more effective and collaborative learning interactions. In addition, blended learning-based learning provides opportunities for students to learn independently while still receiving assistance from lecturers through the face-to-face and online learning process.

The results of this study also show that the teaching materials developed not only function as a means of delivering learning materials, but also as a medium for character

¹⁸ Zongguo Wang et al., "A Systematic Review of the Impact of Social Media on Project-Based Learning," *Sustainability* 17, no. 8 (2025): 3680, <https://doi.org/10.3390/su17083680>.

¹⁹ Muhammad Ali Gunawan et al., "Development of an E-Module For Educational Evaluation Course With a Problem Based Learning Framework," *Edukasia Islamika* 9, no. 1 (2024): 132–44, <https://doi.org/10.28918/jei.v9i1.7242>.

formation and strengthening of progressive Islamic values. Reflective activities and social case studies contained in the teaching materials help students understand the implementation of Muhammadiyah values in social and academic life.²⁰ Thus, Muhammadiyah learning is not only oriented to the cognitive aspect, but also includes strengthening the affective aspects and critical thinking skills of students.²¹ Theoretically, the findings of this study are in line with the view of Ki Bagus Hadikusumo who emphasizes that Islamic education must be able to produce a generation that is knowledgeable, faithful, and deed-righteous.²² In the context of this research, teaching materials function as an integrative medium between knowledge transfer and value transfer. Therefore, the development of teaching materials based on learning innovations not only aims to improve students' academic abilities, but also strengthens the moral, social, and ideological dimensions in Islamic education.

In addition, the application of digital-based teaching materials in this study is also in line with the spirit of Muhammadiyah's *tajdid*, which is renewal in the field of education without losing the substance of Islamic values.²³ The use of digital technology in learning shows that educational innovation can be carried out while maintaining the identity and ideological values of Muhammadiyah.²⁴ Through the integration of technology in learning, students not only understand the concept of *Kemuhammadiyah* theoretically, but are also able to internalize and implement these values in their daily lives. Innovation in the development of teaching materials is one of the important strategies in improving the quality of Islamic education in Muhammadiyah Higher Education.²⁵ Learning that is packaged interactively, digitally, and based on Progressive Islamic values is able to answer the academic needs of students in the digital era while strengthening the ideological identity of *Kemuhammadiyah*. However, this study still has limitations because the product trial was only conducted in one class with a limited number of participants. Therefore, further research with a wider scope is needed so that the effectiveness and sustainability of the use of teaching materials can be tested in various learning contexts in other Muhammadiyah universities.

²⁰ Abdul Mu'ti and Alpha Amirrachman, "Local Wisdom-Based Multicultural Education: Muhammadiyah Experience," *Intellectual Discourse* 33, no. 1 (2025), <https://doi.org/10.31436/id.v33i1.2241>.

²¹ Nurul Latifatul Inayati and Intan Dian Saputri, "Evaluating the Affective Domain in Al-Islam and Muhammadiyah Learning: Methods, Challenges, and Technology-Based Solutions in Muhammadiyah Schools," *AL-ISHLAH: Jurnal Pendidikan* 17, no. 3 (2025), <https://doi.org/10.35445/alishlah.v17i3.6870>.

²² Syamsul Arifin and Nafik Muthohirin, "The Viewpoint of The Young Muhammadiyah Intellectuals towards The Religious Minority Groups in Indonesia," *TEOSOFI: Jurnal Tasawuf Dan Pemikiran Islam* 9, no. 2 (2019): 282–305, <https://doi.org/10.15642/teosofi.2019.9.2.282-305>.

²³ Mohammad Takdir and Akhmad Sirojuddin Munir, "Genealogy and Orientation of the Islamic Modernist Movement in Indonesia: Case Study of the Muhammadiyah Renewal Movement," *Journal of Al-Tamaddun* 20, no. 1 (2025): 81–96, <https://doi.org/10.22452/JAT.vol20no1.6>.

²⁴ Takdir and Munir, "Genealogy and Orientation of the Islamic Modernist Movement in Indonesia."

²⁵ Subur Subur et al., "Development of Islamic Religious Education Concepts in Creating Excellent and Islamic Generation: A Study on PAI Students at Universitas Muhammadiyah Magelang," *BIS Humanities and Social Science* 2 (May 2025): V225019, <https://doi.org/10.31603/bishss.306>.

CONCLUSION

This research produced a product in the form of Kemuhammadiyah teaching materials based on digital learning innovations developed to support the learning process at the University of Muhammadiyah West Sumatra. The development of teaching materials is carried out through the research and development (R&D) stage which includes needs analysis, product design, validation, revision, and product trials. The resulting product is in the form of an interactive e-module based on blended learning that combines learning materials, videos, online quizzes, reflective activities, and social project-based assignments.

The results of the study show that the use of digital teaching materials based on learning innovation is able to improve the quality of the learning process of Muhammadiyah. This increase can be seen from the increase in student involvement in the learning process, especially in the aspects of discussion participation, learning interaction, use of digital media, and the completion of reflective tasks. In addition, the teaching materials developed also help students understand and internalize the values of Progressive Islam in academic and social life.

Theoretically, this research strengthens Ki Bagus Hadikusumo's view that Islamic education does not only function as a means of knowledge transfer, but also as a medium for the formation of values and character. The development of teaching materials based on learning innovation shows that the integration of digital technology can be carried out without losing the substance of Islamic values and Muhammadiyah ideology. Thus, digital-based learning innovation can be one of the strategies in improving the quality of Islamic education in Muhammadiyah Higher Education. However, this study still has limitations because the product trial was conducted on a limited scale with a relatively small number of participants and only in one study program. Therefore, further research is needed to test the effectiveness of teaching materials in a wider scope and develop Kemuhammadiyah learning innovations that are more adaptive to the development of educational technology in the digital era.

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