



Development of an Integrated E-Module on Religious Values in Human Digestive System Material for Grade VIII Junior High School/MTs

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Abstract

This study is a Research and Development study, namely product development including validity and practicality tests. The ADDIE model consists of the stages of analysis, design, and development with details, one to one and small groups. Data collection was in the form of observation, interviews, and questionnaires. The results are as follows: media experts rated the product as 98% “highly valid,” subject matter experts rated it as 92% “highly valid,” language experts rated it as 80% “valid,” interpretation experts rated it as 77% “valid,” and religious values experts rated it as 98% “highly valid,” with an average validation score of 89% “highly valid” and suitable for use. The results of the practicality test from the educators were 97% “very practical,” one-to-one evaluation 89% “very practical,” and small group evaluation 88% “very practical,” with an average result of 91% categorized as “very practical” for application in the learning process.

Keywords: *ADDIE; Digestive System; E-Module; Religious Value*

INTRODUCTION

Quality education is education that can develop the potential and knowledge of students, and must be supported by a good learning process (Kurniawan, 2018). In practice, this process should be carried out in the most interesting way possible, so that it attracts students to learn and study the material. If the learning process is not interesting, it will cause students to quickly become bored and lazy in following the learning process in class (Prawira, 2012; Harahap, 2020). The learning process in the classroom is still considered suboptimal due to the lack of strategies used by educators to create learning activities that attract students' interest. Interviews with science teachers at SMP Negeri 34 Palembang revealed that science material, especially biology, is considered quite difficult and involves a lot of explanation. Based on the

opinions of students in class VIII.7, the material that is considered difficult is the human digestive system because it is complex, so they are not interested in learning it. The teaching materials used are textbooks that contain a lot of material and seem uninteresting, making students lazy to read the books and causing a lack of enthusiasm in participating in the learning process (Harahap & Solihin, 2025). In addition, mind mapping and video media are considered by students to be less than optimal. Furthermore, the lack of integration of religious/Islamic values makes the learning process unchallenging.

This can be overcome by utilizing learning media as an effective learning facility and improving students' mastery of concepts, namely by using e-modules (Munandar, 2009). This media takes the form of systematically arranged self-study materials in electronic form, containing videos, animations, and other supporting materials (Sugianto et al., 2013). Furthermore, Wulandari et al. (2021) stated that these teaching materials can increase learning motivation because their content is neatly packaged with specific objectives, making it easy for students to understand.

To obtain teaching materials that maximize learning outcomes and interest, the solution is to integrate religious values into the learning material (Nasution & Al-Amin, 2025), thereby increasing knowledge and fostering faith or spirituality. According to Syafri (2012), the integration of these values or Islamic values can help students increase their motivation to learn, not only to study but also to convey the moral messages contained in the material, especially material on the human digestive system. Believing in and fearing God is the main thing to instill in students. This is also called religious character. These values can be used as a foundation in the process of forming other characters. In this process, these values also describe the relationship with the creator and are also reflected through positive attitudes in community life. Character education that contains religious values is an important factor in shaping positive character in students. This aims to enable them to optimally practice the religious teachings that guide their lives (Yudianto, 2005; Ismail et al., 2021). This is in line with the objectives of national education as contained in Education Law No. 20. Year 2003, namely "to educate the nation and develop Indonesians holistically, namely people who are faithful and devoted to God Almighty and have noble character, knowledge, physical and spiritual health, a stable and independent personality, a sense of social and national responsibility" (Maryana et al., 2023).

The e-module that has been developed with the integration of religious values is a creation to deliver learning materials that show the greatness of the Creator. The purpose of this development is to produce an e-module integrated with religious values that is valid and

practical for teaching human digestive system material. The benefits include increasing knowledge and material on the development of e-modules integrated with religious values that are valid and practical for teaching the human digestive system to eighth-grade junior high school/MTs students. The main benefit for students is that it can increase their enthusiasm for learning science and remind them of the power and greatness of Allah SWT as the Creator.

RESEARCH METHODS

This research was conducted in the Odd Semester of the 2022/2023 Academic Year at SMP Negeri 34 Palembang in Grade VIII, located at Jl Pasundan RT 45, Kel. Kalidoni, Kec. Kalidoni, Kota Palembang, South Sumatra 30161. This research is a research and development (R&D) study using the ADDIE development model. It is limited to the development stage only, which consists of: 1) the analysis stage, which includes curriculum and student analysis. 2) the design stage, which involves designing e-modules using the Canva application. 3) The development stage consists of validation, analysis of validation results, and product testing, namely one-to-one and small group testing. The initial steps are to understand the 2013 Curriculum KD and its obstacles, then compile a preliminary draft of an e-module integrated with religious values, develop a product draft using Canva, conduct expert validation, revise the design, and conduct limited testing.

Data collection techniques include observation, interviews, questionnaires, and documentation. The types of data are quantitative and qualitative. Qualitative data includes suggestions and criticism from media experts, materials, language, interpretation, religious values, teachers, and students. Quantitative data includes assessment scores and responses provided by media experts, materials, language, interpretation, religious values, educators, and students. Data analysis consists of validator assessments and responses from teachers and students in the form of tabulated scores and analysis of the quality level of the integrated e-module on religious values using Sugiyono's (2018).

RESULTS AND DISCUSSION

This research is an ADDIE model consisting of the analysis stage, the design stage, and the development stage. In this research, development was carried out in the form of an integrated e-module on religious values to determine the validity and practicality of the product. At this stage, product development was carried out, followed by a validity test by 5 lecturers and a practicality test by educators and students. The results of the validity test of the

integrated e-module on religious values consisted of 5 categories of research validation data, namely from expert validators on material, media, language, interpretation, and religious values. The results are presented below:

Table 1. Expert validation results

Validator	Score(%)	Category
Media	98%	Highly Valid
Content	92%	Highly Valid
Language	80%	Valid
Religion	77%	Valid
Religion Values	98%	Highly Valid
Average	89%	Highly Valid

Next, the practicality of the integrated e-module on religious values was tested in one-to-one and small group stages. The one-to-one stage involved three students, while the small group stage involved 17 students and a science teacher at SMP Negeri 34 Palembang. The responses regarding the practicality of the product are as follows.

Table 2. Practicality Test Results

Category	Score	Results
Educator	97%	Very Practical
One-to-one	89%	Very Practical
Small Group	88%	Very Practical
Average	91%	Very Practical

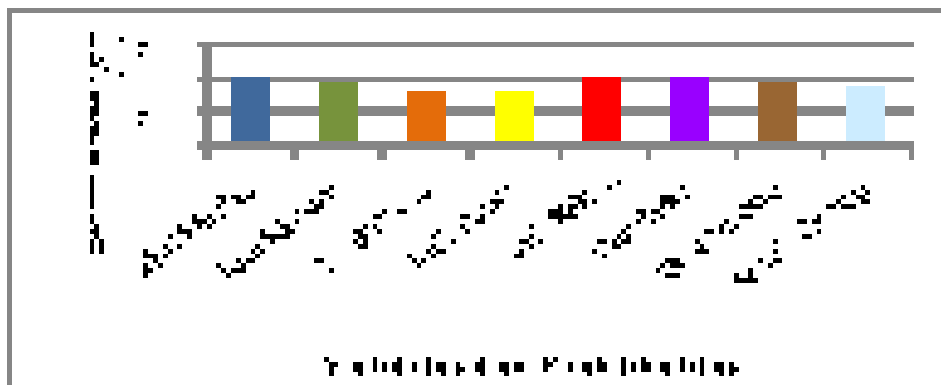


Figure 1. Overall diagram of the percentage results of the integrated e-module assessment of religious values among media experts, material experts, language experts, interpretation experts, religious values experts, educators, and students.

Discussion

1. Validity of Integrated E-Modules on Religious Values

The development of integrated e-modules on religious values in the digestive system material was guided by the ADDIE development model. However, it was limited to the development stage. The media validation was carried out by expert lecturers. In this media

validation, a score of 98% was obtained in the highly valid category. The media assessment consisted of several indicators, namely display design, material presentation, completeness of information, use of fonts, colors, and images. Learning media is the delivery of information and improves the knowledge of students and stimulates the learning process so that it refers to the predetermined objectives (Miarso, 2004).

The material validation results were carried out by expert lecturers. In this validation, a score of 92% was obtained in the highly valid category. The material assessment consisted of two aspects, namely content and structure. According to the Ministry of Education and Culture (2008), in compiling teaching materials, the depth and breadth of the material must be considered so that students obtain more information from the material being studied. The language validation results were carried out by expert lecturers. In this validation, a score of 80% was obtained in the valid category. This language assessment consists of several indicators, namely language use, sentence simplicity, the level of cognitive development of students, and scientific language consistency. Suryosubroto in Pramunando & Yerimadesi (2019) states that communicative and straightforward language makes the designed e-module easier to understand, thus facilitating the learning process.

The interpretation validation was carried out by expert lecturers. In this validation, a score of 77% was obtained in the valid category. The Quranic verses integrated into the e-module are correct and appropriate, and the writing of the Quranic verses and their meanings are correct, making them easy for students to understand and helping to increase their belief that everything on earth is the creation of the Almighty, Allah SWT. Hamzah (2015) states that e-modules integrated with religious/Islamic values increase religious knowledge that combines with existing scientific knowledge. Furthermore, Yudianto (2005) states that religious values are mandatory in science education to instill awareness of creation from Allah SWT.

The religious values were validated by expert lecturers. In this validation, a score of 98% was obtained in the highly valid category. The religious values integrated into the e-module consist of miracles/extraordinary things, uniqueness/wonders, order/balance, harmony, material cycles/material recycling in nature, the benefits/uses of something, the existence of cause-and-effect relationships, the existence of structure-function relationships, and religious values that appreciate natural phenomena as Asmaul Husna from Allah, which are in accordance with the material discussed, namely the human digestive system, so that it can help increase faith. Hidayah (2017) states that religious values integrated into learning materials can

instill values of faith, thereby creating individuals with deep spiritual qualities and good character. This then increases motivation in the learning and teaching process.

According to Syafri (2012), the integration of religious values into e-modules during science learning can help motivate students to learn. Furthermore, these modules can be used independently by users, and the integration of religious/Islamic values strengthens the religious aspect of the material (Lestari et al., 2020). Religious values guide students to behave in accordance with religious teachings (Supriyadi et al., 2024). The presence of these values, especially in biology learning contained in the media created, is a complete and comprehensive process that connects all aspects, such as cognitive, psychomotor, and affective, namely moral and spiritual, in this case, religious values (Fachry, 2024). The presence of religious/Islamic values in the media and learning process can create a holistic and comprehensive education, namely a combination of cognitive and religious aspects, especially morals and character.

The total aspect validation from 5 lecturers at the Raden Fatah State Islamic University Palembang, media validation, material, language, interpretation, and religious values was 89%, categorized as “very valid” and suitable to be continued in the teaching and learning process of eighth-grade biology on the material of the human digestive system. According to Habibati (2017), teaching materials meet validity criteria if they have good feasibility aspects, including material, media, language, and other aspects in their development.

2. Practicality of Integrated Religious Values E-Modules

The practicality of integrated religious values e-modules was tested on three students in a one-to-one setting and 17 students in a small group setting. Based on the average score of the student response questionnaire, the one-to-one stage obtained a score of 89% and there were no suggestions, so it was continued to the small group stage. At this stage, a score of 88% was obtained, categorized as “Very Practical” and no revision was needed. Then, the practicality of the educator was tested with a score of 97%, which is “Very Practical”. The practicality of the integrated e-module teaching materials with religious values can be seen from the teaching materials in the learning process, the responses of teachers and students to the teaching materials, which were obtained from the data on the response sheets of students and teachers after the learning took place. The practicality of a learning module leads to a learning module that is easy for students to use, making learning fun, interesting, and beneficial for the students' lives.

The developed e-module, which contains religious/Islamic values, can help students become independent, reducing their dependence on teachers. The media created with this

content not only attracts interest but also improves learning achievement. (Ramadhani & Firia, 2021; Susilowati, 2017). The creation of e-modules as a form of learning media innovation can instill and even enhance religious values in students, thereby creating a holistic and comprehensive process in accordance with the mandate of the law.

CONCLUSION

The e-module teaching material integrated with religious values on the human digestive system is declared to be highly valid, obtaining a score of 89%, which falls into the “highly valid” category. The e-module teaching material integrated with religious values on the human digestive system is declared to be highly practical, obtaining a score of 91%, which falls into the “highly practical” category.

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