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Development of an E-Module Based on the Islamic Integrated CORE Model for MTs Students on Systems of Linear Equations in Two Variables

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ABSTRACT. The use of electronic teaching materials in the current technological era is still not optimal, even though digital media can expand access and the scope of learning, thereby making the learning process no longer limited by time and place. This research aims to develop an e-module based on the Islamic integrated CORE model that is valid, practical, and effective on the material Systems of Linear Equations in Two Variables (SPLDV). The research method used is Research and Development (R&D) with the ADDIE model, which includes the Analysis, Design, Development, Implementation, and Evaluation stages. The research subjects were class VII students at MTs Al-Qasimiyah Sorek Satu, while the research object was an e-module based on the Islamic integrated CORE model. Research data includes quantitative data in the form of expert validation scores, practicality scores, and post-test results, as well as qualitative data in the form of comments, validator suggestions, and student responses. The results of validity tests by material experts, Islamic experts, and learning technology experts show that the e-module is in the very valid category. The students' practicality test also indicates that the e-module falls into the practical learning category. The effectiveness test was analyzed using the Mann–Whitney U test, which was strengthened by the Z test. The results showed a significant difference in learning outcomes between the experimental and control classes, with the experimental class achieving a higher average post-test score. These findings show that e-modules are not only valid and practical, but also effective in improving student learning outcomes. Thus, e-modules based on the CORE model, integrated with Islam in SPLDV material, are suitable as alternative teaching materials for mathematics learning at the MTs level and have the potential to support a learning process that is more interactive, meaningful, and in line with Islamic values.

Keywords: CORE; development; e-module; islamic integration; SPLDV

ABSTRAK. Pemanfaatan bahan ajar elektronik pada era teknologi saat ini masih belum optimal, padahal penggunaan media digital dapat memperluas akses dan ruang lingkup pembelajaran sehingga proses belajar tidak lagi terbatas oleh waktu dan tempat. Penelitian ini bertujuan mengembangkan e-modul berbasis model CORE terintegrasi keislaman yang valid, praktis, dan efektif pada materi Sistem Persamaan Linear Dua Variabel (SPLDV). Jenis penelitian yang digunakan adalah *Research and Developmen*t (R&D) dengan model ADDIE yang meliputi tahap *Analysis, Design, Development, Implementation, dan Evaluation*. Subjek penelitian adalah siswa kelas VII MTs Al-Qasimiyah Sorek Satu, sedangkan objek penelitian berupa e-modul berbasis model CORE terintegrasi keislaman. Data penelitian meliputi data kuantitatif berupa skor validasi ahli, skor praktikalitas, serta hasil *post-test*, serta data kualitatif berupa komentar, saran validator, dan tanggapan siswa. Hasil uji validitas oleh ahli materi, ahli keislaman, dan ahli teknologi pembelajaran menunjukkan bahwa e-modul berada pada kategori sangat valid. Uji praktikalitas oleh siswa juga menunjukkan bahwa e-modul termasuk kategori praktis untuk digunakan dalam pembelajaran. Uji efektivitas dianalisis menggunakan uji *Mann–Whitney U* yang diperkuat dengan uji Z, dan hasilnya menunjukkan adanya perbedaan signifikan antara hasil belajar kelas eksperimen dan kelas kontrol dengan memperoleh rata-rata nilai *post-test* kelas eksperimen lebih tinggi. Temuan ini menunjukkan bahwa e-modul tidak hanya valid dan praktis, tetapi juga efektif dalam meningkatkan hasil belajar siswa. Dengan demikian, e-modul berbasis model CORE terintegrasi keislaman pada materi SPLDV layak digunakan sebagai alternatif

bahan ajar dalam pembelajaran matematika di tingkat MTs, serta berpotensi mendukung proses pembelajaran yang lebih interaktif, bermakna, dan selaras dengan nilai-nilai keislaman.

Kata kunci: CORE; e-modul; integrasi islam; pengembangan; SPLDV

INTRODUCTION

Current technological advancements require all sectors of life, including education, to continuously adapt to ongoing changes. Education, as a critical field, must keep pace with these developments and consistently pursue innovation. Innovation in this context refers not to overhauling or adding to the curriculum, but rather to refining, organizing, and re-presenting existing learning materials to enhance student comprehension. Such Development can involve simplifying complex concepts, incorporating relevant examples, integrating Islamic values, and utilizing engaging, interactive learning media. According to Government Regulation (PP) Number 19 of 2005, Article 20, teachers are encouraged to develop their own learning materials. This guideline is also emphasized in the teaching material Development manual from Muhammadiyah University of Semarang (Unimus, 2020) The Development of learning materials in this research is intended to improve the quality of learning content by developing the teaching materials used, so that the material presented is more complete, systematic, easy to understand, and in accordance with students' needs.

Teaching materials are all forms of materials that are arranged systematically and enable students to learn effectively independently and in accordance with the curriculum (Magdalena et al., 2020). As stated by the Ministry of National Education, quoted by Kosasih (2021), teaching materials are the materials students must study to learn. So, teaching materials need to be developed in accordance with current developments.

One of the teaching materials that can be used for independent learning and has taken advantage of technological advances is e-modules. According to Prastowo, e-modules are digital teaching materials designed to help students learn independently by presenting systematic, interactive, and easily accessible material (Prastowo, 2011). E-modules are modules that contain text, images, audio, and video, presented in electronic form, and their use requires supporting devices such as smartphones, computers, and internet access (Herawati & Muhtadi, 2020). E-modules offer several advantages that can increase students' interest in learning. One of these advantages is the presentation of material that is more interactive and fun, thereby helping students understand concepts more easily. In presenting this e-module, researchers combine it with a learning model that can help improve students' understanding. One model relevant to e-modules is the CORE (Connecting, Organizing, Reflecting, Extending) model. According to Calfee, the CORE model is a learning approach that emphasizes concept linkages, organizing information, reflection, and expanding understanding to support in-depth conceptual understanding.

The use of the CORE model in e-modules is based on the finding that many students still have difficulty understanding the SPLDV concept abstractly and need learning media that are more structured, interactive, and easily accessible. A needs analysis conducted through observations and interviews shows that students need digital teaching materials that include step-by-step explanations of concepts, contextual examples of questions, and directed independent practice. Therefore, developing e-modules based on the CORE model is relevant to help students understand SPLDV material more effectively.

The CORE (Connecting, Organizing, Reflecting, Extending) learning model is not one discovered by Sari and Karyati; it was introduced earlier by Calfee (1994) as a learning approach that emphasizes concept connectivity and deep thinking. Sari & Karyati (2021) stated that the CORE learning model can improve students' mathematical, representational, and self-confidence abilities. CORE is a learning model that links old concepts with new ones that are being discovered and studied, in accordance with mathematics learning, where each material is connected to the others. They only reviewed the model again in their research, explaining that each CORE stage (connecting, organizing, reflecting, and extending) is an interrelated step that cannot be skipped or changed in

order. This explanation aligns with previous studies, which state that the CORE model aims to help students build conceptual understanding in stages, starting with connecting initial knowledge (connecting), organizing new information (organizing), reflecting (reflecting), and expanding understanding to other contexts (extending). Therefore, CORE-based learning is considered capable of improving learning outcomes because it encourages students to think actively, structurally, and reflectively.

Kasmita et al. (2021) reported that students who used the CORE model achieved higher mathematics learning outcomes than those in conventional learning. In line with this Khotimah et al. (2022) stated that e-modules based on the CORE model can help students learn independently. Apart from interestingly presenting the material, e-modules should also include religious values. The presentation of religious values in e-modules is important, especially in madrasa education units that prioritize a combination of mastery of general knowledge and the formation of Islamic character. Thus, integrating religious values not only strengthens spirituality but also serves as a pedagogical strategy to increase student interest and the quality of learning.

The learning students receive is not only about knowledge but also about understanding and applying Islamic values. So that it can display and support Islamic characteristics in MT students. Sari et al. (2019) stated that learning combined with Islamic values is related to moral and behavioral achievement, thereby developing students' potential, not only intellectually but also emotionally and spiritually.

In Islam, knowledge is not divided dichotomously into knowledge of the world and knowledge of the afterlife, because both are gifts from Allah that must be used for the benefit. Scholars such as al-Ghazali and Ibn Khaldun emphasized that all knowledge that brings benefits (al-'ilm al-nafi') is included in the category of knowledge that is recommended to be studied. The hadith regarding the obligation to seek knowledge does not indicate a hierarchical separation of knowledge, but emphasizes the importance of seeking all forms of knowledge that benefit human life. Therefore, the integration of Islamic values in mathematics learning is not aimed at separating knowledge, but rather at making the learning process more meaningful by instilling ethics, manners, and awareness of monotheism as taught in the Islamic educational tradition, as stated in the following hadith:

مَنْ أَرَادَ الدُّنْيَا فَعَلَيْهِ بِالْعِلْمِ، وَمَنْ أَرَادَ الآخِرَةَ فَعَلَيْهِ بِالْعِلْمِ، وَمَنْ أَرَادَهُمَا فَعَلَيْهِ بِالعِلْمِ

Meaning: "Whoever wants the world, let him master knowledge. Whoever wants the afterlife let him master knowledge, and whoever wants both (this world and the hereafter) let him master knowledge," (HR Ahmad).

Shaikh Al-Zarnuji interpreted that every Muslim and Muslim woman is not obliged to seek all knowledge, but is obliged to seek the knowledge needed at that time. Good and evil morals and how to avoid them must be learned to maintain and adorn oneself with noble morals (Khasanah, 2021). Therefore, learning should include Islamic values . So that students not only understand and are proficient in knowledge, but also have knowledge related to religious studies.

Mathematical material can be integrated with Islamic values, including the material on Systems of Linear Equations in Two Variables (SPLDV). This integration is not to change the concept of mathematics, but rather to instill values such as honesty in the problem-solving process, accuracy in calculations, and the awareness that order and balance in mathematics are part of Sunnatullah. This approach aligns with Islamic education, which emphasizes character formation through the learning process. Therefore, SPLDV can be contextualized with the values of justice, balance, and proportionality, which are also taught in Islamic teachings.

According to Mubarok & Fitriani (2020) students' ability to analyze SPLDV material remains relatively low, as indicated by their research. In line with these finding, Paujiah & Zanthy (2020) reported that the majority of class VIII students at one junior high school in Cianjur experienced difficulty solving SPLDV questions, resulting in low learning outcomes. This condition shows that

SPLDV material remains a challenge for many students and that they need learning strategies to understand it better.

To improve learning outcomes, students need to be encouraged through an engaging learning process that facilitates their active involvement. Therefore, the use of e-modules is not intended to measure interest in learning, but to provide a more interactive presentation of material that supports better learning outcomes. The Development of e-modules based on the CORE learning model has been carried out by Khotimah et al. (2022). Other research was also found related to the Development of CORE-based and integrated Islamic teaching materials by Dwiantara et al. (2022), Kurniati (2018), Hikmah & Haqiqi (2021), Larasati et al. (2020) dan Suhandri & Sari (2019).

Findings from several previous studies show that e-modules based on the CORE model are effective in improving students' conceptual understanding and learning outcomes, as this model helps them connect prior knowledge with new material in a structured manner. Apart from that, other research on the integration of Islamic values in learning indicates that incorporating religious values can shape students' character, increase spiritual awareness, and foster good morals. Thus, the effectiveness of the CORE model and the integration of Islamic values have an empirical basis for combining in the Development of e-modules on SPLDV material.

Based on these findings, previous research has examined the effectiveness of the CORE model and the integration of Islamic values. However, not many have combined the two in the form of digital e-modules on SPLDV material at the MTs level. Therefore, this research is novel in developing an e-module based on the CORE model, integrated with Islam, to produce valid, practical, and effective teaching materials to improve student learning outcomes in SPLDV material.

METHOD

The type of research carried out is research and development. Research and development (R&D) is a method for producing new, more innovative products. In this research, researchers developed a product. To make this happen, research in the form of a needs analysis was carried out to identify student learning problems, the suitability of SPLDV material to the characteristics of students, as well as teachers' needs for digital teaching materials based on Islamic values. This analysis obtains data from classroom observations and interviews with subject teachers. Furthermore, to test the level of product effectiveness, the e-module being developed was tested in the experimental class and compared with the control class through a learning outcomes test, so that it could be seen whether the use of the e-module had a significant effect on improving student learning outcomes. The product developed based on the Islamic integrated CORE model for MTs students on SPLDV material with testing limits is valid, practical and effective. The model used by researchers in this research is the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation).

There are several reasons for choosing the ADDIE model in this research. First, the ADDIE model provides systematic stages starting from needs analysis, design, Development, implementation, and evaluation, so that it is in accordance with the research objectives of developing teaching materials. Second, this model allows researchers to validate and revise at each stage, thereby better testing the quality of the resulting product. Third, ADDIE is flexible across various media Development and has been proven effective in research on the Development of e-modules and digital teaching materials. Fourth, the ADDIE model facilitates expert involvement at the validation stage and student involvement at the implementation stage, ensuring that the Development results are more closely aligned with user needs. Therefore, the ADDIE model is considered the most appropriate for developing e-modules based on the Islamic integrated CORE model.

The research is carried out at MTs Al-Qasimiyah. The location of this MT is at Jalan Amalia No. 1, Sorek Satu, Pangkalan Kuras District, Pelalawan Regency, Riau Province. The time for conducting this research is during the odd semester of the 2024/2025 academic year. The subjects in this research were class VIII students at MTs Al-Qasimiyah. The testers for the product's validity are instrument experts and validators. In this research, during the practicality test stage, students do

not act as product testers but rather as users who try out e-modules during the learning process. After using the e-module, students are asked to complete a questionnaire to assess the practicality, ease of use, attractiveness, and usefulness of the product. This student assessment is used to determine the level of practicality of the e-module. The object of this research is an e-module based on the Islamic integrated CORE model for MTs students on SPLDV material.

The data types in this Development research are qualitative and quantitative. The qualitative data in this research consist of comments, inputs, and suggestions from validators (material experts, Islamic experts, and learning technology experts) on the appropriateness of content, language, presentation, design, and the integration of Islam in e-modules. In addition, qualitative data were obtained from student responses regarding their experiences with the e-module. Meanwhile, the quantitative data in this research are in the form of assessment scores given by validators on validation sheets, practicality questionnaire scores filled out by students, as well as learning outcomes test scores (post-test) in the experimental class and control class. This quantitative data is used to determine the validity, practicality, and effectiveness of the e-module (Sugiyono, 2021).

Data collection techniques in this research include questionnaires, tests, and documentation. Research instruments are tools used to obtain and collect research data. The research instrument used in this research consists of a validation sheet which is used to assess the validity of the e-module by material experts, Islamic experts and learning technology experts, then a practicality questionnaire sheet, which students fill out to assess the level of practicality of the e-module and then a learning outcomes test which is used to measure the effectiveness of the e-module by comparing the scores of the experimental class and the control class.

Data analysis techniques are methods used to systematically search for and compile data, and to draw conclusions that are easily understood by oneself and others (Sugiyono, 2011). The data analysis techniques in this research include qualitative and quantitative descriptive analyses. Qualitative descriptive analysis is used to process and interpret data in the form of comments, suggestions, and improvement notes from experts (validators) and student responses to the e-module. This data is analyzed to determine product revisions at each Development stage. Then, quantitative descriptive analysis was used to process the data in the form of expert validation scores and student practicality questionnaire scores.

Below are presented the criteria for assessing e-modules developed at the validity and practicality testing stages.

$$\text{Percentage of validity/practicality (X)} = \frac{Number\ of\ scores\ obtained}{maximum\ number\ of\ scores} \times 100\%$$

Table 1. Interpretation of Validity/Practicality

Interval (%)	Criterion
80≤ X ≤100	Very Valid
60≤ X< 80	Valid
40≤ X< 60	Quite Valid
20≤ X< 40	Less Valid
0≤ X< 20	Tidak Valid

To assess effectiveness, an inferential statistical analysis using the Mann-Whitney U test was conducted on student exam results data to evaluate the effectiveness of e-modules. Based on the results of this analysis, conclusions were drawn using the criterion that, if $Z_{count} \geq Z_{table}$, the use of e-modules had a significant influence on learning outcomes.

RESULTS AND DISCUSSION

Analysis Stage

At the analysis stage, information was obtained that the use of printed teaching materials and conventional methods still dominated the mathematics learning process at MTs Al-Qasimiyah. Electronic teaching materials that are interactive and integrated with Islamic values are not yet optimally available. Students have difficulty understanding SPLDV material due to its abstract nature and its lack of connection to everyday life and religious values.

Analysis of student characteristics shows that MTs students need teaching materials that facilitate independent learning, present material systematically, and encourage active student involvement in the learning process. Therefore, an e-module was developed using the CORE model, with Islamic values integrated.

Design Stage

The design stage produces an initial e-module design that includes introductory components, learning activities, a summary, an evaluation, a glossary, and a bibliography. Each learning activity is designed to follow the CORE model syntax, namely connecting, organizing, reflecting, and extending.

The integration of Islamic values is realized through the presentation of prayers, verses from the Koran and hadith, visual illustrations with Islamic nuances, and examples and contextual question exercises that link the SPLDV concept to students' religious life. The e-module design also pays attention to aspects of language, graphics, and ease of use to suit the characteristics of MTs students.

Development Stage

E-module Validation Analysis

Based on validation analysis by Islamic and learning material experts of e-modules based on the Islamic integrated CORE model for MTs students on SPLDV material, the criteria are "very valid" with a percentage of 87.10%. The following will be presented in Table 2 validation results from experts on learning materials and Islam as a whole.

Table 2. Results of Expert Validation of Learning Materials and Overall Islam

Assessment Aspects	Validator			Score Validator	Maximum Score Obtained
	Expert I	Expert II	Expert III		
Content Eligibility	74	68	80	222	255
Language Eligibility	18	16	19	53	60
Feasibility of Presentation	64	56	63	183	210
Models CORE	17	16	17	50	60
Integrated Islam	34	28	31	93	105
Total	207	184	210	601	690

Then, after obtaining each score, the validity criteria are determined as follows.

$$\text{Validity Level Percentage} = \frac{\text{score obtained}}{\text{maximum score}} \times 100\%$$

$$= \frac{601}{690} \times 100\% = 87.10\% \text{ (Very Valid)}$$

Based on the percentage calculation, the validation results from learning and Islamic experts indicate that the e-module developed meets the very valid criteria, with a percentage score of 87.10%. The following is an interpretation of the quantitative analysis of the validation results carried out by Islamic and learning material experts in each aspect.

Table 3. Validity Results Based on Each Assessment Aspect

Aspect	Indicator	Percentage	Category
Feasibility of Content	Material suitability with CP	88,89%	Very Valid
	Material accuracy	88,90%	Very Valid
	Learning support materials	85,93%	Very Valid
Language Feasibility	Suitability to student development level	86,67%	Very Valid
	Communicative	90,00%	Very Valid
	Collaboration and unity	87,67%	Very Valid
Feasibility of Presentation	Learning presentation	84,44%	Very Valid
	Completeness of presentation	89,17%	Very Valid
CORE Models	Material suitability with CORE characteristics	83,33%	Very Valid
Islamic Integration	Writing of Allah's name, prayer, Qur'anic verses, hadith, inspirational stories	88,67%	Very Valid
	Islamic visual illustrations	88,69%	Very Valid
	The use of terms with Islamic nuances	93,33%	Very Valid
	Application of Islamic nuanced material	86,67%	Very Valid

Then, the results of the validation analysis by learning technology experts of e-modules based on the Islamic integrated CORE model for MTs students on SPLDV material showed that the criteria were "very valid," with a 89.84% score. This is shown in Table 4 below.

Table 4. Overall Learning Technology Expert Validation Results

Assessment Aspects	Validator			Obtained Score	Maximum Score
	Expert I	Expert II	Expert III		
Graphic Eligibility	95	92	96	283	315
Total	95	92	96	283	315

Based on Table 4, the percentage of validation results by learning technology experts on the e-module developed as follows can be calculated.

$$\text{Validity Level Percentage} = \frac{obtained\ score}{\text{Maximum score}} \times 100\%$$

$$= \frac{283}{315} \times 100\% = 89.84\% \text{ (Very Valid)}$$

Based on calculations, the percentage obtained from the learning technology expert validator's assessment was 89.84% and was included in the very valid criteria. The following is a description of the quantitative analysis of the validation results carried out by learning technology experts in each aspect.

Table 5. Validity Results of Feasibility Aspects of E-Module Design

Indicator	Description	Percentage	Category
E-Module Size	Conformity of display size and layout proportions	86,67%	Very Valid
Cover design	Suitability of layout, typography, color, and visual identity on the cover	92,38%	Very Valid
Content Design	Suitability of layout, visual consistency, and neatness of module content	88,89%	Very Valid

In the product Development process, the results of expert validation for the mathematics learning e-module developed as a whole met the validity criteria, with an average validity of 88.47%. Based on the suggestions for improvement provided by expert validators, the following e-module product will be displayed.

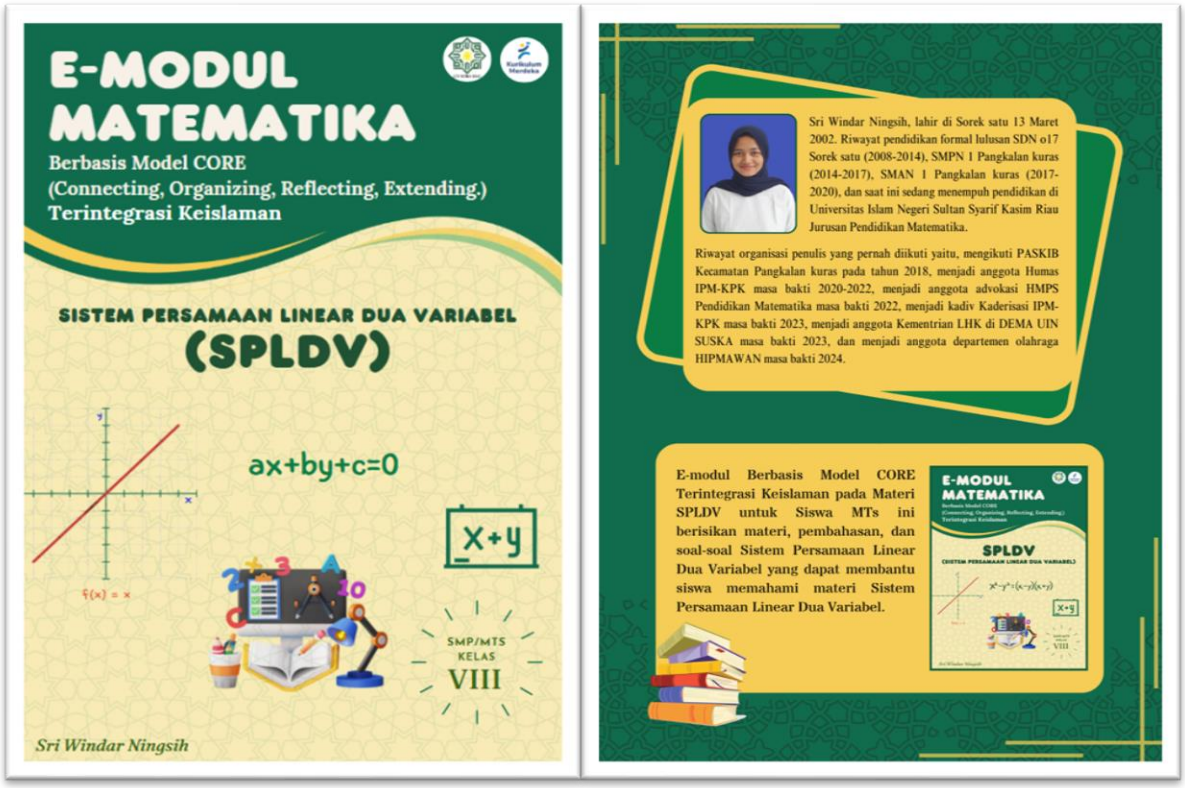

Figure 1. E-Module Cover Design (Prototype II)

Figure 2. Design of the E-Module Icon Usage Guide and Material Start Page

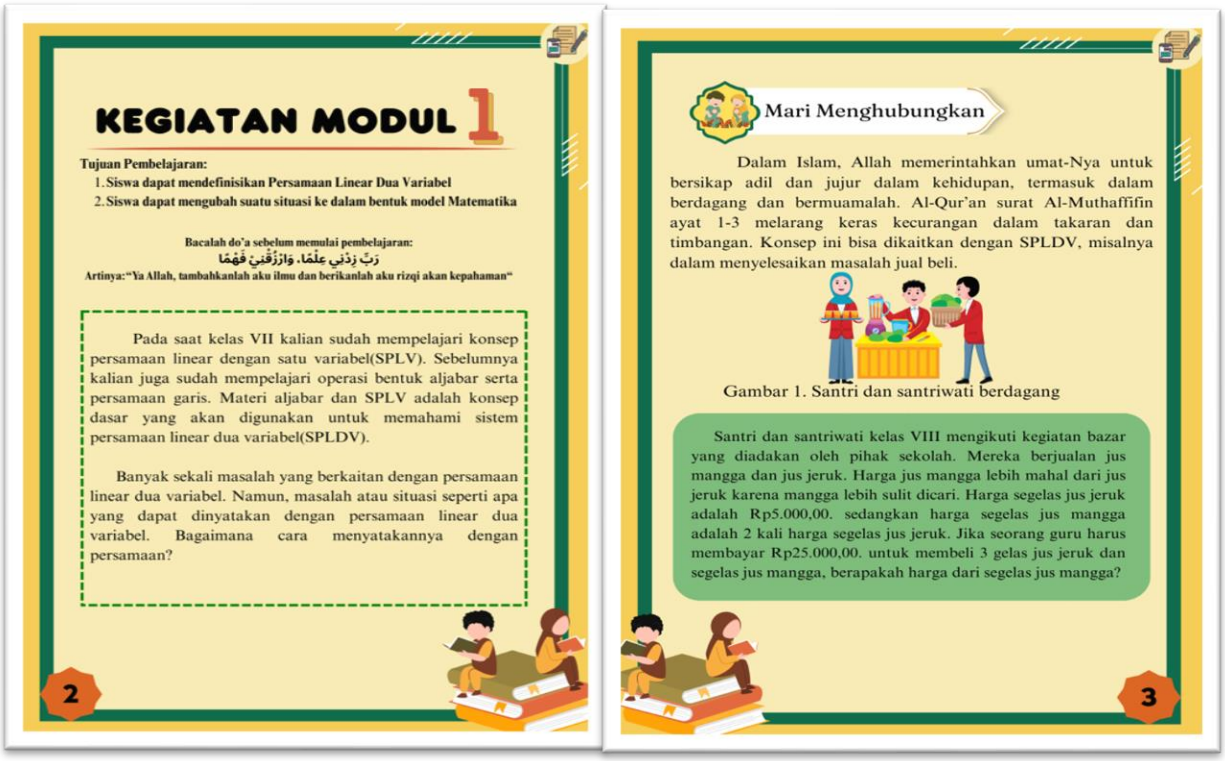

Figure 3. Learning Activities (1)

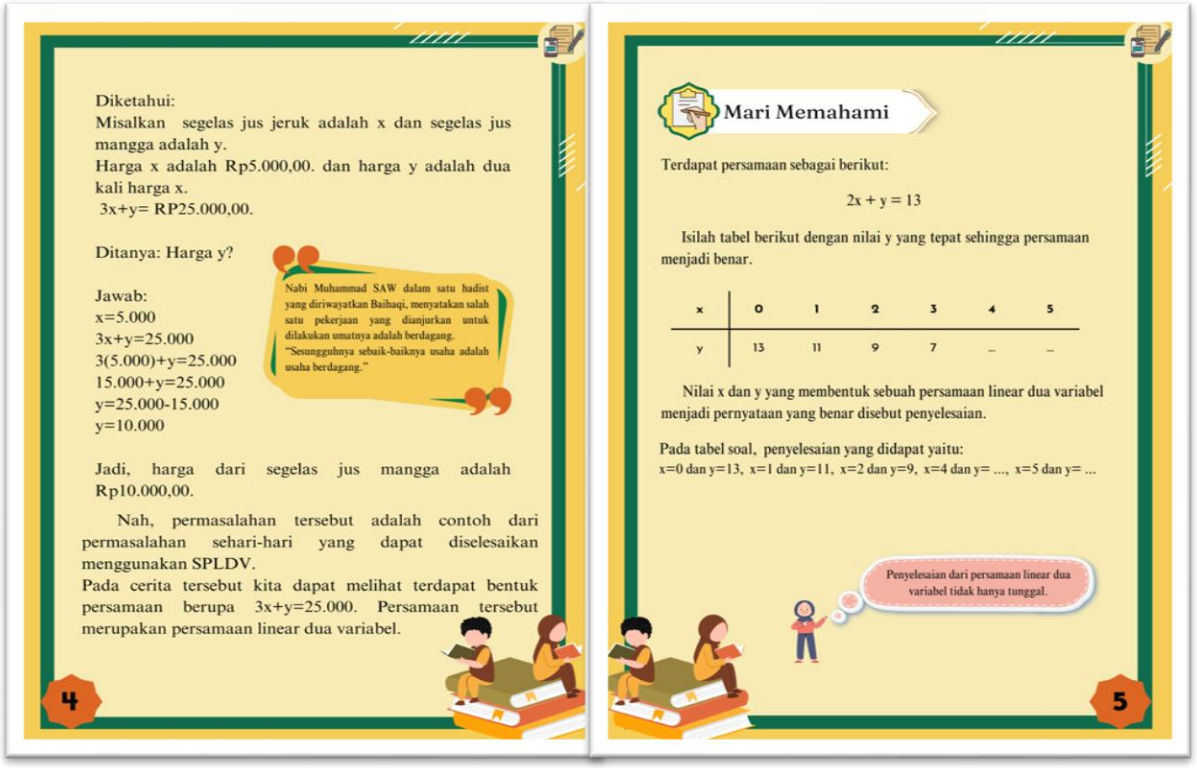

Figure 4. Learning Activities (2)

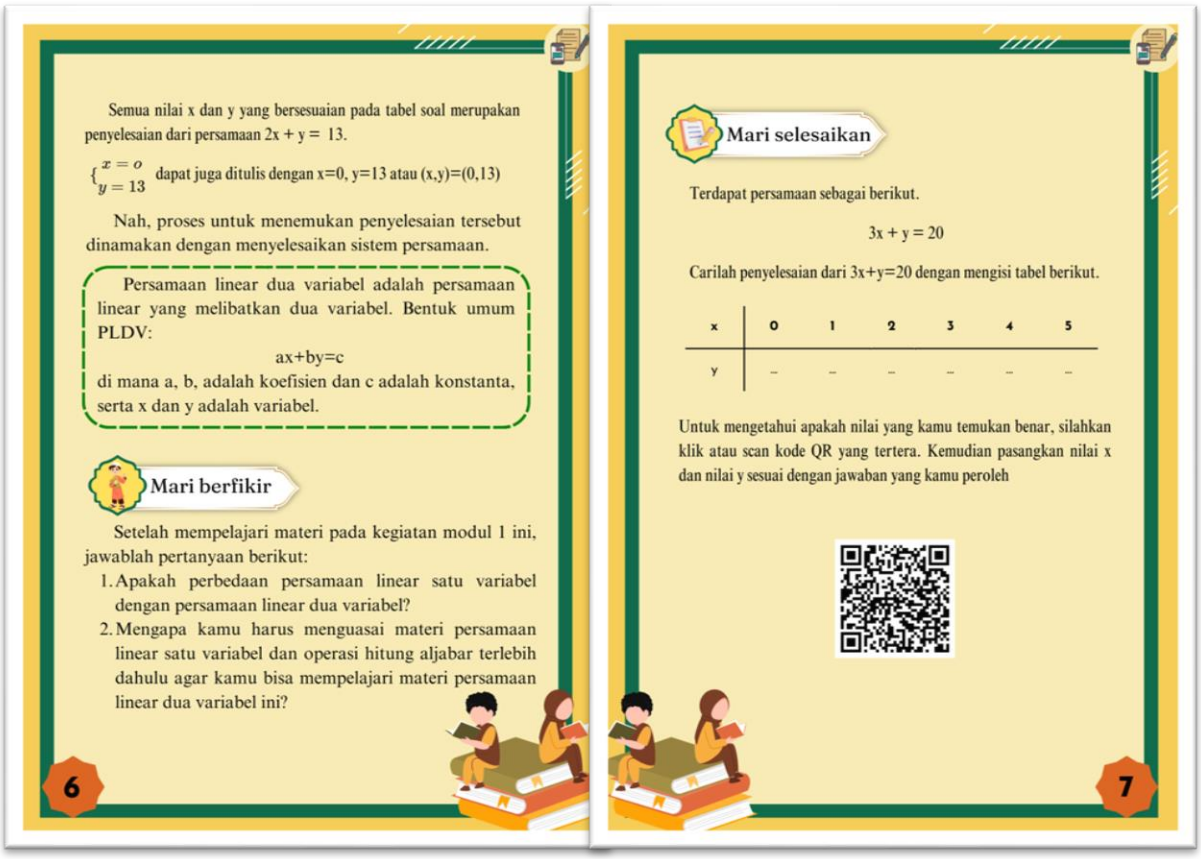

Figure 5. Learning Activities (3)

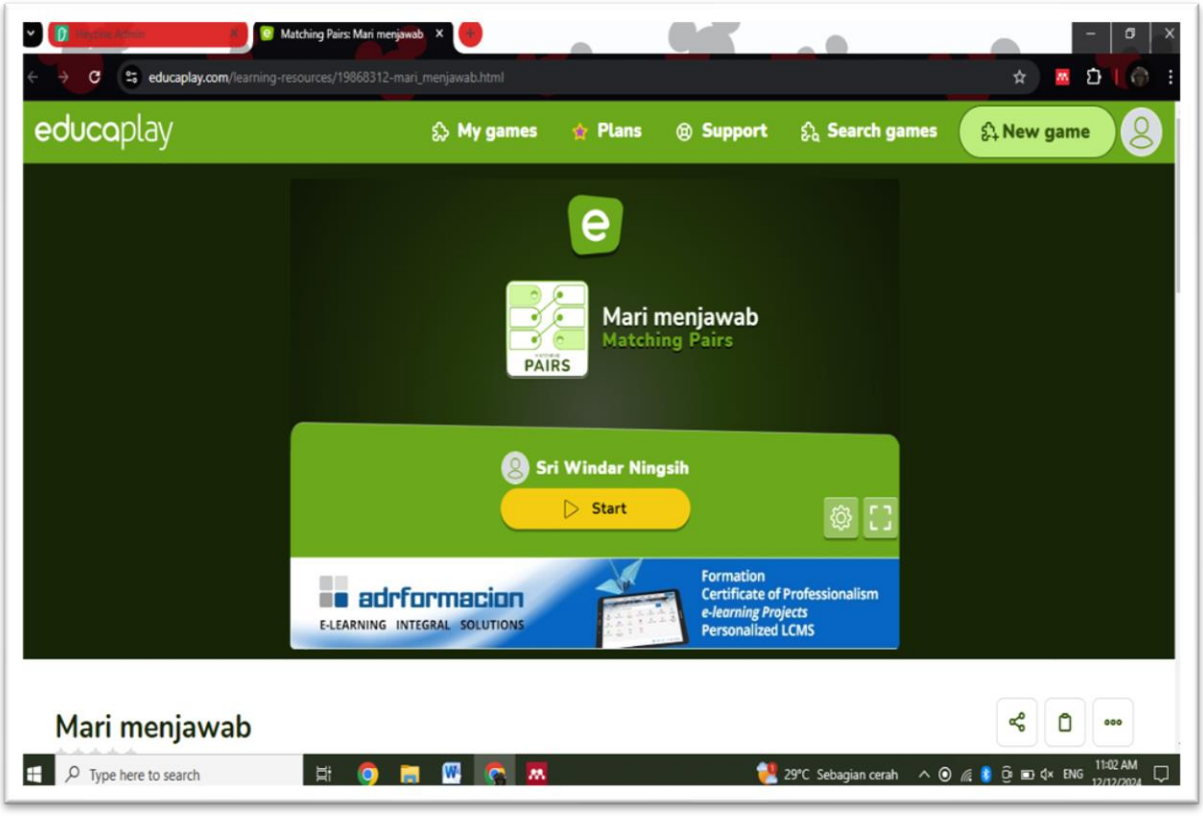

Figure 6. Learning Activities (4)

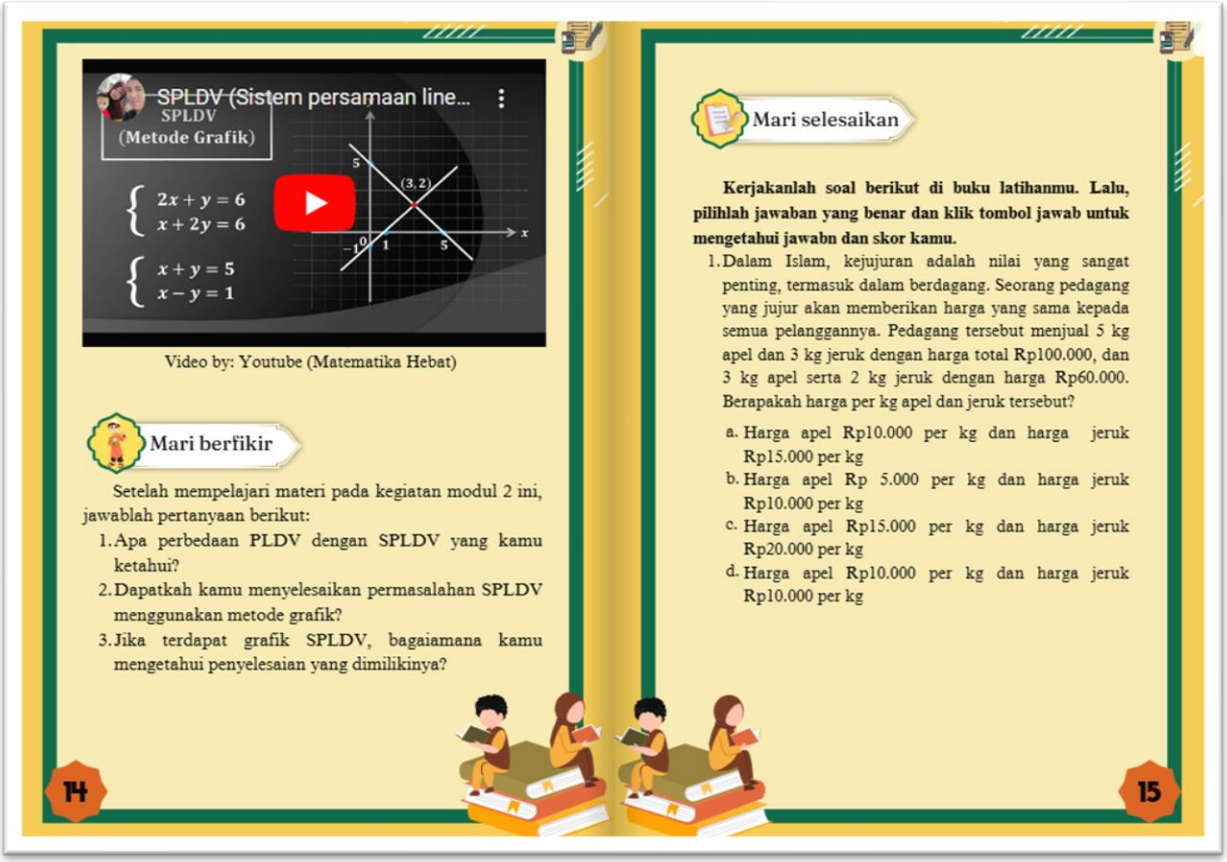

Figure 7. Learning Activities (5)

Implementation Stage

E-Module Practicality Analysis

The analysis of the e-module's practicality begins with a small-group test. This practicality test in small groups was carried out by 10 studens of class VIII at MTs Al-Qasimiyah Sorek Satu. Students are given a practicality test sheet and asked to complete it based on their assessment of the e-module being developed. The following is an interpretation of the quantitative analysis of the validation results carried out by Islamic and learning material experts in each aspect.

Table 6. E-Module Practicality – Small Group (10 Students)

Aspect of Practicality	Percentage	Category	Interpretation
Ease of Use	74,40%	Practical	E-modules are effortless for students to use
Time Effectiveness	81,00%	Very Practical	Efficient to use in learning
Attractiveness of E-Modules	91,20%	Very Practical	E-modules are beautiful to students
Interpreting E-Modules	74,67%	Practical	Students can interpret the contents of the module well
Equivalent	80,50%	Very Practical	E-modules are equivalent and suit learning needs

Then, proceed to carry out an analysis of the practicality of the e-module in large groups to find out the level of practicality of the e-module being developed. The students involved in the practical test in this large group were 21 students of class VIII at MTs Al-Qasimiyah Sorek Satu. Students are given a practicality test sheet and asked to complete it based on their assessment of the e-module being developed. Based on calculations from the large-group practicality test results, the e-module meets the "practical" criteria, scoring 76.29%. The following is an interpretation of the quantitative analysis of the validation results carried out by Islamic and learning material experts in each aspect.

Table 7. E-Module Practicality – Large Group (21 Students)

Aspect of Practicality	Percentage	Category	Interpretation
Ease of Use	72,76%	Practical	E-modules are effortless for students to use
Time Effectiveness	73,57%	Practical	Efficient to use in learning
Attractiveness of E-Modules	80,19%	Very Practical	E-modules attract students' interest
Interpreting E-Modules	76,35%	Practical	Students can interpret the contents of the module well
Equivalent	78,57%	Practical	E-modules are equivalent and suit learning needs

The practical results of small groups and limited groups as a whole can be seen in Table 8.

Table 8. Overall E-Module Practicality Test ResultsTabel

Respondents'	Practicality Value (%)	Criteria
Small Group	80,35	Very Practical
Limited Group	76,29	Practical
Overall Ideal Percentage (%)	**78,32**	**Practical**

Based on the overall practicality test calculations, the e-module developed meets the practical criteria, with an average practicality value of 78.32%.

E-Module Effectiveness Analysis

At the effectiveness stage, the post-test questions are validated by experts before being administered to students in the control and experimental classes. The results of the post-test question validation indicate that the five prepared questions are highly valid and suitable for use, with a validity coefficient of 85.94%. To identify differences in student learning outcomes between the control and experimental classes, the descriptive results of the e-module use are shown in Table 9.

Table 9. Recap of Post-Test Calculation Results

Class	Highest Value	Lowest Value	Average	Standard Deviation
Experiment Class	100	17	75,05	25,01
Control Class	98	12	57,05	23,46

For the next, perform an inferential analysis using the Mann-Whitney U test, with $Z_{count} \geq Z_{table}$ yakni 2.48 ≥ 1.96. This shows that there are differences in student learning outcomes between the control and experimental classes. Based on the post-test results in Table 9, the average post-test score in the experimental class is higher than that in the control class. It can be concluded that the e-module developed is effective as a teaching material for improving student learning outcomes.

Evaluation Stage

The evaluation stage in the ADDIE model in this research aims to assess the final quality of the e-module using the Islamic integrated CORE model developed. Evaluation is carried out summatively, namely by comprehensively reviewing the results of validity, practicality, and effectiveness tests obtained at the Development and implementation stages. Thus, the evaluation stage is not conducted as a separate test but rather as a process of concluding the product's overall suitability.

The results of the product validity evaluation indicate that the e-module developed is in the very valid category. This assessment is based on validation by learning and Islamic material experts and learning technology experts, who assess aspects of content appropriateness, language, presentation, CORE model characteristics, graphics, and the integration of Islamic values. These

findings indicate that the e-module has met academic and pedagogical standards as mathematics teaching material on Systems of Linear Equations in Two Variables (SPLDV).

The practicality of the product was evaluated by examining results from trials using e-modules in small and large groups of students. Based on the results of the practicality questionnaire, the e-module was considered practical by students, as demonstrated by ease of use, an attractive appearance, time efficiency, and clarity of material presentation. This shows that e-modules can be used effectively by students as independent teaching materials and to support learning in class.

Next, the product's effectiveness was evaluated by analyzing differences in student learning outcomes between the experimental and control classes. The Mann–Whitney U test, supported by the Z test, showed a significant difference: the average post-test score in the experimental class was higher than that in the control class. These findings indicate that the use of e-modules based on the Islamic integrated CORE model has a positive impact on improving student learning outcomes.

Based on the overall evaluation results, it can be concluded that the e-module based on the Islamic integrated CORE model has met the criteria of validity, practicality, and effectiveness, and is suitable for use as an alternative teaching material in mathematics learning at the MTs level, especially in SPLDV material. This evaluation stage confirms that the product being developed is not only theoretically feasible, but also functional and has a positive impact in authentic learning contexts.

CONCLUSION

The e-module based on the Islamic integrated CORE model in the SPLDV material was found to be highly valid, with a validity coefficient of 88.37% in the validity test. This shows that this e-module has met the eligibility criteria for content, presentation, language, CORE model characteristics, graphics, and Islamic integration. So, this e-module is suitable as teaching material for mathematics learning.

In the practicality trial, this e-module was rated practical by a small group, with an 80.35% rating. Meanwhile, in the large group, the percentage obtained was 76.29% using practical criteria. From the results of the practicality of small groups and large groups, an average practicality of 78.32% was obtained using practical criteria. This shows that the e-module has met the necessary practicality criteria.

The effectiveness of the e-module was demonstrated by the Mann-Whitney U test, which yielded a Z_{count} of 2.48, exceeding the Z_{table} value of 1.96. So, it shows that there is a significant difference in learning outcomes between students in the experimental and control classes. The average post-test score for students in the experimental class was 75.05, while the average post-test score in the control class was 57.05. This shows that students in the experimental class have higher post-test scores than those in the control class.

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