Jurnal Edutech Undiksha
Volume 12, Number 1, Tahun 2024, pp. 89-100
P-ISSN: 2614-8609 E-ISSN: 2615-2908
Open Access: https://doi.org/10.23887/jeu.v12i1.67869

Problem-Based Electronic Module on *Thaharah* Material for *Madrasah Tsanawiyah* Students

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ARTICLE INFO

Article history:
Received September 4, 2023
Accepted February 20, 2024
Available online June 25, 2024

Kata Kunci:
E-modul, Fiqih, Pembelajaran Agama Islam, Thaharah, Berbasis Masalah

Keywords:
E-module, Fiqh, Islamic Religious Learning, Thaharah, Problem-Based

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ABSTRAK

Saat ini dunia sudah sangat mudah terhubung dengan perangkat digital sebagai wujud nyata dari penerapan teknologi dalam kehidupan sehari – hari, begitu juga pembelajaran agama Islam yang sudah sepatutnya harus mengikuti tren perkembangan teknologi informasi dan komunikasi melalui inovasi media belajar digital agar tetap relevan bagi karakteristik siswa. Oleh sebab itu, penelitian ini bertujuan untuk mengembangkan sebuah media pembelajaran digital dalam formal modul elektronik (e-module) yang diintegrasikan dengan pendekatan berbasis masalah untuk pembelajaran agama Islam. Metode penelitian termasuk dalam jenis penelitian dan pengembangan (R&D), subjek yang terlibat dalam riset ini terdiri atas 2 guru dan siswa Madrasah Tsanawiyah (MTs), serta 4 orang ahli. Teknik pengumpulan data yang digunakan menggunakan Teknik non-test dengan instrumennya adalah angket validasi ahli dan kepraktisan media pembelajaran. Data yang diperoleh dari hasil angket kemudian dianalisis secara deskriptif menggunakan persentase untuk mengukur tingkat kelayakan produk modul elektronik yang dikembangkan. Hasil riset menunjukkan bahwa validasi yang dilakukan oleh ahli penyajian materi didapatkan skor 72%, ahli Bahasa memperoleh skor 73%, ahli materi sejumlah 79%, dan ahli grafis dengan peroleh skor 96%. Adapun perolehan dari uji kepraktisan oleh guru I adalah 80%, guru II 89% dan untuk uji kepraktisan oleh siswa pada uji individu memperoleh skor 86,9% dan pada uji grup kecil sejumlah 81,9. Dari kedua uji tersebut dianalisis dan diputuskan bahwa modul elektronik berbasis masalah yang dikembangkan untuk pembelajaran agama Islam di MTs memperoleh keputusan layak digunakan sebagai media untuk proses pembelajaran.

ABSTRAK

Currently, the world is very easily connected with digital devices, including Islamic learning which must follow the development trends of information and communication technology. Therefore, this research aims to develop a digital learning media in formal electronic modules that is integrated with a problem-based approach to learning Islamic religion. The research method is included in the type of research and development (R&D), the subjects involved in this research consisted of 2 Madrasah Tsanawiyah (MTs) teachers and students, as well as 4 experts. The data collection technique used is a non-test technique with the instrument being an expert validation questionnaire and the practicality of learning media. The data analysis technique used is descriptive with percentages to measure the level of feasibility of electronic module products. The research results showed that validation was carried out by 72% of material presentation experts, 73% of language experts, 79% of material experts, and 96% of graphics experts. The results of the practical test by teacher I was 80%, teacher II was 89% and for the practical test students in the individual test got a score of 86.9% and in the small group test it was 81.9. From these two tests, it was decided that the problem-based electronic module developed for Islamic learning at MTs was deemed suitable for use as a medium for learning activities. It is hoped that this research will be able to have a positive impact on the implementation of Fiqh learning at the junior secondary education level.

1. INTRODUCTION

The development of the Islamic religious education and learning system in junior high schools has a long history and continues to change with the times. Currently, Islamic religious education at the junior high school level is very important because it produces young people who have a good understanding of the

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values and teachings Islam subject (Destriani, 2022; Syamsuar & Reflianto, 2018). Initially, Islamic religious education in junior high schools was often limited to Islamic religious lessons taught conventionally, with an emphasis on memorizing the Koran and hadith. However, along with the times and developments in technology, the approach to learning Islamic religion in junior high schools has begun to change. A more holistic approach in learning Islamic religion is starting to be introduced, with a focus on understanding concepts, moral values, ethics, and practical applications in everyday life (Rozi & Alawiyah, 2021; Nasiri, 2020). Technology integration is also an important part of Islamic religious learning, with the use of software and online resources to enrich students' learning experiences (Haldorai et al., 2021; Nasiri, 2020; Sutama et al., 2022).

One of the materials discussed in the subjects of Islamic Religious Education is *thaharah*. *Thaharah* material (purification) is very important material to learn, considering that *thaharah* is a requirement for someone to worship Allah SWT. Not only as a condition for worship, *thaharah* is also important for maintaining human health (Husain et al., 2014; Maawiyah, 2016). *Thaharah* itself is used as a basis for a Muslim to protect himself from uncleanness and how to purify himself from *hadas*. Understanding *thaharah* material at school is very important because when worshiping we are required to be in a state of purity, so that we are able to understand the true *thaharah*, students are required or encouraged to learn and understand the meaning of *thaharah* and practice it in everyday life (Arifah et al., 2019; Husain et al., 2014; Rozi & Alawiyah, 2021). Therefore, understanding and practicing *thaharah* needs to be taught and accustomed to children from an early age.

The importance of understanding *thaharah* material is inversely proportional to the conditions that occur in the field, some Muslims, especially students, still lack understanding in carrying out the practice of *thaharah* correctly due to a lack of knowledge and understanding regarding this matter. Meanwhile, for students, especially at Madrasah Tsanawiyah Al-Huda, Pringdewu based on information obtained from interviews with Islamic Religious Education subject teachers, they said that students' understanding of *thaharah* is still low and the methods used in learning still use conventional methods, namely lectures and discussions. This is confirmed by research conducted by previous study who stated that there were still some students who did not maintain the purity of their clothes for prayer and their ablutions were not complete (Arifah et al., 2019). Apart from that, another problem that is a challenge for teachers is related to students' different levels of understanding, so teachers are required to make efforts so that students' understanding of the material can be in line with the teacher's expectations (Destriani, 2022). Therefore, efforts need to be made to increase students' uniform understanding. From the results of the interviews then explore information about learning activities and learning management that are currently taking place. The next field finding was in the learning process through the distribution of questionnaires to seventh grade students at MTs Al - Huda in Pringsewu sub-district, researchers found that 87.2% of students generally received teaching materials in the form of student books from school as the main learning source and these books were also used. as an evaluation tool. Therefore, digital learning materials or resources are needed that are designed to allow them to be used independently so that learning can be carried out completely (Bhattacharjee & Deb, 2016; Lim et al., 2020).

One effort that can be made to increase students' understanding of *thaharah* is by utilizing learning media. The learning process will go well if the teacher can utilize technology as a learning medium, because using technology as a learning medium will make it easier for teachers to convey the material (Firdawati et al., 2021; Syahrial et al., 2019). The use of technology that can be done to help the learning process is by creating electronic modules (e-modules). Electronic modules are a type of integrated media which not only explains material through text but also includes other media such as video tutorials and simulation-based multimedia (Smaldino et al., 2014; Suprapto et al., 2021; Yulando et al., 2019).

The application of learning with learning media is something that needs to be done because in this era of globalization humans are required to be able to keep up with the times where the development of science and technology is developing very fast. This is known as 21st century learning which is marked by the increasingly intense use of Information and Communication Technology (ICT) in all aspects of life (Sutama et al., 2022; Ishaq et al., 2020). Therefore the use of technology must really be done in order to support the student learning process goes well. One of them is like learning materials that are packaged in electronic modules. Besides that, as a learning medium, modules can be integrated with various approaches in learning such as problem-based, project, local wisdom and so on (Hastuti et al., 2020; Rahayu, I., & Sukardi, 2021; Sofyan et al., 2019). For example, Problem Based Learning (PBL) is an approach or learning model that teaches students to solve problems and reflect on their experiences, thereby enabling the development of thinking skills (reasoning, communication and connection) in solving problems that are meaningful, relevant and contextual. Through the problem-solving process, students are expected to be able to develop knowledge and skills in mastering subject matter concepts, including mastering various 21st century skills. The PBL learning model places more emphasis on the use of academic knowledge for real-

world applications and thus bridges classroom learning and real-world needs (Dewantara et al., 2020; Fidan & Tuncel, 2019; Simanjuntak et al., 2021). The application of PBL in the teaching and learning process also does not only emphasize theoretical understanding, but also helps students to reflect on their understanding of the real world.

Currently, of course, along with technological developments and analysis of field findings and theoretical information above, it has been identified that learning modules are available in print and electronic formats, the electronic version is often referred to as e-module. E-modules are part of learning material or information packaged in electronic format, where learning using information and communication technology becomes more optimal and can be accessed at any time by students (Oksa & Soenarto, 2020; Yolanda & Rizal, 2021). As is known, one of the advantages of the E-Module is that it can't only be operated via internet access, but also via a computer or smartphone without an internet connection. E-modules that are distributed in electronic form can indirectly contribute to reducing paper waste by saving on the use of paper and other writing instruments, but also a form of innovation through the use of digital technology which is developing so rapidly and is implemented into the learning process (Hadianto & Festiyed, 2020; Nisa et al., 2020; Sá et al., 2021). E-modules have very varied components, they are composed of a combination of various formats such as text, images, graphics, music, animation, video, interactions into one unit in a digital file (Findeisen & Wild, 2022; Hamid et al., 2020). In several schools spread across various parts of the world, it is stated that currently the use of ICT for the learning process has increased very rapidly, as seen from the application of high-level technological media to the integration of ICT-based learning media during the learning process (Nicolaou et al., 2019; Alfadda & Mahdi, 2021).

One of the ICT-based interactive media is of course attached to the characteristics possessed by electronic modules. E-modules in their use can be used to support the learning process which empirically and theoretically will be able to have a positive impact on student academic achievement (Hariyani et al., 2021; Nisak & Yulkifli, 2021; Rawashdeh et al., 2021). As several previous studies have succeeded in revealing that the use of e-modules with a problem-based approach to science learning can be declared feasible for the learning process, after going through a series of validation processes carried out by experts and practitioners (Aufa et al., 2021). Similar results were also obtained from other studies which revealed that the use of interactive e-modules and integrated with a project-based learning approach could improve the practical competence of vocational high school students in terms of electrical installations (Laili et al., 2019). In line with this, subsequent research succeeded in proving that the application of E-modules which added interactive elements was proven to be effective in providing a positive impact on improving students' critical thinking skills (Latifah et al., 2020).

Based on several previous research findings, it appears that developing and implementing e-modules in learning is an approach worth considering. There is an element of novelty in this research, namely the application of a problem-based approach in delivering material, which is especially relevant in the context of Islamic religious learning at junior high school level. This research also gives a special touch to the electronic aspect of the media module, because apart from being able to be accessed via a computer, the e-module can also be operated via a smartphone device. It can be seen that the presence of this e-module is very important, because this e-module will be problem-based combining a project-based learning approach, which encourages students to solve real-world problems, develop problem-solving, analytical and critical thinking skills. This is in line with the needs of the 21st century where graduates must have more comprehensive skills than just memorizing facts. Furthermore, this e-module allows more flexible and independent learning access. Students can study anytime and anywhere, according to their needs and preferences.

Therefore, this study aims to develop ICT-based learning media products in the e-module format by integrating a problem-based approach in order to convey *thaharah* material in Islamic religious learning in junior high schools which is suitable for use as media during learning activities, after that It is hoped that the product to be developed can become an innovation in an effort to improve student character. The novelty of this study provide problem-based approach in order to convey *thaharah* material in Islamic religious learning in junior high schools which is suitable for use as media during learning activities in ICT-based learning media products.

2. METHOD

This research is a research and development (R&D) study. The use of this research approach is in line with the research objective of developing electronic module products which are then validated by experts and practitioners so that they become an electronic module learning media that is suitable for use in Islamic religious education learning. As expressed whereas research and development is a method used to produce certain products and allows it to be used as a method to test the level of effectiveness of said

product (Borg & Gall, 1989). On the other hand, the development model that will be used by researchers is the ADDIE model which consists of stages, Analysis, Design, Development, Implementation and Evaluation.

The research samples involved in this research consisted of material experts, material presentation experts, language experts, graphics experts and practitioners, namely two Fiqh Subject Teachers at the Al-Huda *Tsanawiyah Madrasah*, Pringsewu which if added up, the total sample involved was six (6) people. The data collection technique is a non-test technique which aims to measure the quality level of the electronic modules being developed (Widoyoko, 2012). The data collection instrument uses a validation questionnaire by adopting four scales, namely Very Good (Score 4), Good (Score 3), Not Good (Score 2), and Very Poor (score 1) for each validator (Perdana et al., 2021). The following is a lattice of instruments developed for the assessment carried out by each expert, each instrument refers to relevant research and has been adapted to the needs of this research are show in Table 1, Table 2, Table 3, Table 4, and Table 5.

Table 1. Material Expert Validation Instrument Grid

Aspect	Indicator	Number of Items
Eligibility of Content/Substance	Conformity of material with Competency Standards	3
	Accuracy of Material	14
	Sophistication	7
	Encourage Curiosity	2
	Developing Life Attitudes (Life Skills)	5
	Developing an Attitude of Respect (Sense of Diversity)	2

Adapted from (Perdana et al., 2021; Pujawan, 2019)

Table 2. Language Expert Validation Instrument Grid

Aspect	Indicator	Number of Items
Language Eligibility	Straightforward	3
	Communicative	2
	Dialogic and interactive	2
	Suitability with the development of students	2
	Conformity with the rules of language	2
	Use of symbols and icons	2

Adapted from (Hartiyani & Ghufron, 2020)

Table 3. Graphical Expert Validation Instrument Grid

Aspect	Indicator	Number of Items
Graphic Eligibility	Module Size	2
	Cover design (cover)	12
	The placement of layout elements is consistent based on the pattern	1
	The separation between paragraphs is clear	1
	Illustrations and image captions	10
	The use of letter variations (old, italic, all capital, small capital) is not excessive	7

Adapted from (Septiani, 2020)

Table 4. Media Presentation Expert Validation Instrument Grid

Aspect	Indicator	Number of Items
Eligibility of Presentation	Presentation technique	5
	Presentation support	6
	Presentation of learning	5

Adapted from (Lasfika et al., 2022)

Table 5. Student Assessment Instrument Grid

Aspect	Indicator	Number of Items
Appearance	The attractiveness of learning media	1
	Ease of use of learning media	1
	Facilitate student learning	1

Aspect	Indicator	Number of Items
Content and Evaluation	Text readability	1
	Use of font sizes and fonts	1
	The use of attractive images	1
	The material is easy to understand	1
	Learning objectives are easy to understand	1
	The suitability of the questions with the material	1
	Provide feedback on evaluation results	1

Adapted from (Ariusnita & Bayu, 2023; Setyaedhi et al., 2023)

Meanwhile, the instruments that have been made for each validator are validated first with expert judgment techniques, the instrument validation process is carried out by selecting an expert from each type of instrument to be consulted about the quality and validity of the electronic module assessment questionnaire from various points of view (Sugiyono, 2018). This research will use data analysis techniques with descriptive types, percentages and categories to describe the feasibility of electronic modules in tabular form (Perdana et al., 2021). Analysis of the feasibility level of electronic module learning media must obtain a score of >51% in order to be declared suitable as learning media (Fahmi et al., 2021). The table for electronic module eligibility criteria is show in Table 6.

Table 6. Electronic Module Eligibility Criteria

Eligibility Level	Interpretation	Decision
76 – 100%	Very Good	Very Feasible
51 – 75%	Good	Feasible
26 – 50%	Enough	Not Worth It
0 – 25%	Not Good	Not Feasible

Adapted from (Fahmi et al., 2021)

However, this research only focuses on product feasibility tests that are developed according to research objectives, due diligence will be carried out by several testers. The following is an overview of research and development procedures that focus on the product development stages carried out is show in Figure 1.

Figure 1. Research Design

3. RESULT AND DISCUSSION

Results

The results of this study are of course based on the problems and methods used, which starts from conducting a needs analysis to conducting a media assessment adapted from the ADDIE research and development model. In the initial stage, the analysis was successfully carried out by carrying out observation activities during the learning process. The results of the observations show that the implementation of the curriculum is different from previous years, so it is necessary to update the material. The teachers have made adjustments to the material with the curriculum that applies nationally, it's just that they have not succeeded in developing learning media with an adapted version of the material. This is certainly a problem for students, because students are limited to the material in the book. It would be a shame if technology that has advanced and developed as it is today cannot be optimized properly. Besides that, the observation findings also show that during the learning process, teachers who have not updated learning media with material in the national curriculum still use printed books as their learning media. So, from the results of observations and the potential availability of facilities referring to identification, currently teachers need an innovative ICT-based learning media in the format of interactive electronic modules. This media emerged as an innovation based on field findings and the characteristics of students

who are already accustomed to its presence. The results of this needs analysis are expected to be able to provide a stimulus in order to develop a learning media product in the e-module format, which is specifically to be applied to Islamic religious learning. Referring to the results of field findings in the needs analysis stage, a product will be developed that is needed by students to overcome the problems they face.

In this section, the results of the design regarding the flow of media in the form of learning syntax that apply electronic module media will be presented, which will then be assessed or validated by experts. The following are the results of the initial design which are outlined in the form of learning syntax in implementing e-modules. Learning syntax by applying e-module is show in Table 7.

Table 7. Learning Syntax by Applying E-Module

Steps	Teacher Activities	Student Activities
Student orientation to the problem	The teacher conveys the problem that will be solved in groups through reading material or activity sheets that have been provided by the teacher	Students observe and understand problems presented by the teacher or obtained from recommended reading materials.
Organizing students to learn.	The teacher divides into groups of 5-6 students and ensures that each member understands their respective assignments.	Students discuss and divide tasks to find the data/materials/tools needed to solve the problem.
Guiding individual and group investigations.	The teacher monitors student involvement in collecting data/materials during the investigation process.	Students carry out investigations (looking for data/references/sources) for group discussion materials.
Develop and present work results.	The teacher monitors the discussion and guides the preparation of reports so that each group's work is ready to be presented.	The group holds discussions to produce solutions to solve problems and the results are presented/presented in the form of work.
Analyze and evaluate the problem solving process.	The teacher guides presentations and encourages groups to give awards and input to other groups. The teacher and students conclude the material.	Each group makes a presentation, the other groups give appreciation. The activity continues by summarizing/making conclusions based on input obtained from other groups.

Base on Table 7, after the learning syntax design using e-modules is complete, the next step is to develop the initial electronic module product. Then the initial product then enters the media evaluation stage by the experts involved. Assessment by each expert and teacher of the *Fiqh* subject at *MTs*. The assessment of the suitability of media in electronic module format uses an instrument in the form of a questionnaire containing assessment items which are distributed to each assessor, along with the results of the e-module product assessment by each expert. Problem-based on e-module feasibility test results by experts is show in Table 8.

Table 8. Problem-Based E-Module Feasibility Test Results by Experts

No.	Validator / Expert	Validity Results (%)	Interpretation
1.	Review of assessments by Material Presentation Experts	72%	Good
2.	Assessment review by Linguists	73%	Good
3.	Review of assessments by Material Experts	79%	Very Good
4.	Rating review by Graphics Expert	96%	Very Good

From Table 8, it is known that the table contains some of the results of the e-module media feasibility assessment by experts. As has been done by material presentation experts, the results of media reviews were obtained with a total score of 72% which when referring to the media eligibility criteria table has a 'good' interpretation and is included in the 'proper' decision. Meanwhile, the results of linguists assessing elements of language and characteristics of language use also obtained results that included 'good' with a score of 73% and had a 'decent' decision as a medium. The next result is an assessment carried out by material experts, material experts provide an assessment with a score obtained of 79% with an

interpretation that is 'very good' and included in the 'decent' category. Meanwhile, the review scores obtained from graphic experts are also included in the 'very good' interpretation with a total percentage of 96% and are also included in the 'decent' category to become a learning medium. Thus, theoretically from all information or material, language, graphics and presentation of material contained in electronic module products according to the needs of competence, ease of use, actuality and factuality of the material so that it does not conflict with the implementation of the national curriculum and learning. Therefore, as a whole it can be decided that the e-module product obtains a 'decent' decision based on the assessment of the three expert validators, so that it can then be tested on students and teachers to measure the level of practicality of the media before being implemented in large scale. Practical problem-based e-module feasibility test results is show in Table 9.

Table 9. Practical Problem-Based E-Module Feasibility Test Results

No.	Validator / Expert	Validity Results (%)	Interpretation
1.	Teacher I	80%	Very Good
2.	Teacher II	89%	Very Good
3.	Student (Individual trial)	86.9%	Very Good
4.	Students (Small group trial)	81.9%	Very Good

Referring to the results obtained in Table 9, it is known that the table contains several results of e-module media feasibility assessments by teachers and students. The results of the assessment carried out by teacher I obtained a score of 80% which if interpreted was included in the 'very good' category, as well as teacher II whose results from the review gave a score of 89% with the category of interpretation of the score including 'very good'. Meanwhile, media testing activities by students are divided into two stages, namely the individual trial stage and small group trial stage. In individual trials, a feasibility score of 86.9% of the e-module media was obtained which if interpreted included 'very good', in line with that the results of testing the e-module in the small group trial also obtained a score of 81.9% which was included in the interpretation of the data is 'very good' which from the two test results by the student obtains a decision that is 'appropriate' as a learning medium for Islamic religious education.

Overall, the electronic media products developed have gone through a validation process both by experts and by teachers and students, each of the assessment subjects shows that learning media in e-module format with the integration of a problem-based approach is included in the 'very good' qualification. So it can be decided that problem-based e-modules for learning Islamic religion are included in the 'appropriate' category for use as a learning medium for junior high school students. The display of the electronic module learning media that has been developed is show in Figure 2.

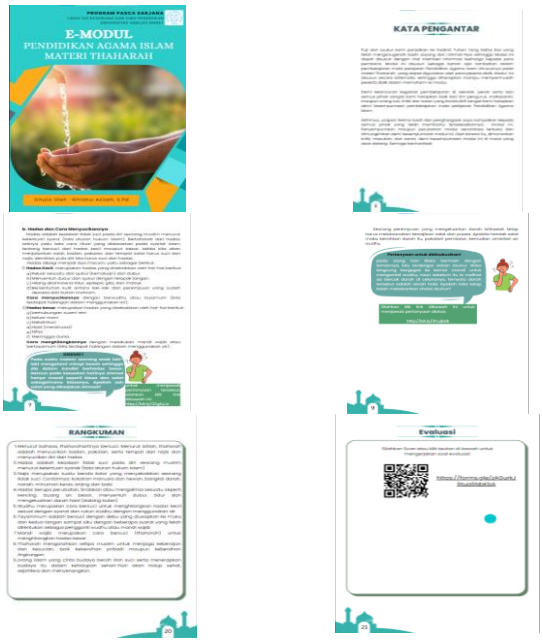

Figure 2. Electronic Module Display for *Thaharah* Material

Discussion

The data obtained in this research consists of observational data obtained from needs analysis activities, documentation in design activities and percentage data to determine the feasibility level of the electronic module product being developed. From the results of observations during the needs analysis activity it was identified that currently teachers still have not implemented digital learning media due to the implementation of the new curriculum, so currently teachers still use printed book media as a source for learning. The results of this needs analysis then show that of course the learning process that is currently taking place needs to be innovated, one of the innovations that can be applied is to develop a digital learning media that is integrated with problems for learning Islamic religious education. Of course this cannot be separated from the many benefits of using innovative and ICT-based learning media, which will have more impact on student understanding, when compared to just using a static printed version of a material book (Yulando et al., 2019; Apostolou, 2020).

Apart from that, the results of the development of learning media products in electronic module format also show that the media is included in the good category and is suitable as a medium for learning Islamic religious education. The results of the assessment by several experts, teachers and students show that the media has been developed in accordance with procedures and based on the results of needs analysis in the field. As a review of the validation results carried out by experts in presenting the material is considered good as a learning medium, assessments by other experts such as material experts and language experts also show that the learning media in the electronic format of this module which has been successfully developed is included in the good category. Of course, obtaining an assessment score by this expert cannot be separated from the compatibility between the electronic module and the module principles as well as the addition of interactive and digital elements to the electronic module so that the results obtained are also in line with the application of the theoretical principles (Rejekiningsih et al., 2021; Lasfika et al., 2022). In terms of the quality of the e-module, of course it has been proven theoretically to be included in the good category according to the validation of experts. This cannot be separated from the application of text message design to e-modules that has paid attention to message design principles (Verdiana & Pangestieka, 2018; Nugroho & Daniamiseno, 2022), of course this is important for learning media developers so that what is conveyed in the e-module becomes more sequential and systematic (Tennyson, 2020; Ozdamli & Ozdal, 2018), so that text and information designed based on message design theory will make it easier for students to receive information and understand the material or message contained in it (Fitria & Suminah, 2020; Resita & Ertikanto, 2018).

Apart from the order in which information is conveyed, the message must also be packaged well so that it has meaning and is not confusing when studied by students, for example the use of each image displayed must have meaning and support the content of the material being conveyed, as well as using fonts, colours, lines, spaces, etc. shape, scale, balance and texture that meet the characteristics of the material and the characteristics of the students (Artiniasih et al., 2019; Rahayu & Sukardi, 2021). The existence of e-modules that are suitable for learning is also an effort to prepare interactive and ICT-based learning tools with elements that contain material, methods, limitations, and evaluation methods that are designed systematically and attractively to achieve the abilities and learning objectives that have been set (Alfiras & Bojiah, 2020; Yulando et al., 2019). From the three experts who had carried out the validation, it was identified that problem-based electronic media modules for learning Islamic religion could be tested practically by teachers and students.

Furthermore, the developed electronic modules were tested on teachers and students to find out the level of practicality of the media before being massively applied to learning activities. The results of the test assessment by two teachers showed that the e-module product was included in the 'very good' category. Furthermore, practical tests are also carried out by students, through individual and small group trial stages. Through these two tests, it was successful to show that the results of individual trials obtained information that the e-module obtained very good qualifications, as well as small group trials with similar results. The results of the E-module assessment which obtained very good qualifications, of course, could be due to several things, so that students were interested and enthusiastic in learning. Such as the availability of several interactive learning resources such as videos and images in this e-module (Okocha, 2020; Hariyani et al., 2021) which is a supporting element so that students are interested in learning the material through the media of this electronic module. The application of e-modules in the learning process can increase student responsibility and involvement, produce interesting learning activities, and improve learning outcomes (Nisa et al., 2020; Aufa et al., 2021; Hadiyanti et al., 2021). Apart from that, learning media in the form of e-modules can also help teachers gain new experiences, besides that e-module media can also help teachers communicate information to their students better, especially when teaching (Albana & Sujarwo, 2021; Pratiwi et al., 2021). Overall, learning media in an electronic module format that is integrated with a problem-based learning approach is considered capable of inspiring student involvement,

interest in learning, and achieving predetermined competencies. In the context of learning media, the E-Module based on problem-based learning that has been developed has received a very good assessment both theoretically (expert test) and practically (teacher and student test), with its superiority lying in the preparation of information based on message design theory, visual quality attractive, relevant text, cool use and combination of colours, and navigation that functions comprehensively. All components in this e-module were then arranged and succeeded in creating attractive visual elements as well as the integration of educational content that was interesting for students to use and learn.

Not only that, it turns out that the results obtained in this research are in line with the results of previous research which also revealed that the use of problem-based electronic module media has been used as a suitable learning media for science learning as a means of increasing students' scientific literacy (Kimianti & Prasetyo, 2019). The results of other research have also succeeded in revealing that problem-based electronic module media (E-Modules), which first go through a series of validations by experts and receive input, have succeeded in having an impact on improving student learning outcomes in biology learning (Pramana et al., 2020). Meanwhile, other research conducted at the vocational secondary level also shows that Islamic religious subjects have not been innovative enough in their use of learning media, so that electronic modules are considered as one of the suitable media to be developed and applied to learning activities. The results of this research show that the Electronics with interactive elements can be accepted by vocational school students and they find it easy to study material about Islamic religious education in their schools (Fahmi et al., 2021). The results of the latest research also show that learning media in an electronic module format and integrated with a problem-based learning approach is very suitable and has successfully met the eligibility criteria to be applied to sociology learning activities in high school (Yuningtyas et al., 2023).

Referring to various findings from relevant research shows that the use of e-modules enables the integration of technology in the learning process, allows better accessibility for students, and provides an interactive and interesting learning experience. In addition, problem-based e-modules allow the use of more contextual and applicable content, which can strengthen students' understanding of concepts and skills. Therefore, problem-based e-modules are a learning tool that is in line with technological developments and can be optimized for use in learning activities. However, this research has weaknesses and limitations. This research only focuses on the needs analysis stage to assessing the feasibility of electronic media modules, without testing the impact of using this media, especially in the context of Islamic religious learning in junior high schools. Therefore, further testing is needed to assess the impact of using this e-module on achieving the specified competencies.

4. CONCLUSION

Based on the findings in this research starting from the needs analysis stage to assessing the feasibility of learning media, it can be concluded that problem-based learning electronic modules for Islamic religious learning are needed as innovations to overcome problems that are less varied and update the material that has been delivered so far, in addition to research results also shows that the electronic media module or E-module has good quality and is declared feasible for use during learning activities based on the results of expert validity tests and product practicality tests. The hope is that this research can be used in learning activities and have an impact on increasing competence and student learning outcomes.

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