



Development of Islamic Education Learning Tools Based on E-Learning to Enhance Students Digital Literacy

Muchlis¹, Gunawan², Muhammad Irwansyah^{3*}, Magfirah Perkasa⁴, Erni Suryani⁵

^{1&2}Mathematics Education Study Program, STKIP Bima

^{3*&5}Biology Education Study Program, STKIP Bima

⁴Chemistry Education Study Program, STKIP Bima

*Corresponding Author. Email: irwansyahmuh44@gmail.com

Abstract: The purpose of this research is to develop islamic education learning tools based on e-learning that valid, practical and effective to use. The type of research is research and development by adopting the Thiagarajan development model, which consists of 4 stages, namely defining, designing, developing and disseminating. The research instruments used in this study were validation sheets and learning outcomes tests using the Jamboard application. Analysis of the data used in this study (1) By conducting a feasibility analysis on the e-learning learning module, Student Activity Sheet (LKM) and student learning outcomes tests. Based on the results of the validation, the overall learning tools in the form of e-learning modules for Islamic religious subjects, LKM and learning outcomes tests are generally declared valid. The details of the module validation scores are generally very valid ($M = 3.62$), the LKM is generally declared valid (3.31) and the learning outcomes test is declared to be ($M = 3.43$). (2) conducting trials on e-learning and LKM learning modules. The learning tools developed can be said to be valid because the development process is based on a strong theoretical rationale and has internal consistency so that the teaching materials have high reliability and consistency, so that it can be used to enhance students's digital literacy.

Article History

Received: 20-11-2021

Revised: 08-04-2022

Accepted: 24-05-2022

Published: 04-06-2022

Key Words:

E-Learning; Learning Tools; Islamic Education Students's Digital Literacy.

How to Cite: Muchlis, M., Gunawan, G., Irwansyah, M., Perkasa, M., & Suryani, E. (2022). Development of Islamic Education Learning Tools Based on E-Learning to Enhance Students Digital Literacy. *Jurnal Kependidikan: Jurnal Hasil Penelitian dan Kajian Kepustakaan di Bidang Pendidikan, Pengajaran dan Pembelajaran*, 8(2), 500-507. doi:<https://doi.org/10.33394/jk.v8i2.4433>



<https://doi.org/10.33394/jk.v8i2.4433>

This is an open-access article under the [CC-BY-SA License](#).



Introduction

The development of science and technology is growing very rapidly throughout life, both in the economic, socio-cultural, political and educational fields (Amin, 2020). This is a challenge for every stakeholder, including educational institutions. Educational institutions must be able to produce quality human resources and have competitiveness in the era of changing times, namely human resources who master information technology and have adequate literacy skills. Learning activities in Islamic Education courses have been carried out conventionally. As a result, students' digital literacy skills are inadequate. Digital literacy is the ability to use digital media or communication tools intelligently, healthy, critically and creatively so that it can filter information circulating on social media (Kemdikbud, 2017; Stefanny, 2017). Digital literacy is an important pillar for the future of education and digital literacy can be developed through digital technology-based learning (Pratama & Hartini, 2019; Azizah, 2021).

Meanwhile, on the other hand, the Indonesian government faced the phenomenon challenge, that is Covid-19 that afflicts some people throughout Indonesia, including people in Bima City, West Nusa Tenggara Province. Based on data from the task force for the acceleration of handling Covid-19 on October 28, 2021, the number of Indonesians who were



tested positive for the corona virus reached 400.483 people (<https://covid19.go.id/>). Responding to the spread of the corona virus, the central government and regional governments issued appeals for schools and universities to be closed for a while while learning activities were carried out at home by utilizing internet technology or distance learning. The government's appeal is supported by the existence of an Android-based mobile phone facility for every lecturer and student at STKIP Bima who has direct contact with the internet. This allows and becomes an opportunity for every lecturer and student to conduct distance learning using e-learning because one of the strategies that can be used to accelerate student learning with better results during this pandemic is the e-learning learning strategy (Daud & Ramadhani: 2015; Kristiyani, 2019).

However, based on the results of previous observations, the problem in the field is the lack of lecturers in utilizing information technology as a source of learning and learning activities. This is evidenced by the fact that there are still lecturers who choose conventional learning by means of face-to-face directly. Even though this way does not guarantee that it can break the chain of the spread of Covid-19. Therefore, learning activities can continue to take place effectively even during the Covid-19 pandemic. Lecturers must be able to apply e-learning-based learning, namely, the learning process carried out through the internet network. With e-learning learning can be done anytime and anywhere so that the learning process takes place effectively and efficiently (Permana, 2015). In addition, learning activities with e-learning can improve students' digital literacy skills (Chaeruman, 2018). Based on this explanation, the involvement of information technology with the internet is very helpful in the learning process of students, this is in accordance with what was expressed by Fazryah (2020) namely that there are many benefits to the involvement of information technology in learning, among others, teachers and students are able to access technology. In information and communication, teachers have knowledge and skills in using information and communication technology, because teachers act as students who must learn continuously throughout their lives, the goal is to improve their professional quality and competence, and quality and meaningful learning materials are available.

The purpose of this research is to develop Islamic education e-learning to improve students' digital literacy that meets the valid, practical and effective criteria. Valid because student activity sheets and learning outcomes tests have been validated by experts so that the learning tools are feasible to use, this is in accordance with what was revealed by Hernawati (2016), Susanto (2016), Nurhidayah & Afifah (2019) that the learning tools made must be validated by experts so that they can be used for trials in learning. While what is meant is practical, that this learning device is assessed and analyzed based on data obtained from lecturer assessments and student assessments. Learning tools are said to be practical if the categories from the results of the analysis of each device are at least practical and can be used to assess the implementation of learning.

This research is important to do because e-learning-based Islamic Education learning tools can improve student learning outcomes and digital literacy skills. The use of these learning devices can make it easier for students to carry out learning activities during the corona virus pandemic.

Research Method

The type of this research is a development research by adopting the Thiagarajan development model. In this study there are 4 steps or stages to be carried out, namely the definition stage, the design stage, the development stage and the dissemination stage (Sugiyono, 2013). The instruments used to measure the quality of learning devices are validation sheets and learning

outcomes tests. The developed e-learning learning device was piloted on STKIP Bima students in the 1st semester of the mathematics education study program for the 2021/2022 academic year. After that, the data were analyzed using descriptive statistical analysis method. Descriptive statistics are methods of collecting or presenting data to obtain useful information. With descriptive statistics, the data collection obtained will be presented concisely and neatly (Siagin & Sugiarto, 2002).

Results and Discussion

Defining Stage

At this stage, identify the learning tools used by lecturers of Islamic Education courses in the STKIP Bima mathematics education study program. After identification was carried out, it was analyzed and obtained results, it turned out that the learning devices used were printed teaching materials. Even though learning during the Covid-19 pandemic was carried out online, the actual learning tools used by lecturers had to be adapted to online learning, namely electronic learning devices for the smooth and effective learning activities during the pandemic. According to Kartimi (2021) online learning has a significant effect on student learning outcomes. Online learning in the form of learning videos can increase student learning opportunities (Terras & Ramasay, 2015). These results provide motivation to design electronic learning using the Moodle application. Moodle's learning management system functions as an effective tool in providing learning facilities because it is equipped with important learning support features such as assignments, quizzes, chat, collaboration and the main features that can upload various formats of learning materials and are easier to understand because of information. presented not only in the form of writing but also in the form of images and videos (Sampurno, 2013). The electronic learning tools uploaded in the Moodle application are semester learning plans, modules and student activity sheets.

Design Stage

E-Learning

The e-learning used in this research is the Moodle application. Moodle is a web-based platform that was created specifically as a learning management system. By using the Moodle application, learning activities can be done anytime and anywhere so that the learning process takes place effectively and efficiently (Lathifah & Prastowo, 2020). Moodle's designed learning management system (LMS) can be accessed at the link <http://www.pjjstkipbima.id>

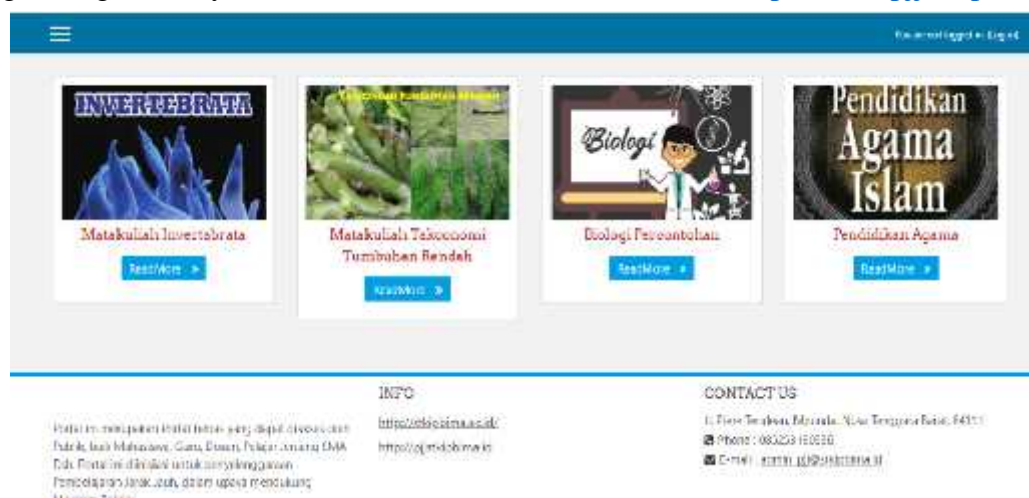


Figure 1: Front View of the Developed E-Learning

Module

The material for Islamic Education contained in the online module is the material for human beings. The learning modules developed are tailored to the needs of STKIP Bima students. The modules that have been designed are then inputted into the Moodle learning management system so that students can easily learn them. The main purpose of online learning modules is to allow users to work and master the learning materials at their own pace. The use of online learning modules can increase student motivation and learning outcomes (Irwansyah, Ferawati & Suryani. 2019).

Student Activity Sheet

Student activity sheets are designed to contain various problems of mankind in this century with the hope that students can carry out scientific activities such as observation, gathering information and providing appropriate solutions to various problems that exist in society. The student activity sheet developed in this study is an online form that can be accessed by students via an android phone. The advantage of using student activity sheets for students is that it makes it easier for them to study independently and learn to understand and train students to think critically, think creatively and solve problems. Meanwhile, the application of online student activity sheets in learning can improve student literacy (Hekmah, 2019).

Study Results Test

The learning outcomes test in this study used the Jamboard application. This application supports online lecture activities, especially in terms of interacting in learning and testing students' abilities against the material that has been delivered, this is in accordance with what was expressed by Fazriyah (2020) that the jamboard application is an application that can be used for learning and evaluation. This is in accordance with what was expressed by Sulistiyaningrum (2021) that the jamboard application is for delivering material as well as conducting an assessment/evaluation and this application is very good for the learning and evaluation process.



Figure 2: Display of Learning Devices Applied to Moodle

Development Stage

The validation of the learning tools was carried out by two experts by providing an assessment of the learning modules, student activity sheets and learning outcomes tests. The

results of the validation by the validator on the e-learning learning module for Islamic Education courses can be seen in Table 1. The results of the validation assessment on student activity sheets can be seen in table 2. And the results of the validation of the learning outcomes test are shown in table 3.

Table 1: Online Module Validation Results

No.	Assessment Aspects	\bar{x}	Information
1.	Achievement of goals	3,70	Very Valid
2.	Material coverage	3,70	Very Valid
3.	Model selection and learning steps	3,50	Very Valid
4.	Media selection	3,60	Very Valid
5.	Assessments Instrument	3,50	Very Valid
6.	Grammar	3,70	Very Valid
7.	Benefits	3,70	Very Valid
Total		3,62	Very Valid

Table 2: Validation Results of Student Activity Sheets

No	Assessment Aspects	\bar{x}	Information
1	Contents construction	3,35	Valid
2	Presentation technique	3,35	Valid
3	Completeness of content/material	3,50	Very Valid
4	Time	3,00	Valid
5	Language	3,40	Valid
6	Benefits	3,30	Valid
Total		3,31	Valid

Table 3: The Results of the Validation of the Learning Outcomes Test

No	Assessment Aspects	\bar{x}	Information
1.	Content construction	3,20	Valid
2.	Appearance	3,40	Valid
3.	Conformity with the material	3,40	Valid
4.	Compatibility with other components (Module and student activity sheet)	3,35	Valid
5.	Grammar	3,55	Very Valid
6.	Benefits	3,70	Very Valid
Total		3,43	Valid

Based on the results of data analysis in the table above, it can be concluded that the overall validation results of e-learning learning tools in the form of modules, student activity sheets and learning outcomes tests are generally declared valid. The details of the module validation scores are generally very valid with a total score of 3.62, the student activity sheets are generally declared valid with a total score of 3.31 and the learning outcome test is declared to be very valid with a total score of 3.43. The learning tools developed can be said to be valid because the development process is based on strong theoretical rationale and has internal consistency so that teaching materials have high reliability and consistency for collecting data. (Mustami dan Irwansyah, 2015).

The e-learning-based Islamic Education learning tool that has been developed is very suitable to be applied to students of the STKIP Bima mathematics education study program. With this learning tool, students can learn independently by playing back presentation videos, reading modules and working on student activity sheets.



E-learning-based learning tools can be used to improve the quality of students' digital literacy because the average results of the validation of learning tools are in the valid category. In addition, students can evaluate their knowledge through an evaluation tool in the form of a quiz using the Jamboard application. This e-learning-based Islamic Education learning tool has the advantage that it can be used independently by students anywhere and anytime, without being limited by space and time.

Hall (2014) explains that educators in the 21st century must have the ability and innovation in designing technology-based learning devices so that the learning process can take place effectively which in turn will increase students' digital literacy. In addition, the results of Handayanto's research (2015) which explains that the use of e-learning-based learning tools provides opportunities for students to think openly by doing practice questions creatively and students have the ability to use communication tools by prioritizing cultural and ethical values. the good one. Furthermore, Ramdani (2020) added that digital-based learning tools are feasible to be implemented during the Covid-19 pandemic in order to improve students' digital literacy.

Conclusion

The conclusion obtained from this research is that e-learning-based Islamic Education learning tools have been developed in an effort to improve students' digital literacy. Learning tools were developed by adopting the Thiagarajan development model with restrictions on the deployment stage, then assessed and validated by 2 experts, namely material experts and learning media experts. Based on the results of the validation that the learning tools that have been developed meet the valid category with a module validation value of 3.62, student activity sheet 3.31, and learning outcomes test 3.43.

Recommendation

Recommendations that can be submitted based on the results of this study, are: 1) The authors wish that the lecturers of STKIP Bima will take advantage of the use of the e-learning by using learning management system Moodle in learning activities, 2) In preparing e-learning-based learning tools, it is better to pay attention to the content of the material, the time of processing the sheet student activities and add pictures or videos.

References

- Amin, A.E. (2020). Peningkatan Profesionalisme Guru dan Pengembangan SDM dalam Menghadapi Era Revolusi Industri 4.0 Pada Guru Smk Mulia Buana Parung Panjang Bogor. *Jurnal Pengabdian Kepada Masyarakat*, 1(2), 258-262.
- Anggoro, E.Y.C. (2017). Pengembangan Perangkat Pembelajaran Problem-Based Learning Berorientasi pada Kemampuan Berpikir Kreatif dan Inisiatif Siswa. *PYTHAGORAS: Jurnal Pendidikan Matematika*, 12(1), 1-11.
- Azizah, N.Y., Lathifah, S.S., & Hidayat, N. (2021). Pengembangan E-Ensiklopedia Keanekaragaman Talas di Kabupaten Bogor Berbasis ESD untuk Meningkatkan Literasi Digital Siswa. *Pedagogia: Jurnal Ilmiah Pendidikan*, 13(2), 53.
- Chaeruman, A.U., Wibawa, B., & Syahrial, Z. 2018. Determining the Appropriate Blend of Blended Learning: A Formative Research in the Context of Spada- Indonesia. *American Journal of Educational Research*, 6(3), 188.
- Daud, F., & Rahmadana, A. (2015). Pengembangan Media Pembelajaran Biologi Berbasis E-Learning pada Materi Ekskresi Kelas XI IPA 3 SMAN 4 Makassar. *Jurnal Bionature*, 16 (1), 35.

- Fazryah, dkk. (2020). Penggunaan Aplikasi Kahoot Pada Pembelajaran Media dan Sumber Pembelajaran SD. *Jurnal Ilmiah PGSD STKIP Subang*, 4(1), 140-142.
- Hall, R., Atkins, L., & Fraser. (2014). Research article: Defining a self-evaluation digital literacy framework for secondary educators: The DigiLit Leicester project. *Research in Learning Technology*, 22(3), 1-3.
- Handayanto, et.al. (2015). Pembelajaran E-Learning Menggunakan Moodle pada Matakuliah Metode Numerik. *Jurnal Informatika UPGRIS*, 1(6), 47.
- Hekmah, N., Wilujeng, I., & Suryadarma. (2019). Web-LKS IPA Terintegrasi Lingkungan untuk Meningkatkan Literasi Lingkungan Siswa. *Jurnal Inovasi Pendidikan IPA*, 5(2), 136.
- Hernawati, F. (2016). Pengembangan Perangkat Pembelajaran Matematika Dengan Pendekatan PMRI Berorientasi pada Kemampuan Representasi Matematis. *Jurnal Riset Pendidikan Matematika*, 3(1), 34-44.
- Irwansyah, M., Ferawati., & Suryani, E. (2019). Pengembangan LKS Biologi Berbasis Pendidikan Abad 21 Terintegrasi Kearifan Lokal pada Siswa SMA. *Jurnal BIOTEK*, 7 (2), 119.
- Kartimi. R.Y., Gloria, I.R., & Anugrah. (2021). Chemistry Online Distance Learning During the Covid-19 Outbreak: do TPACK and Teachers' Attitude Matter? *Jurnal Pendidikan IPA Indonesia*, 10(2), 228-229.
- Kemdikbud. (2017). Literasi Digital (Gerakan Literasi Nasional). Jakarta: Tim GLN Kemdikbud.
- Kristiyani, E. (2019). Pengaruh Strategi Pembelajaran E-Learning dan Minat Belajar Terhadap Hasil Belajar Akuntansi. *Akademika Jurnal Teknologi Pendidikan*, 8(1), 68.
- Lathifah, A., & Prastowo, A. (2020). Analisis Pembelajaran Daring Model Website dan M-Learning Melalui Youtube pada Mata Pelajaran PAI Kelas 2 SD/MI. *Jurnal Limas PGMI*, 1(1), 76.
- Mustami, M.K., & Irwansyah, M. (2015). Pengembangan Lembar Kerja Peserta Didik (LKPD) Berorientasi Pendekatan Saintifik di SMA. *Lentera Pendidikan*, 18 (2), 236.
- Nurhidayah., & Afifah. (2019). Pengembangan Perangkat Pembelajaran Pendidikan Agama Islam Model Problem Based Learning dengan Pendekatan Contextual Teaching and Learning untuk Meningkatkan Kemampuan Berpikir Kreatif Siswa. *Masters thesis, UIN Sunan Ampel Surabaya*.
- Permana, H.F. (2015). Pengembangan Buku Ajar Biologi Berbasis Blended Learning sebagai Bekal Hidup di Abad 21 untuk Mahasiswa S1 Kimia FMIPA UM. *Prosiding Seminar Nasional Pendidikan Biologi*. UM Malang.
- Pratama, W.A., & Hartini, S. (2019). Analisis Literasi Digital Siswa Melalui Penerapan E-Learning Berbasis Schoology. *Jurnal Inovasi dan Pembelajaran Fisika*, 6(1), 9-13.
- Ramdani, A., Jufri, W., & Jamaluddin. (2020). Pengembangan Media Pembelajaran Berbasis Android pada Masa Pandemi Covid-19 untuk Meningkatkan Literasi Sains Peserta Didik. *Jurnal Kependidikan*, 6(3), 433.
- Sampurno, P.J., Maulidiyah, R., & Puspitaningrum, HZ. (2015). Implementasi Kurikulum 2013: MOODLE (Modular Object Oriented Dynamic Learning Environment) Dalam Pembelajaran Fisika Melalui Lembar Kerja Siswa Pada Materi Optik di SMA. *Jurnal Fisika Indonesia*, 95(55), 54-55.
- Siagin, D., & Sugiarto. (2002). Metode Statistik untuk Bisnis dan Ekonomi. Jakarta: PT. Gramedia Pustaka Utama.



- Stefanny, S., Nurbani & Badaruddin. (2017). Literasi Digital dan Pembukaan Diri: Studi Korelasi Penggunaan Media Sosial pada Pelajar Remaja di Kota Medan. *Sosioglobal: Jurnal Penelitian Pemikiran dan Penelitian Sosiologi*, 2(1), 10-31.
- Sugiyono. 2013. Metode Penelitian Pendidikan. Bandung: Alfabeta.
- Sulistiyaningrum, dkk. (2021). Pemanfaatan Media Pear Deck dan Jamboard dalam Pembelajaran Matematika di Masa Pandemi Covid-19. *Jurnal Basicedu*, 5(5), 4169-4179.
- Susanto, E., & Retnawati. (2016). Perangkat Pembelajaran Matematika Bercirikan PBL untuk Mengembangkan HOTS Siswa SMA. *Jurnal Riset Pendidikan Matematika*, 3(2), 189-197.
- Terras, M.M., & Ramsay, J. (2015). Massive Open Online Courses (MOOCs): Insights and Challenges from a Psychological Perspective. *British Journal of Educational Technology*, 46(3), 472-487.