



Development of Interactive E-Module on Islamic Religious Education Subject: *Implementation of Independent Curriculum at Schools*

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Abstrak

Kurangnya antusias siswa untuk mengikuti kegiatan pembelajaran khususnya pada mata pelajaran Pendidikan Agama Islam kebanyakan disebabkan oleh bahan ajar yang monoton. Selain itu, bahan ajar tersebut dinilai kurang mendukung proses belajar dengan kebijakan merdeka belajar bagi siswa pada kurikulum merdeka. Oleh karena itu, diperlukan bahan ajar yang sesuai dengan kebijakan merdeka belajar yakni salah satunya dengan menggunakan e-modul interaktif. Sehingga penelitian ini bertujuan untuk mengembangkan e-modul interaktif Pendidikan Agama Islam untuk mendukung implementasi kurikulum merdeka kelas X SMKN 1 Lamongan, dengan harapan dapat membantu guru mengatasi permasalahan yang terjadi pada saat mengimplementasikan kurikulum merdeka pada proses pembelajaran Pendidikan Agama Islam. Model pengembangan yang digunakan adalah model ADDIE. Empat tahapan pada prosedur pengembangan ADDIE yang dilalui lima tahap yaitu *Analysis, Design, Developement, Implementation* dan *Evaluation*. Teknik analisis data yaitu dengan cara menghitung skor persentase penilaian validasi dan respon pengguna. Hasil penelitian menunjukkan bahwa Hasil penelitian menunjukkan bahwa pengembangan e-modul interaktif pokok

materi peran ulama' penyebar ajaran islam di Indonesia untuk mendukung implementasi kurikulum merdeka ini memenuhi kriteria sangat valid dari aspek kualitas tampilan, rekayasa perangkat lunak, keterlaksanaan, *interface*, *reusable*, *maintainable* dengan memperoleh skor 98,77% dari segi IT. Skor dari segi materi memperoleh 96,69%. Sedangkan dari segi media memperoleh skor 98,56%. Hasil uji respon siswa dan guru dari hasil *pretest* sebelum diimplementasikannya e-modul interaktif ini, masing-masing memperoleh skor 69,54% dan 74,66%. Kemudian terjadi peningkatan nilai siswa pada *posttest* yaitu dengan nilai rata-rata 89 dibanding *pretest*.

Kata Kunci: E-Modul Interaktif, Pendidikan Agama Islam, Kurikulum Merdeka

Abstract

Students' lack of enthusiasm to participate in learning activities, especially in Islamic Religious Education subjects, is mainly caused by monotonous teaching materials. In addition, these teaching materials are considered not to support the learning process with the independent learning policy for students in the Independent curriculum. Therefore, teaching materials that meet the independent learning policy are needed, one of which is by using interactive e-modules. So this study aims to develop an interactive e-module for Islamic Religious Education to support the implementation of an independent curriculum for grade X SMKN 1 Lamongan, which can help teachers overcome problems when implementing an independent curriculum in the learning process of Islamic Religious Education. The development model used is the ADDIE model. The four stages in ADDIE development procedures are passed through five stages: Analysis, Design, Development, Implementation, and Evaluation. The data analysis technique calculates the percentage score of the validation assessment and user response. The study results show the development of interactive e-modules and the subject matter of the role of ulama' in spreading Islamic teachings in Indonesia, supporting the implementation of an independent curriculum. Those results met very valid criteria for display quality, software engineering, performance, interface, reusable, and maintainability, with a score of 98,77% in terms of IT. The score in terms of material gained 96,69%, and in terms of the media obtained a score of 98,56%. The results of students' and teachers' response tests from the results of the pretest before the interactive e-module implementation got a score of 69,54% and 74,66%. Then there was an increase in student scores in the posttest, with an average score of 89 compared to the pretest.

Keywords: *Interactive E-Module, Islamic Religious Education, Independent Curriculum*

INTRODUCTION

Islamic Religious Education aims to foster and develop morals or human behavior, both in spiritual and physical aspects, that occur hierarchically (Hasan Basri, 2016). In Islamic Religious Education, the process of maturation, development, and growth can be achieved providing that the learning activities are aimed at transformative and innovative goals (Sya'bani, 2018). The learning of Islamic Religious Education

needs to be contextually developed to respond to current situations, conditions, and problems by utilizing developing technology (Eva Latipah, t.t.). With the increasing complexity in the context of Indonesia in the 21st century, a deep understanding of religion is crucial because religion acts as the basis for human behavior in everyday life. To bring this into realization, the learning plan should be predetermined carefully before the actual learning taking place, one of which is preparing the proper learning resources (Supriadi, 2017).

The decree of the Head of the Educational Standards, Curriculum and Assessment Agency of The Ministry of Education, Culture, Research, and Technology Number 008/H/KR/2022 concerning learning outcomes in the independent curriculum (independent curriculum) stipulates that learning Islamic Religious Education in independent curriculum needs to be directed into learning. Therefore, it can foster students' curiosity and discovery, student-oriented learning processes (student-centred learning), problem-solving, real-life project-based learning and collaborative learning. Thus, it can provide the chance for the growth of valuable skills in students such as critical thinking, communication and collaboration skills, and being a creative student (Ananda, 2019). Therefore, learning resources are needed to support interactive and student-centred learning.

The era of industrial reform 4.0 was followed by the era of *society* 5.0. which was marked by society starting to implement technological advances that emerged in the industrial revolution 4.0 so that they could solve various kinds of problems that occur in the social sphere (Sugiono, 2020). Advanced digital technology has provided many advantages for anyone in accessing various information and connecting, ignoring borderline, space, and time (Farida, Alba, Kurniawan, & Zainuddin, 2019). This change has a direct impact on the education sector, leading to an evolution to integrate information and communication technology into learning (Moreno-Guerrero, Soler-Costa, Marín-Marín, & López-Belmonte, 2021). Thus, in today's education world, technology-based learning systems are increasing. This learning system has changed dramatically over time regarding the use of modern technology in the classroom, which is then referred to as 21st-century learning (Garcia, Abaratigue, & Alcantara, 2021).

One of these changes impacts on the use of digital or electronic-based teaching materials (Yustanti & Novita, 2019). Teaching materials, which used to be in the form

of books printed on paper, are now switched to electronic-based teaching materials, commonly known as e-modules (Winatha, 2018). E-module or electronic module is self-teaching materials arranged systematically to achieve particular learning objectives presented in electronic form, which is Self Instruction. E-module can be used flexibly without any limitations of space and time. Using e-modules, students can access the links anytime and anywhere given by the teacher as long as they connect to an internet connection. In addition, in certain conditions, students can access the e-modules without connecting to the network. Therefore even though students are not in the same place as the teacher, the learning process can still be conducted (Wulandari, Yogica, & Darussyamsu, 2022).

SMKN 1 Lamongan is an educational institution that implements an independent curriculum with an independent learning policy for students. According to the observations and interview results of researchers with Islamic Religious Education teachers, there were problems in implementing independent learning in the learning process in grade X. The problems are students' lack of enthusiasm to participate in Islamic Religious Education learning activities, especially on the material of the role of the ulama' in spreading Islamic teachings in Indonesia. The problems happened because of the monotonous teaching materials and did not support the implementation of an independent learning policy on students learning process. To overcome this, the proper teaching materials which meet the independent learning policy are needed, one of which is using interactive e-modules.

Interactive e-module is learning materials that contain material, methods, limitations and evaluation ways that are designed systematically and interestingly to achieve the expected subject competencies/sub-competencies according to the level of complexity (Mas'udah & Bakar, 2021). Presentation of this kind of material will give an accurate picture of the material or content and could draw students' attention (Sutarto, Muzaki, Hastuti, Fujiaturrahman, & Untu, 2022). With the explanation of the facts above, it is necessary to develop an interactive e-module of Islamic Religious Education with the subject matter of the role of the ulama' in spreading Islamic teachings in Indonesia to support the implementation of the independent curriculum for grade X SMKN 1 Lamongan. This study aims to see the effectiveness of developing interactive e-modules for Islamic Religious Education to support the implementation of an

independent curriculum. In addition, this research is expected to create learning designs that are innovative, effective and efficient in implementing the independent learning policy in an independent curriculum, which involves students participating actively in the learning process.

The development of e-modules in the subject of Islamic Religious Education has also been developed by many previous researchers, such as research of Lathifa Budiatiy Mawaddah, Lia Nur Atiqoh Bela Dina, and Atika Zuhrotus Sufiyana (Mawaddah, Dina, & Sufiyana, 2022), Shinta Nurfirdausi, Ajat Rukajat, and Khalid Ramdhani (Nurfirdausi, Rukajat, & Ramdhani, 2022), and Mohammad Iqbal Assyauqi (Assyauqi, 2020). These studies examine the development of e-modules in Islamic Religious Education subjects to support student learning activities in the digital era. However, none of these studies has developed interactive e-modules to support the implementation of an independent curriculum. This research can contribute to helping teachers overcome problems occurred when implementing the independent curriculum in the learning process of Islamic Religious Education.

METHODS

The type of this research is development research and the model of this research is using ADDIE model (*Analysis, Design, Development, Implementation, Evaluation*) (Sari, 2017). The ADDIE learning model is based on an effective and efficient system approach and an interactive process between students, teachers, and the environment (Hidayat & Nizar, 2021). The ADDIE model in this study will use five stages of development: *Analysis, Design, Development, Implementation, and Evaluation*. The analysis phase (*Analysis*) includes analysis of competency, material analysis, student characteristic analysis, and instructional analysis.

The research results are then used as study material (teaching material), followed up at the design stage. The planning (*design*) stage includes the preparation of the structural framework (*outline*), the determination of systematics and the design of evaluation tools. The development stage *includes* pre-writing, drafting, editing and revision, and limited tests to get feedback from interested parties such as media and material experts, peer reviewers, teachers and students. The implementation phase is carried out by extensive/empirical tests, and teachers and students use the teaching

material products in the learning process. The evaluation phase includes the results of the previous stage. Then an evaluation is carried out to see whether the developed product is successful and in line with initial expectations. The instrument used is a learning achievement test consisting of a *pretest* and a *posttest*.

RESULTS AND DISCUSSIONS

Independent curriculum is identical to various intra-curricular learning where the content will be more optimal, so students have enough time to explore concepts and strengthen competence. Teachers have the flexibility to choose various teaching tools so that learning can be adapted to the learning needs and interests of students (Kusuma, Ekasari, & Weddakarti, 2022). Therefore, Islamic Religious Education teachers must have skills in processing teaching materials in a joyful atmosphere and utilizing technology as a learning resource. Implementing an independent curriculum will make Islamic Religious Education learning more relevant and interactive. In contrast, project-based learning will provide broad opportunities for students to explore factual issues related to the subject matter actively.

In this study, the teaching materials developed were interactive electronic teaching materials, commonly known as interactive e-modules (Hutahaean, Siswandari, & Harini, 2019). In this interactive e-module, material and student assignments are adapted to the Islamic Religious Education package book of independent curriculum issued by the Indonesian Ministry of Education and Culture. However, the difference is that digital assistance creates the interactive e-module as attractive as possible. This module is accompanied by pictures, videos, moving animations, interactive quizzes, and assignments as a guide for students to explore their thinking skills and to support student-centred learning as an implementation of an independent curriculum. The selection of teaching materials in electronic form is based on several things, including:

1. There is an increasingly rapid development of technology, thus promoting the use of teaching materials in electronic form because they are considered more practical, efficient and can contain all the media components needed in learning such as images, audio and video.
2. Electronic teaching materials contain all the components and advantages of printed teaching materials.

3. Electronic teaching materials have proven to be effectively used in learning in independent curriculum.

This interactive e-module was created using the Adobe Flash Professional CS6 application. Adobe Flash Professional CS6 is a flagship computer software product of Adobe Systems. Adobe Flash CS6 is used to create vector images and animated images. Files generated from this software have a file extension, SWF and can be played in a web browser that has been installed with Adobe Flash Player (Rezeki, 2018). Adobe Flash CS6 is a good software used to support interactive learning because interactive learning media with the Adobe Flash CS6 application can combine graphics, animation, and sound and can interact with users (Hidayah, Wahyuni, & Ani, 2017). The stages of this development research are as follows:

Analysis

According to Molenda, quoted by Nancy Eko and Mustaji, the results of the analysis phase are in the form of a description of the learner, the tasks to be studied and the objectives of the lesson (Angko & Mustaji, 2017). The *analysis stage* in this study consists of the analysis of student character, analysis of curriculum, teaching materials, analysis of the material, and analysis of learning activities. From the analysis stage, the teacher will know the need to develop new learning materials and analyze the feasibility and requirements for their development. This analysis will be used as material for developing learning products in the form of interactive e-modules on the subject of Islamic Religious Education in Grade X Vocational High Schools, the subject matter of the role of Ulama in spreading Islamic teachings in Indonesia. The explanation is as follows:

1. Student character analysis

In analyzing student characteristics, several things need to be of concern to the teacher, namely: 1) Overall student characteristics such as age, gender, family background, and so on; 2) Specific basic competencies possessed by students which can describe the types of abilities, skills or competencies that must be possessed by students before learning; 3) Learning styles owned by students such as tendencies or hobbies, preferences or how students study habits (Niswatin, Zainiyati, Hana, & Hamid, 2022). As for this research, it is known that the students of Grade X SMK are, on average, 15-16 years old. In the stage of cognitive development according to

Piaget, their thinking ability has reached the stage of formal operational thinking, namely a stage of cognitive development where children can think about abstract things, they can think systematically to solve a problem (Desmita, 2015). Therefore, teaching materials must contain materials that can improve students' critical thinking skills. Based on the pre-cycle tests on the material on the role of the ulama in spreading Islamic teachings in Indonesia, the results obtained by students were still relatively low. The reason is the lack of interest in teaching materials, so students were less enthusiastic about learning. There are 19 male and 21 female students in one class, and the learning styles of students in that class tend to be auditory, visual, and kinesthetic learning styles. So that teaching materials will be adapted to the learning style.

2. Curriculum and material analysis

The development of teaching materials depends on the curriculum or syllabus model applied in the school. Regarding this, according to Huda, whom Rahmat Arafah Hari Cahyadi quoted, he argued that by relying on contextual learning, the development of teaching materials must be able to respond to competency standards and basic competencies, which are the ultimate goal of education in the curriculum (Cahyadi, 2019). The guidelines in this study are the independent curriculum, the learning outcomes of Islamic Religious Education elements of the history of Islamic culture in grade X SMK which students appropriately believe in moderate da'wah methods, *bi al-hikmah wa al-mau'idlatil hasanah* based on the order of Allah SWT. Students can get used to the attitude of simplicity, perseverance, peace and earnestness in seeking knowledge appropriately, and the spirit of respecting the customs and differences of other people's beliefs correctly, getting used to the attitude of being willing to read, write, achievement, and hard work, responsibility, critical reasoning, national spirit, global diversity, spreading that Islam *rahmat li al-ālamīn*, harmony, peace, and cooperation. Students can analyze the role of prominent Islamic scholars in Indonesia (Wali Songo) in properly spreading Islamic teachings. Students can explain the history of Wali Songo's struggles and da'wah methods in Indonesia which were carried out peacefully and correctly.

3. Analysis of learning activities

In the process of developing a teaching material, Branch believes that the needs analysis is a very important part and step (Afifulloh & Cahyanto, 2021). As for this research, the need for developing teaching materials is the implementation of an independent curriculum in which students actively participate in the learning process. The Independent curriculum learning process refers to the profile of Pancasila students, which aims to produce competent graduates and uphold character values. Therefore, the teaching materials that will be created need to be adapted to learning activities that lead to forming a Pancasila student profile. This Islamic Religious Education learning activity must contain the value of faith and piety to God Almighty and have a noble character, global diversity, cooperation, independence, critical reasoning, and creativity.

Design

The design stage includes several plans for developing teaching materials, including the following activities: 1) Preparation of teaching materials in contextual learning by examining initial competencies, learning outcomes, learning objectives, student targets and student profiles of Pancasila, based on an independent curriculum structure to determine learning materials based on facts, concepts, principles and procedures, learning time allocation, indicators and student assessment instruments, 2) Designing learning scenarios or teaching and learning activities with a learning approach, 3) Selection of teaching material competencies, 4) Preliminary planning of learning devices based on subject competencies, 5) Designing learning materials and learning evaluation tools with a learning approach (Cahyadi, 2019). Then proceed with compiling interactive e-module systematics such as cover designs to be used, exciting and interactive learning material pages, quiz pages or practice questions and student assignments.

In the following, a display of the interactive e-module of Islamic Religious Education will be presented, the subject matter of the ulama's role in spreading Islamic teachings in Indonesia. The display of e-module main page is presented in Figure 1:

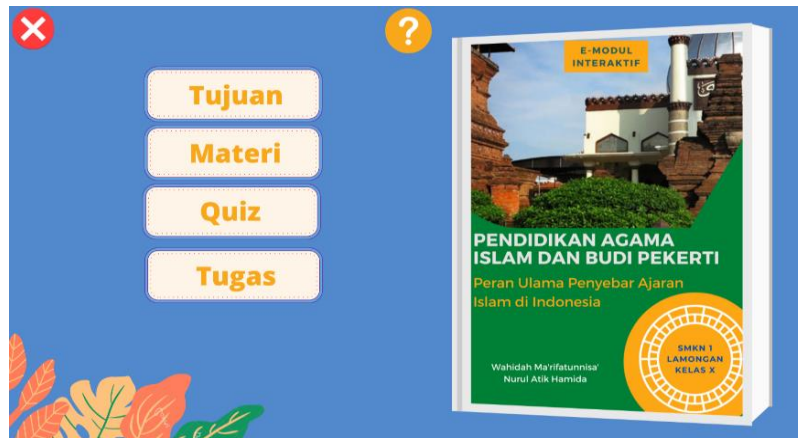


Figure 1. Display of The E-Module Main Page

The e-module home page is a page that connects users with all the content in the teaching materials. The components on the home page of this e-module include: a) Learning objectives; b) Subject matter; c) Quiz is fun as well as to test students' understanding of learning material; d) Student assignments; and e) Supporting navigations, such as assistance on how to operate the e-module with a question mark symbol and exiting the e-module with a cross symbol.

The components in this e-module are made using the Adobe Flash CS6 application. Students can access all the contents of this e-module by pressing the navigations prepared in the e-module. Navigation accompanied by writing is made to make it easier for students to access the e-module. The following display regarding learning objectives and also the material is presented in Figure 2:

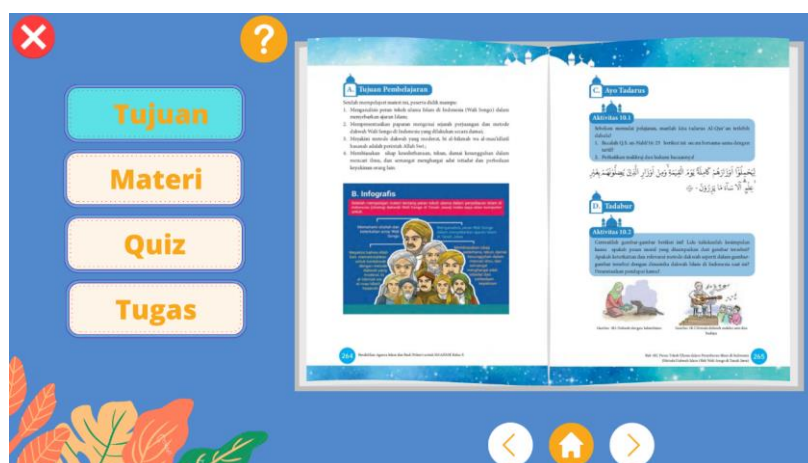


Figure 2. Display of The Learning Objectives Page

Images like printed books containing learning objectives and the material will be displayed in the learning objectives and material sections. In certain materials, students will also be shown learning material presented in the form of text accompanied by pictures so that students can be interested in reading the learning material. In each view, navigation will also be provided, which students can use to return to the main page, to the previous page, or to the next page. The appearance of the material page, accompanied by text and images, is presented in Figure 3:



Figure 3. Display of The Material Presentation Page Accompanied by Text and Images

Apart from that, in certain materials, students can also access the videos provided to explore further the materials contained in the e-module. The appearance of the material page in the form of a video is presented in Figure 4:

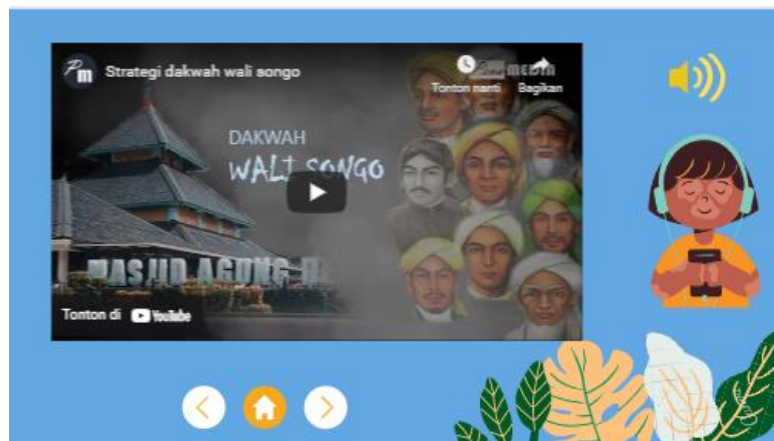


Figure 4. Display of The Material Presentation Page In The Form of a Video

The e-module will also provide interactive quiz facilities accompanied by moving animations and exciting pictures that students can access to test how well they

understand the subject matter they have studied. Students will be faced with 10 to 15 multiple-choice questions. The display of the quiz page will be presented in Figure 5:



Figure 5. Display of The Interactive Quiz Presentation Page

As for answering the interactive quizzes available in this e-module, students will be given direct *feedback* when they choose wrong and correct answers. All the answer choices available in the quiz have been set up to provide direct feedback to students, so they can immediately find out whether their answers are right or wrong. In addition, the answers are accompanied by moving animations in the feedback display. A three-line navigation is also provided, allowing students to continue to the next question or repeat the previous one. It will also provide navigation to return to the e-module home page. The display of the feedback page *directly* in the quiz for students is presented in Figures 6 and 7:



Figure 6. Display of The Feedback Page *For* The Correct Answer



Figure 7. Display of The Feedback Page *For* Wrong Answers

In addition to quizzes to hone students' skills in understanding material, in this interactive e-module, assignments will also be provided for students as a form of deepening material about the role of ulama, who spread Islamic teachings in Indonesia, discussing wali songo. In this task view, group and individual assignments will be presented. In group and individual assignments, most students will be asked to explore more about the material presented in the e-module. The appearance of the assignment page for this student will be presented in Figure 8:



Figure 8. View of The Student Assignment Page

In this section of student assignments, group assignments and individual assignments will be presented. When students choose group assignments, students will be directed to the display of tasks that must be done in groups. Likewise with individual assignments, when students choose individual assignments, the display will appear in

assignments that must be done by students individually. Page views regarding group and individual assignments for students are presented in Figures 9 and 10:

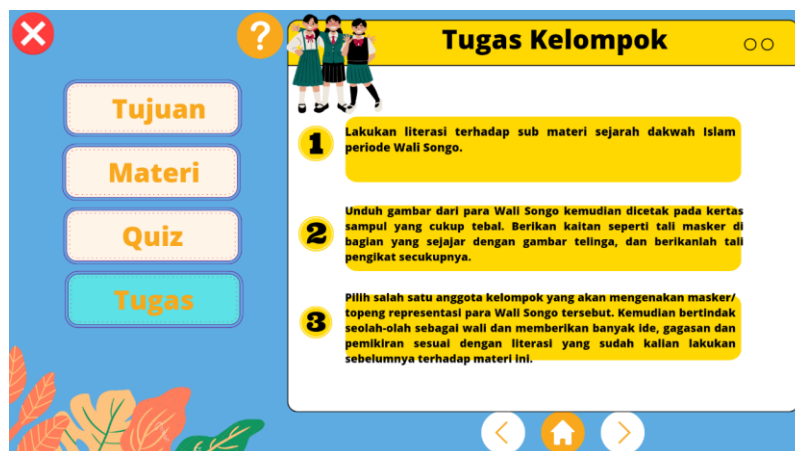


Figure 9. Display of Student Group Assignment Page



Figure 10. Display of Individual Student Assignment Pages

Development

At this stage, a design assessment was carried out by a reviewer consisting of 1 media expert, 1 material expert, 1 IT expert, and 1 Islamic Religious Education teacher. Reviewers have competence in their respective fields determined by the developer so that reviewers meet the requirements to assess this Islamic Religious Education interactive e-module teaching material. The validation data obtained in this study were processed using descriptive statistical analysis using a Likert scale. The feasibility or product validity level is obtained by calculating the percentage of validation values. The

formula used is: $Percentage = \frac{\text{obtained score}}{\text{maximum score}} \times 100\%$

The results of the assessment are as follows:

1. Media Expert

Media experts provide an assessment from the aspect of display quality, software engineering, and implementation. Aspects of display quality get a percentage value of 95,68%, and engineering and implementation aspects get a maximum percentage value of 100%. The results of the assessment conducted by media experts are shown in Table 1 as follows:

Table 1. Evaluation of Interactive E-Modules By Media Experts

No	Aspect	Ideal Percentage
1	Display Quality	95,68%
2	Manipulation	100%
3	Execution	100%
The Ideal Percentage Total		98,56%

2. Material Expert

Material experts assess of aspects of the curriculum, presentation of material, evaluation, and language. The results of the assessment of material experts are shown in Table 2 as follows:

Table 2. Assessment of Interactive E-Modules By Material Experts

No	Aspect	Ideal Percentage
1	Curriculum Aspect	100%
2	Presentation of material	94,44%
3	Language	100%
4	Evaluation	92,32%
The Ideal Percentage Total		96,69%

3. IT expert

IT experts assess this interactive e-module on display quality, software engineering, usability, *interface*, *reusable*, *maintainable*, and *compatibility*. The results of the assessment by IT experts are presented in Table 3 as follows:

Table 3. Assessment of Interactive E-Modules By IT Experts

No	Aspect	Ideal Percentage
1	Display quality	98,66%
2	Software engineering	95,55%
3	Execution	100%
4	<i>Interface</i>	100%
5	<i>Reusable</i>	100%
6	<i>Maintainable</i>	100%
7	<i>Compatibility</i>	97,24%
The ideal percentage total		98,77%

A team of media experts carried out the results of the assessment, material experts, and IT experts, which showed that the interactive e-module on Islamic Religious Education and the subject matter of the role of ulama' in spreading Islamic teachings in Indonesia met the criteria as excellent and ideal teaching material. Therefore, the interactive e-module can be used for learning Islamic Religious Education in class X SMKN 1 Lamongan.

Implementation

Interactive e-modules that have been declared valid and meet the criteria as excellent and ideal teaching materials begin to be implemented in learning. Then it was tested limited by asking for responses from teachers and students as users (respondents). This implementation is carried out in one class with 40 students. The teacher follows every path in the teaching material. The learning steps are as follows:

1. The teacher begins the lesson. The teacher opens the lesson by greeting and asking the students to pray together, recite the Qur'an, pay attention to the student's readiness, and check attendance, tidiness, and student seating positions. The teacher provides motivation and asks questions related to the subject matter, conveying the scope of the material, learning objectives, activities to be carried out, and the scope and technique of assessment.
2. The teacher explains teaching materials in the form of interactive e-modules used in learning and how to use them.
3. The teacher and students access the interactive e-module of Islamic Religious Education, the subject matter of the role of the 'ulama' in spreading Islamic teachings in Indonesia.
4. The teacher allows students to read and explore knowledge related to the role of the ulama' in spreading Islamic teachings in Indonesia.
5. In certain sections, a video will appear that leads to YouTube regarding the material. Students are asked to watch the video and record what they have learned from the video.
6. Students carry out everything in the interactive e-module, such as doing group assignments, guessing pictures, taking quizzes, and doing individual assignments.
7. On the individual assignment page, the teacher applies the independent learning policy to students to do the task in their way. Students can search for material from

sources such as the internet, encyclopedias, newspapers, magazines, books and others. Students can write down any of their findings. Here, students are free to think and reason whatever the findings are.

Evaluation

Based on the pretest results, it can be seen that students get a score of 69,54% and teachers get a score of 74,66%. Then, there was an increase in student scores on the posttest, with an average score of 89 compared to the pretest done before this interactive e-module. This interactive e-module can help students understand the material because the language used is communicative, and the guidance steps provided are clear and easy to understand. This interactive e-module also contains videos and pictures that can visualize material about the role of the 'ulama' in spreading Islamic teachings in Indonesia so that students can know each character. In addition, this interactive e-module can help students be active and motivated to learn because the learning presented is more interesting, fun, and not boring. Students are free to explore their abilities.

This interactive e-module can help teachers control activities, give badges to the best students and evaluate student understanding. With this interactive e-module, students become more independent in the learning process. This interactive e-module also contains profiles of Pancasila students. Each material and learning activity is directed toward having faith, fear of God Almighty, noble character, global diversity, cooperation, independence, critical reasoning, and creativity.

CONCLUSION

The development of this interactive e-module with the subject matter of the role of the 'ulama' in spreading Islamic teachings in Indonesia has been declared valid and meets the criteria as excellent and ideal teaching material. This interactive e-module teaching material was developed using the ADDIE (*Analysis, Design, Development, Implementation, Evaluation*) development model. This interactive e-module is considered to have met very valid criteria both in terms of display quality, software engineering, performance, *interface*, *reusable*, and *maintainable* with details of a score of 98,77% from IT experts, a score of 96,69% from material experts, and score of

98,56% from media experts. So that the development of interactive e-modules of Islamic Religious Education, the subject matter of the role of the ulama' in spreading Islamic teachings in Indonesia is appropriate to be implemented in class X SMKN 1 Lamongan in order to support the independent curriculum. Interactive e-modules are considered effective for independent curriculum because these teaching materials can help teachers control student activity, give badges to the best students and evaluate student understanding. As for students, this teaching material makes students more independent in the learning process. In addition, the interactive e-module also contains Pancasila student profiles, so it is very appropriate to be implemented at SMKN 1 Lamongan to support the independent learning curriculum.

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