THE DEVELOPMENT OF BLENDED LEARNING-BASED CIVICS EDUCATION TEACHING MATERIAL TO IMPROVE LEARNING OUTCOMES OF STUDENT OF PGMI IAIN PADANGSIDIMPUAN

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Abstract

This research showed an increase in students’ learning outcomes by using Blended Learning based Civics Education teaching materials. This study used the Research and Development method with the ADDIE development model. The population of this study is the fourth-semester students of the PGMI IAIN Padangsidimpuan. The sampling technique used is purposive sampling, which is 35 students. Data collection techniques used were questionnaires, tests, interviews, observations, and documentation. Analysis of research data used was SPSS, STATCAL, and EAVIS software. The outcomes showed an increase in the learning result of PGMI students using BL-based Civics Education teaching materials from the post-test I meeting I by getting score of 74.5714 and post-test II meeting I of 79.5714 while post-test II meeting I was 83; post-test II meeting II was 88.

Keywords: Civics Education teaching materials, Blended Learning, PGMI student learning outcomes


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INTRODUCTION

The emergence of COVID-19 shook up the learning system in Indonesia. As a result, the Minister of Learning and Culture of the Republic of Indonesia (Mendikbud RI) announced Circular No. 3 of 2020 regarding COVID-19 Prevention in Education Units (Lubis, Syafrilianto, et al., 2021), as well as the Minister of Religion Circular S.E. No. 2 of 2020 dated March 16, 2020, concerning Adjustment of the Employee Work System in Efforts to Prevent Corona Virus Disease 2019 at the Ministry of Religion, also Circular of the Chancellor of the Padangsidimpuan State Islamic Institute No. 670/In.14/A/B.2a/K.P.01.2/03/2020 concerning Efforts to Prevent the Spread of COVID-19 and Adjustment of the Employee Work System at IAIN Padangsidimpuan (Lubis, Marina, et al., 2021). The three circulars appealed to formal education (at universities) to continue learning by always practicing health protocols (maintaining cleanliness, maintaining distance, and wearing masks) for students, lecturers, and employees.

Due to the COVID-19, the teaching and learning process quickly adapts through existing changes to integrate the learning system through the internet network (Nuryati et al., 2020). All agencies, including universities, carry out learning activities from home to minimize the spread of the virus (Wijayanto et al., 2020). At the tertiary level, each educational institution in various countries has specific differences. Efforts are being made to continue to provide academic services during distance learning digitally without compromising the quality of the curriculum and learning outcomes (A et al., 2020).

Andreas said that distance learning became the lifeline of education during the pandemic. However, digital technology's opportunities are a temporary solution during a crisis (Oyediran et al., 2020). According to Hannum et al. (Abuhammad, 2020), distance learning is a platform that many institutions use to meet the learning needs of students. It had also been determined that distance learning is a practical approach from parents' perspective at the college level. Distance learning was carried out online. Web-based online learning and internet learning, were commonly known as e-learning. An e-learning system is a form of implementation of learning using the internet in a website or weblog to display various multimedia content. It can be said as a transformation process from conventional learning to digitalization (Anggrasari, 2020).

During the COVID-19, all sectors, including education in universities, implemented online learning systems. A few months after implementing the system, a case emerged that was reported to have died of a student in South Sulawesi. This problem attracted the attention of academics and caused severe problems. The student's death was due to just looking for an internet signal to study online. The news of the student's death came from Ishak's post, which stated that the second-semester student of the PGSD University of Muhammadiyah Makassar faced a motorcycle accident. The accident was caused by students wanting to find an internet signal so they could study online. The hospital felt the same incident (initials of students' names
at Hasanudin Makassar University). Djaman’s article on a news portal revealed that the hospital died due to falling from a mosque tower after finding an internet network to do college assignments (Karim, 2020).

From the point of view of other problems seen in the research done by Annur & Hermansyah (2020), his research shows that students experience some difficulties classified as technical problems, difficulty adjusting, and teacher unpreparedness. Developing an educational strategy to support students’ acceleration to online education is necessary to overcome these difficulties. However, lecturers are also required to improve their ICT skills to use various online learning media. A similar problem was also experienced and created a perception among PGMI IAIN Padangsidimpuan. One of the perceptions is that they disagree that lectures are conducted online because they do not listen to lecturers' explanations due to the internet signal being less than optimal and challenging to reach remote areas (Lubis et al., 2021).

In addition, research conducted by Sadikin & Hamidah (2020) shows that effective learning allows lecturers and students to communicate in virtual classrooms to be accessed anywhere and anytime. Online learning can make students learn independently and increase their motivation. However, there are weaknesses in online learning if students are not adequately supervised throughout the online learning process. One of them is the weak internet signal and the high cost of paying for data packages, so there are specific challenges in experiencing online learning. However, online learning can minimize the spread of COVID-19 in universities.

Some of the research results above show problems in the learning process during the COVID-19. This means that even though learning is carried out remotely online through the e-learning system, there are still visible weaknesses. Activities in online classes can overcome weaknesses in face-to-face classes. However, it should be noted that lecturers cannot only rely on online classes to get the expected learning outcomes. Face-to-face classes are still very much needed, incredibly motivating, inspiring, building social relationships, and building the values expected from learning outcomes. Therefore, the author has a solution to make Learning permanent to avoid the spread of the COVID-19 virus by combining offline and online learning models (Indriyanti et al., 2020).

Researchers at home and abroad have conducted an in-depth analysis of traditional and network-based teaching and found that traditional teaching is irreplaceable (Bi & Shi, 2019). The BL-based model is a combination of online and face-to-face learning systems. Online classes to overcome the weaknesses of face-to-face classes. Through good and planned synergies, online and face-to-face classes are expected to get maximum learning outcomes. BL is applied in the implementation of learning with two learning models, namely face-to-face activities and activities using web networks, e-learning, blogs, and others (Prime & Adha, 2020).

BL-based learning is an improved method of e-learning-based learning. This means that in e-learning learning, students cannot learn without guidance and discussion with educators.
This is what must be developed. Thus, BL-based was born as a complement to e-learning. This is what is called development in the world of technology learning. Therefore, implementing BL-based requires teaching materials. It plays an essential role in bridging the knowledge transfer process (lecturers and students). There are exciting and accessible ingredients so that it creates a sense of curiosity and interest in students to take part in Learning. The ingredients in question are teaching materials that contain monotonous material and can process teaching materials by linking online technology. This makes teaching materials a tool for lecturers to deliver lecture material so that learning objectives can be achieved and students can absorb lecture material effectively.

Teaching materials generally contain information and knowledge and can learn attitudes, knowledge, and skills. Lestari stated that teaching materials are equipment arranged systematically and attractively to achieve learning objectives, including learning materials, limitations, evaluation methods, and methods used (Rosilia et al., 2020). According to Azizah, teaching materials are divided into two major groups, printed teaching materials, and non-printed teaching materials. Printed teaching materials are modul, leaflet (Lubis, 2017), handouts, books, modules, brochures, and student worksheets. Meanwhile, non-printed teaching materials include (1) audio teaching materials such as radio, cassette, compact disc; (2) audio-visual teaching materials such as video compact discs and films; (3) interactive multimedia teaching materials such as web, CD, multimedia (Yuanita & Kurnia, 2019). Each type of teaching material has its characteristics to be used in the learning process. It is just a matter of how educators can do the 3 M (Observing, Imitating, Modifying) well. Teaching materials developed through BL help students be technologically literate and include today's latest learning methods. In addition, BL-based teaching materials enable students to learn independently (under the guidance of lecturers) to imagine and think critically.

Changing learning models during the COVID-19 was a demand, that was not only to be free from the epidemic transmission, social and physical distancing, but also to ensure that students were served their learning rights as long as they study from home, control their spiritual and social activities and attitudes, and cognitive and psychomotor (H. Purnomo et al., 2020). The model ought to also be applied in the PGMI Study Program based on the demands of the times. The PGMI Study Program is under the Faculty of Tarbiyah and Teacher Training IAIN Padangsidimpuan, born in 2016. This study program was accredited "B" in 2021 from BAN-PT (National Accreditation Board for Higher Education), so it was very much in demand by the public. This was marked by the increase in registrants every year, so that it becomes the second favorite Study Program after the Islamic Religious Education Study Program. This means that the PGMI IAIN Padangsidimpuan Study Program is developing and will become an opportunity to produce graduates who can improve the quality of education in Indonesia. Then the PGMI Study Program must be developed through Learning based on the times according to its vision (Ministry of Education and Culture, 2020). "Excellent and Trusted Study
Program in Preparing Islamic, Innovative, Competitive, and Professional Madrasah Teachers."
Therefore, researchers were interested in modifying past teaching materials and transferring
them to students during the COVID-19.

Civics Education course taught at formal educational institutions are intended to foster
student attitudes and morals so that later they can have a character and personality in line with
the values contained in the Indonesian nation's guidelines, namely Pancasila. Civics Education,
as a vehicle for fostering student behavior, is also intended to equip students with character,
competence, and basic abilities related to the relationship between citizens and the nation and
the state (Hidayanti et al, 2012). In addition, Civics is also a learning process that seeks to build
civic knowledge, civic skills, and civic disposition of students so that the goal of forming good
citizens can be realized. In essence, Civics is the spearhead to build the character of the student
nation because Civics is a moral education that teaches the values of the Indonesian nation's
personality as contained in Pancasila. Civic Education has a significant role in growing citizens'
mindsets, attitudes, and behavior (Widiatmaka, 2016).

The focus research was to show improvement in students’ learning outcomes by using
Blended Learning-based Civics Education materials.

METHODS

This research used a development model ADDIE type (Analysis, Design, Development,
Implementation, Evaluation) (Tung, 2017; Hamzah, 2019). Reiser & Mollenda conceived the
ADDIE model in the 1990s, which can be guidelines for creating product innovation as learning
support (A. Purnomo et al., 2016). The ADDIE model has five stages, namely: analyzing,
designing, developing, implementing, evaluating (Personal, 2016). The ADDIE model is the
main component of the systems approach to learning development and development
procedures in Learning. ADDIE can be categorized as a model that adapts the learning design
principles described by Gagne, Wager, Golas, and Keller (Suryani et al., 2018). The ADDIE
(Januszewski & Molenda, 2008) flow in this study can be seen in figure 1.
The Development of Blended Learning-Based Civics Education Teaching Material

This research was conducted in study program PGMI IAIN Padangsidimpuan. The research implementation began in the odd semester of academic year 2020/2021 with a research period of 3 months, starting from December 2020 to Maret 2021. Civic Education teaching materials developed in the web type were tested two times through cycles. The first cycle consisted of two meetings, and the second cycle, which consisted of two meetings. Before the trial, the researcher gave a pre-test to see the student's competence in the Civics Education material. The population of this research is all fourth-semester students of PGMI. The sample was determined by purposive sampling method with the criteria of a student achievement index of at least 3.50; students have technological devices, and students are proficient in technology. So, the sample of this study amounted to 35 students of PGMI.

The data collection technique used in this research is the distribution of questionnaires to experts to assess the Civics teaching materials developed via Google Form, learning outcomes tests were carried out during the trial (post-test) via Kahoot, unstructured interviews via Whatsapp were conducted to obtain student responses to Civics Education teaching materials, observations made by researchers during the learning process (online and offline), and documentation. This study applied data analysis techniques through statistical tests. The data that had been collected were processed using the SPSS, STATCAL, and EAVIS software.
STATCAL & EAVIS is data processing software from Indonesian children named Prana Ugiana Gio and Rezzy Eko Caraka (Gio & Caraka, 2018; Gio & Caraka, 2021; Azizan et al., 2021).

RESULTS AND DISCUSSION

This research resulted Civics Education teaching materials in the form of a web application through BL-based in table 1.

Table 1. Design of Civics Education Materials

<table>
<thead>
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<th>Before</th>
<th>After</th>
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![Before Design](image1.png)

![After Design](image2.png)
The stages of development in this research were carried out to produce quality products for Civics Education teaching materials. Teaching materials to Facilitate Learning for students based on basically consisted of online and offline. The tools used during developing the Civic Education teaching materials were ext Editor (VS Code) and GUI Database (DBeaver). The programming used is Code (PHP 7.1, CodeIgniter 3.1.10, Jquery, AJAX, JavaScript, CSS, HTML5) and Database (MySQL 8.0). The VPS (Virtual Private Servers) servers used are Provider (CloudKilat), RAM (1 G.B.), vCPU (1 Core), SSD (20 G.B.), O.S. (Centos 8), Web Server (Nginx).

The teaching materials collaborated with Kahoot, Wakelet, and Zoom. The Kahoot application was used to test students' cognitive of students' understanding of Civics. The Wakelet application was used to test skills and display student creativity in digital literacy. At the same time, the Zoom application is used to transfer knowledge about Civics online. These teaching materials served as a forum to facilitate the learning process in the MI/SD Low-Grade Civics Education courses. These teaching materials had several features: manage lecturer and student accounts, login history, classes (has features for posting materials, assignments, and members), and profile accounts. Lecturers could add materials in files and links in the class section of the material and assignment features. The lecturer would explain the teaching materials based BL, meaning that it was delivered online and offline. This Civics Education teaching material was tested twice to see its effectiveness. So it could be concluded that the design of Civics Education materials based on its development was categorized as good based on data from the questionnaire assessed by the validators. Civics Education-based teaching materials, This website is in the form of a web; it was created to make it easier for lecturers and students, especially in the Civics Education MI/SD courses during distance learning COVID-19.
At the implementation stage, researchers applied BL-based Civics Education materials by testing them on students. Students could register as a condition for having an account to enter the web portal (Civics Education teaching materials in the lecture hall). The web in question contained Civics Education teaching materials developed by researchers to distance learning during the COVID-19. The web integrated several applications: Zoom, Kahoot, Wakelet, Youtube, and PDF files. The researcher interviewed several students who participated as respondents; they responded positively by stating pleased. Because this is the first time they have applied Learning that combines several applications, and they even just got to know the application from this research. So far, they tend always to use Whatsapp, E-mail, and Google Classroom distance learning during the COVID-19. The following is the documentation in figure 3 during implementation using Civics Education teaching materials developed by researchers.

Figure 2. Actualization of BL-based Civics Education materials

In figure 2, the researcher invited students to try out BL-based Civics Education materials. Students could register as a condition for having an account to enter the web portal (Civics Education teaching materials in the lecture hall). The web in question contained Civics Education teaching materials developed by researchers to distance Learning during the COVID-19. The researcher interviewed several students who participated as respondents; the students responded positively with a good statement because this was the first time they had applied...
Learning that combined several applications, and they even just got to know the application from this research. So far, they tended always to use Whatsapp, E-mail, and Google Classroom when learning remotely during the COVID-19.

The knowledge test instrument was validated before being distributed to respondents; The total number of questions is 30. The validity test was carried out to test the validity of each question item in the questionnaire that had been designed. A question item is said to be valid if the correlation value (Corrected-Item Total Correlation) of the question item > R table (0.3). Figure 3 presents the results of the validity test for each question item.

![Figure 3. Grafik Validity Instrument Test](image)

Based on figure 3, it was known that all calculated R values (Corrected-Item Total Correlation) > 0.3 (R table). So it could be concluded that all questions were valid. Furthermore, the reliability test ought to be carried out only on questions that already had or met the validity test. If they did not meet the validity test requirements, there was no need to continue with the reliability test. The following were the results of the reliability test on valid questions. The instrument test was reliable because Cronbach's Alpha value of 0.973 was more significant than 0.6. So, a question is valid if the calculated R-value > 0.3 (R table). It is
known that all calculated R values (Corrected-Item Total Correlation) > 0.3 (R table). So it could be concluded that all questions were valid. After the items on the test instrument were valid and reliable, the post-test was tested to see the improvement in student learning results of PGMI students. The learning result could be seen in table 2.

Table 2. Descriptive Statistical Analysis

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td>35</td>
<td>50.00</td>
<td>80.00</td>
<td>64.7143</td>
<td>8.98879</td>
</tr>
<tr>
<td>Post-Test I, Meeting-I</td>
<td>35</td>
<td>60.00</td>
<td>90.00</td>
<td>74.5714</td>
<td>6.45931</td>
</tr>
<tr>
<td>Post-Test I, Meeting-II</td>
<td>35</td>
<td>70.00</td>
<td>90.00</td>
<td>79.5714</td>
<td>6.22748</td>
</tr>
<tr>
<td>Post-Test II, Meeting-I</td>
<td>35</td>
<td>75.00</td>
<td>95.00</td>
<td>83.0000</td>
<td>4.23570</td>
</tr>
<tr>
<td>Post-Test II, Meeting-II</td>
<td>35</td>
<td>80.00</td>
<td>95.00</td>
<td>88.0000</td>
<td>3.87298</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the results in table 2, the average of Civics Education MI/SD value in the pre-test was 64.7143. In post-test one meet one, the average of Civics Education was 74.5714. In post-test 1 meeting two, the average Civics Education was 79.5714. In post-test two meetings one, the average Civics Education was 83, and in post-test two meetings two, the average Civics Education was 88. The average value can be seen in figure 4.

![Figure 4. PGMI Student Learning Result](image)

Based on figure 4, it can be seen that there was an increase in the average value of Civics Education, starting from the pre-test to post-test II meeting II. Then observations were made to see student activities in the learning process by using Civic Education teaching materials. Present the observation data can be seen in figure 5 and 6.
The Development of Blended Learning-Based Civics Education Teaching Material

Based on Figure 5, the positive behaviour questions start from P1 to P8. It can be seen that of the eight questions, the majority of respondents did. Furthermore, in Figure 6, a frequency bar graph is presented for respondents' answers to negative behavioural questions. So, the average score on the student activity observation data is positive when using Civic Education materials that are 42.59%.

Based on Figure 6, the negative behavior questions start from P9 to P16. It can be seen that of the eight questions, the majority of respondents did not do it. So, the average value on student activity observation data from behavior does not do anything negative when using Civic Education materials, which is 42.58%. So, the BL-based Civic Education teaching materials that were developed were able to improve the learning outcomes of PGMI students through data from questionnaires, learning outcomes, documentation, and observations. This was also confirmed by the students based on the results of the interviews. This is a certainty that lecturers need to be provided to structure the learning process according to the curriculum. Because teaching materials are needed and used in managing the teaching and learning process or tools that are very important for educators to carry out learning efficiently and improve student learning achievement (Olayinka, 2016). Teaching materials contain explanations of subject
matter based on the needs of a lecturer or student. Lecturers need teaching materials used as information to complete the teaching process, while students need materials used as knowledge information to understand the material. Teaching materials are structured in a structured manner so that lecturers can use them during the learning process (Lubis, 2018). So, it can be concluded that teaching materials are learning tools that are exciting and easy-to-understand materials/materials to be conveyed to students. So a lecturer needs to prepare teaching materials before teaching; if not prepared, it is like "empty barrels make a loud sound."

Teaching materials are an essential factor in improving the quality of the learning process and students' competencies (Shodikin, 2017). Currently, conventional teaching materials are no longer a learning attraction for students. Because now is a modern era that relies on technology. Then the teaching material that is believed to overcome these problems is in the form of BL. BL combines online teaching methods that use electronic communication technology (Zhang et al., 2020). BL combines online digital resources with traditional classroom activities and enables learners to achieve higher Learning through well-defined interactive strategies, thereby involving online and traditional learning activities (Lu et al., 2018).

They BL such as web-based learning, video streaming, synchronous (time-dependent) audio communication, and asynchronous (time-independent) with face-to-face learning (Surahman & Surjono, 2017). BL has six elements that must exist, namely: meetings, independent study, software implementation, tutorials, cooperation, evaluation (Susilawati, 2017). Of the six elements, they can develop the latest Civic Education materials. In addition, BL-based Civic Education materials aim to provide understanding to the creation of student creativity. Therefore, this study refers to Bloom's Taxonomy theory, namely: remember, understand, applied, analysis, evaluation, work (Lubis, 2019). The six levels of cognition are derived from the educational goal categorization framework arrangement, which Benjamin Samuel Bloom conducted with MD Engelhart, EJ Fru, W.H. Hill, and DR Krathwohl in 1956. The framework is entitled The Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook I: Cognitive Domain. The word "taxonomy" in question is a classification system of educational goals (Nugroho, 2018). The development of BL-based Civic Education materials requires students to understand Civic Education materials, be proficient in using technology, and produce work from the material that has been understood.

BL-based Civics Education materials are innovative at IAIN Padangsidimpuan because so far, they have only been conventional. The characteristics of innovation, according to Rogers (2003), that is: relative advantage, compatibility, complexity, trialability, observability. BL-based Learning can overcome lousy time and place changes. It can be done by adding online learning hours; this will undoubtedly be more effective so that students are no longer busy looking for classes and determining learning hours (Arham & Dwiningsih, 2016). Therefore, applying BL-
based in the PGMI study program can develop a learning system because it is supported by intense and varied technology to make modern learning.

CONCLUSION

This research concludes that there was an increase in student learning outcomes of PGMI IAIN Padangsidimpuan students by using BL-based Civics Education teaching materials in MI/SD Civic Education courses based on the post-test I meeting I score of 74.5714; post-test II meeting I was 79.5714; post-test II meeting I was 83; post-test II meeting II was 88.

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