The Combination of AI and Local Wisdom: Transforming Textbooks and Learning Media at Al-Risalah Islamic Boarding School

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KEYWORDS	ABSTRACT
Service Learning, Textbooks, AI Technology, Local Wisdom, Islamic Boarding School Education.	The transformation of education in the era of the Industrial Revolution 4.0 requires educational institutions, including Islamic boarding schools, to adapt to modern technology without neglecting their local identity. This research aims to assist the transformation of textbooks and learning media at Al-Risalah Islamic Boarding School using a service learning approach. The mentoring process involves four main stages: planning, implementation, reflection, and evaluation. In the planning phase, the identification of needs indicates a high need for AI-based technology, additional training, and reinforcement of local values in teaching materials. The implementation phase focuses on training AI technologies, such as Canva and ChatGPT, as well as the preparation of textbooks that are integrated with local wisdom. Reflection involves a comprehensive discussion between facilitators, educators, and students, which results in an evaluation of the success of the program. The evaluation showed an increase in the competence of educators in compiling AI-based textbooks, although there was a need for further training. The results of the program in the form of textbooks and digital learning media are disseminated to the pesantren community to ensure sustainability. This study proves that the service learning approach is effective in supporting the transformation of technology-based education, while maintaining the local values of Islamic boarding schools. This model can be adopted by other Islamic boarding schools to face the challenges of modern education.

1. INTRODUCTION

Islamic boarding schools in Indonesia have long been educational institutions that integrate Islamic values and local traditions (Anderson & Dron, 2011; Harmathilda et al., 2024). Islamic boarding schools play a vital role in shaping the younger generation who have noble character, intellectual competence, and spiritual competence (Alam & Mohanty, 2023; Pedro et al., 2019). However, in the era of the Industrial Revolution 4.0, the need for technology-based learning transformation is increasingly urgent

(Lorenz & Parasuraman, 2007). The demands of 21st century learning emphasize the importance of mastery of technology, critical thinking skills, and creativity, which challenges pesantren to remain relevant without losing their traditional roots (Aoun, 2017). This change requires an approach that is able to accommodate modernity while still maintaining local values as the core of pesantren education (Astuti et al., 2024).

Technology, especially Artificial Intelligence (AI), has proven to have great potential in the world of education. Wang & Chen. (2021) shows

that AI-based learning media provides personalization that allows students to learn according to their needs (Wang & Chen, 2024). Mahmudi (2024) also noted that the use of digital textbooks is able to increase student engagement and learning effectiveness (Mahmudi, 2024). In the context of Islamic boarding schools, the integration of AI with local wisdom values has been proven to create inclusive and relevant learning (Jasminto, 2024). However, the gap between expectations and reality is still large; Many educators have minimal knowledge of this technology, while infrastructure and special training to optimize AI are still limited (Seanburan, 2024).

This article aims to explore how Al-Risalah Islamic Boarding School can transform textbooks and learning media by integrating AI technology and local wisdom values. The focus of this research is to analyze the process of development, implementation, and impact of AI-based textbooks on improving the quality of learning in Islamic boarding schools. In addition, this research aims to offer a model that can be adopted by other Islamic boarding schools to face the challenges of modern education without losing the roots of tradition.

This study proposes a hypothesis that the integration of AI technology with local wisdom values in textbooks and learning media can increase the effectiveness of teaching and learning at Al-Risalah Islamic Boarding School. In addition, this approach is also believed to be able to strengthen the local identity of the pesantren while providing a more adaptive, interactive, and relevant learning experience for students.

2. METHOD

The method used in this study is the Service Learning approach, which integrates services to the community with experiential academic learning. This method is designed to provide dual benefits, namely increasing the competence of educators and developing learning products that are relevant to the local needs of Islamic boarding schools.

The Service Learning approach is used to support the transformation of textbooks and learning media based on AI technology at Al-Risalah Islamic Boarding School. The following is a systematic description of the assistance results that have been achieved:

Identify Needs
The mentoring activity began with an analysis of the needs of educators and students at the pesantren. The results of the survey and interviews show several key points:
a. AI Technology Needs: Most educators are not familiar with AI technologies such as Canva and ChatGPT, but they show high enthusiasm to learn them.
b. Integration of Local Wisdom: There is a strong push to ensure that Islamic values and local traditions remain a major part of textbooks and learning media.
c. Lack of Interactive Media: The textbooks that were previously available were still conventional, making them less attractive to students.

These results are the basis for designing programs that suit the specific needs of Islamic boarding schools.

Program Planning
Based on the results of the identification, the mentoring team designed a program that involved several main components:
a. AI Technology Training: Provides an introduction and intensive training on how to use Canva, ChatGPT, and other design

applications.

b. Textbook Preparation: The textbook is designed to include adaptive AI elements as well as narratives based on local wisdom.

Program Implementation

The implementation phase involves several core activities:

a. Training and Workshops: Educators are trained to use AI in compiling textbook content. The training is carried out in stages, starting from the basics of technology to hands-on practice in making textbooks and learning media.

b. Textbook Prototype: The developed textbook includes features such as interactive visualizations, AI-based material recommendations, and narratives that contain pesantren values.

Reflection and Evaluation

After the implementation, the reflection session was carried out by involving educators, students, and the accompanying team:

a. Positive Feedback: Educators feel more confident in using AI technology in learning. They also appreciated the integration of local values in textbooks.

b. Technical Constraints: Some educators reveal challenges in understanding AI features in depth, which requires advanced training.

c. Improvement Recommendations: More detailed technical guidance is needed to help educators make the most of technology.

Results and Impact

Service Learning-based mentoring has succeeded in creating a positive impact, including:

a. Improving the Competence of Educators: Islamic boarding school teachers are now more skilled in using AI technology to compile textbooks and learning media.

b. Higher Student Engagement: AI-based learning media attracts students' interest, so they are more active in the learning process.

c. Integration of Local Wisdom: Textbooks and learning media reflect local values that strengthen the identity of the pesantren.

The Service Learning approach provides an effective framework to improve the competence of educators and produce relevant learning products. With a focus on the integration of AI technology and local wisdom, this program not only answers the challenges of modern education but also strengthens the tradition of Islamic boarding schools as educational institutions based on Islamic values. This approach can be adopted by other Islamic boarding schools to support the transformation of education in the digital era.

3. RESULT AND DISCUSSION

Assistance in the transformation of textbooks and learning media at the Al-Risalah Islamic Boarding School is carried out through a service learning approach. This approach not only connects theory with practice, but also provides a space for collaboration between facilitators, educators, students, and students. The process is designed in four main stages: planning, implementation, reflection, and evaluation, with each stage ensuring the full involvement of the pesantren community and the integration of Artificial Intelligence (AI) technology with local wisdom values.

Planning Phase

The planning stage focuses on identifying needs and designing a systematic program. The participatory approach is carried out by involving educators through surveys, in-depth interviews, and focus group discussions.

1. Identify Needs
   Through discussions involving Islamic

boarding school leaders, such as Ust. Junaidi and Ustadzah Sitti Aisyah, specific needs were successfully formulated. The participants emphasized the importance of integrating technology with local narratives to strengthen the identity of pesantren in the midst of educational modernization.

The results of the survey of teachers at Al-Risalah Islamic Boarding School provide a detailed overview of the main needs related to the use of AI technology in the development of textbooks and learning media. This data strengthens the needs analysis that is the basis for designing the mentoring program. Here are the key points identified from the survey results:

a. The Need for Automated Visual Creation Features

As many as 60% of respondents said "Agree", while another 40% voted "Strongly agree" to the importance of the automated visual creation feature. This data shows a significant need for technology that can help teachers create visual content with high efficiency. Visualizing interesting content is considered to support student understanding and make the learning process more effective.

b. The Need for AI Tools for Multimedia

As many as 60% of respondents voted "Strongly agree" and 40% "Agree" to the need for AI tools to create multimedia content. AI-based multimedia, such as video and animation, is considered to be able to increase the attractiveness of teaching materials and support interactive learning that is relevant to the needs of students in the digital era.

c. Flexibility and Ease of Learning AI Features

The majority of respondents (60%) stated "Agree", 20% voted "Neutral", and 20% "Strongly agreed". These results show that the ease of learning and operating AI features is one of the important aspects that must be considered in the mentoring program. Teachers expect intuitive and user-friendly tools to reduce technical barriers in the learning process.

d. Additional Training for Interactive Content

As many as 80% of respondents stated "Strongly agree" and another 20% "Agree" to the need for additional training in interactive content creation. This figure indicates an urgent need to provide more comprehensive training so that teachers can master new techniques in developing engaging and relevant AI-based content.

e. AI Training Frequency

As many as 60% of respondents voted "Agree" and another 40% "Strongly agree" that AI training needs to be carried out regularly. This reflects the need for a continuous training program to ensure the improvement of teachers' competence in using AI technology optimally.

The results of this survey show that teachers have a clear need for AI-based tools and additional training to improve the quality of learning. Mentoring programs designed to meet this need can accelerate the adoption of AI technology in Islamic boarding schools, focusing on:

1) Provision of AI-based tools that support the creation of automated visuals and interactive multimedia content.

2) Intensive and ongoing training that includes the introduction, use, and integration of AI features into textbook development.

3) A user-friendly approach to ensure

that teachers can easily learn and use the technology in their daily activities. By understanding this need, assistance at Al-Risalah Islamic Boarding School not only focuses on the final results in the form of textbooks and learning media, but also on the process of improving teacher competence as a whole. This ensures the sustainability of the use of AI technology in Islamic boarding schools, supporting the transformation of learning based on local values in the digital era.

2. Preparation of Program Plan
The activity program is designed in eight training sessions, starting from the introduction of AI technology to the publication of textbooks in digital format. The main focus is on training in using platforms like Canva and ChatGPT to create engaging interactive content.

The mentoring program at Al-Risalah Islamic Boarding School is designed systematically by involving the pesantren community to ensure that activities are in accordance with local needs and learning schedules. The main focus of this program is AI-based technology training, textbook development, and the integration of local wisdom into learning media. The following are the stages of activities designed to achieve the program's objectives:
a. Participants are introduced to the objectives and benefits of the activity to build an initial understanding.
b. Participants conveyed their needs related to the development of textbooks and learning media, so that activities can be directed specifically as needed.
c. Participants were introduced to technologies such as Canva AI and ChatGPT to support the design of

technology-based learning resources.
d. Participants learn the structure of curriculum-based textbooks to compile material systematically and relevantly.
e. Participants began to prepare a draft curriculum-based textbook by utilizing the technology features that had been taught.
f. Participants are trained to edit the layout of the textbook professionally, ensuring an attractive and functional appearance.
g. Participants use applications such as Canva to create covers and layouts that are attractive and in accordance with the identity of the pesantren.
h. Participants use applications such as Canva to create covers and layouts that are attractive and in accordance with the identity of the pesantren.
The program is designed with a participatory approach, ensuring that participants are not only skilled in using technology, but also able to produce textbooks that are relevant to the needs of the curriculum and the values of local wisdom.

3. Initial Product Design
Textbooks and learning media are designed with content personalization using AI, interactive structures, and narratives based on local values. Examples of innovative features include:
a. Automated Content Visualization: Helps educators quickly compile diagrams and infographics.
b. Adaptive Content: Textbooks that adapt to students' needs based on AI analysis.
At the initial product design stage, the textbooks prepared by the workshop participants cover various fields of study that are relevant to the curriculum of the Al-Risalah Islamic Boarding School. The approach used combines Islamic values, local

wisdom, and AI-based technology. The following is an overview of the fields of study and the focus of the textbook material produced:

a. Arabic. This textbook focuses on grammar (Nahwu and Sharaf), vocabulary mastery, and everyday conversation skills. Examples are taken from the situation of pesantren life, such as conversations in the dormitory and classroom activities.

b. Indonesian Language. Designed to improve the ability to read, write, and understand narrative, descriptive, and argumentative texts. The material is complemented by inspiring stories of students and Islamic literature.

c. Fiqhi suggested. It covers the basic principles of fiqhi proposals with practical applications, such as decision-making in worship and muamalah. Case studies are presented to make it easier for students to connect theory with practice.

d. Social Sciences (IPS). Focusing on local history, geography, and culture, students are invited to understand their role in society through an approach to Islamic values.

e. The Science of the Qur'an. Emphasizing the introduction of sentence structure, simple interpretation, and Islamic themes. Examples of the application of verses in daily life strengthen the learning of Islamic values.

f. Hadith Science. Teaching methods of understanding hadith, its history, and its application. Examples of selected hadiths are related to manners, morals, and worship that are relevant to the lives of students.

g. The Science of Monotheism. The material is prepared to strengthen faith in Allah, His attributes, and the pillars of Islam. The explanation is complemented by examples of the application of monotheistic values in daily life.

h. Mathematics. This textbook connects concepts such as calculations, geometry, and statistics with pesantren activities, such as scheduling activities and managing student data.

i. Tajweed Science. This textbook provides practical guidance on reading the Qur'an according to the rules of tajweed, equipped with interactive exercises to make it easier to understand.

j. Akidah Tul Awwam. Presenting the basic concepts of the Islamic faith in simple language, making it easier for students to understand the principles of faith in daily life.

k. Nahwu Science (Syarah Jurumiah). This textbook emphasizes the understanding of Arabic grammar rules using contextual and applicable methods.

This textbook is designed to improve students' academic understanding while also forming a strong Islamic character. With this approach, workshop participants can produce relevant and applicable teaching materials for the needs of Islamic boarding schools.

The enthusiasm of the workshop participants was reflected in their focus when compiling the draft textbook using a computer. The collaborative atmosphere can be seen from the dynamics of group discussions, where participants help each other and share ideas. The presence of a facilitator who provides direct technical direction increases the confidence of participants, so they are more motivated to complete the task well.

Participants utilize technology platforms such as Canva and ChatGPT to compile digital-based textbooks. This technology

helps in the creation of engaging and systematic visual content. The seriousness of the participants in participating in the training shows high motivation to improve their skills, so that they can implement the results in learning at the pesantren.

Through a technology-based approach and local values, the resulting textbooks are expected to not only be relevant to the needs of the curriculum, but also create a more meaningful learning experience for students.

Implementation Phase

At this stage, the mentoring program is carried out in accordance with the plan that has been prepared. Some of the main activities include technology training and textbook preparation. Training focuses on:

1. Use of AI for Textbook Design: Participants are taught using Canva AI and ChatGPT to compose teaching materials.
2. Integration of Local Wisdom: Participants are directed to incorporate local cultural values into the learning content.

As a result, textbooks in various fields of study, such as Arabic, Fiqhi, and Tawhid Science, were successfully prepared. This textbook combines a practical approach with Islamic values and local traditions of Islamic boarding schools, such as examples of daily conversations in dormitories or the study of the yellow book.

The training, which focuses on the use of AI technology and the integration of local wisdom, received a very positive response from participants. The educators showed high enthusiasm during the textbook preparation process. They seriously followed every session, from the introduction of Canva AI and ChatGPT to the application of local cultural values into the learning content.

Participants actively tried out various features provided by Canva AI and ChatGPT, such as creating interactive visual designs and preparing data-driven narratives. Some participants seemed enthusiastic about exploring these new tools, even discussing how best to utilize technology for their needs. Their expressions of focus and passion while working in front of a computer reflect a high level of motivation to master the technology.

The participants were also very involved in the process of integrating local wisdom. They discussed how to incorporate elements of pesantren traditions, such as local stories, cultural values, and Islamic narratives, into the teaching materials. Collaboration in groups produces creative ideas that are embodied in their textbook drafts. The collaborative and passionate work atmosphere can be seen from the interaction between participants who share ideas and help each other complete tasks.

The textbooks that have been successfully compiled cover various fields of study, such as Arabic, Fiqhi, and Tawhid Science, which are designed with a practical approach and Islamic values. For example, Arabic textbooks contain daily dialogues in the dormitory, while Fiqhi science books integrate practical case studies that are relevant to the life of Islamic boarding schools. In addition, the Tawhid Science textbook strengthens the concept of divinity through a narrative that is evocative and relatable for students.

Active engagement of participants not only results in quality textbook products, but also builds their confidence to use technology in learning. This shows the success of the training in improving the competence of educators while strengthening local identity in the educational process at Islamic boarding schools.

Reflection Phase

The reflection stage provides an evaluation space for participants to assess the strengths and weaknesses of the program. The reflection session involved pesantren leaders, educators, and students.

1. Reflective Discussion
   In this discussion, various perspectives from facilitators, educators, and students were collaborated to evaluate the implementation of the program. Ust. Junaidi emphasized the importance of program sustainability, while students provided input on the effectiveness of training methods. Key Reflection Points:
   a. Program Success: Participants feel more confident using AI technology.
   b. Technical Challenges: Some participants encountered obstacles in understanding AI features in depth, indicating the need for advanced training.

Evaluation Phase

The evaluation stage aims to assess the impact of the program on educator competence and learning quality. Data from observations, questionnaires, and interviews were analyzed to assess the success of the activity. Evaluation Results:

1. Competency Improvement: 90% of participants stated that they were able to compile AI-based textbooks with more confidence.
2. Improvement Recommendations: Participants suggested more specific advanced training, such as the use of AI for lesson plans and learning evaluations.

Assistance in transforming AI-based textbooks and learning media at Al-Risalah Islamic Boarding School showed positive results. This program has succeeded in improving the competence of educators, producing textbooks that are relevant to local values, and creating innovative learning media. Collaboration between facilitators, educators, and students is the key to the success of this program. The service learning approach has proven to be effective in supporting educational transformation in the digital era without ignoring local identity.

4. CONCLUSION

The mentoring program for the transformation of textbooks and learning media at Al-Risalah Islamic Boarding School has been designed and implemented with a systematic and participatory approach. This program has succeeded in improving the competence of educators in utilizing AI technology, such as Canva and ChatGPT, to produce textbooks and learning media that are relevant to the needs of the curriculum and local wisdom values. Each stage, from planning to evaluation, is designed to ensure that activities not only deliver quality product outcomes, but also strengthen teachers' capacity to face the demands of the digital age.

The results of the program include AI-based textbooks in various fields of study, which integrate Islamic values and pesantren traditions. The textbook is designed with a systematic structure, interactive features, and engaging visual elements, which supports more effective and relevant learning. In addition, the program creates a collaborative atmosphere that increases participants' enthusiasm in completing their tasks, demonstrating the success of the service learning approach in connecting theory with real practice.

As a further step, the program recommends ongoing training to explore the use of AI, the preparation of interactive materials, and the development of learning innovations. This approach can serve as a model for other Islamic

boarding schools to face the challenges of modern education while still maintaining local identity and values. Thus, Al-Risalah Islamic Boarding School can be a successful example of technology-based educational transformation that remains rooted in local wisdom.

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