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Integration of Qur'anic and Hadith Values in Evolution Learning: Innovation of Biology Modules Based on Faith Education

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ABSTRACT

Purpose of the study: The purpose of this study is to develop a biological evolution module based on Qur'anic and Hadith values to improve academic understanding, religious character, and learning guidance according to the principles of Muslim students' faith.

Methodology: This study uses the Development research method with ADDIE research design. The research subjects consisted of 60 students of the Biology Education Department of UIN Alauddin Makassar, who were divided into two groups: experimental and control. Data collection techniques include interviews, questionnaires, and documentation studies. Data were analyzed descriptively using SPSS for quantitative and thematic analysis techniques were used for qualitative data analysis.

Main Findings: The results of the study showed that the biology module integrating Qur'anic and hadith values successfully improved students' academic understanding and religious character. The experimental group showed better results in understanding the theory of evolution and strengthening religious character compared to the control group. This module proved to be more effective in helping students understand the material of evolution and strengthening students' religious beliefs.

Novelty/Originality of this study: This study offers a new approach in biology learning by integrating the values of the Qur'an and hadith in the material of the theory of evolution. This not only deepens students' scientific understanding, but also strengthens their religious character. This study fills the gap in the literature that connects science and religion, and creates a holistic learning model in Islamic universities.

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1. INTRODUCTION

Developing the professionalism of educators needs to be done through their creativity in conducting better learning [1]-[3]. This creativity is not only in terms of using more interesting, meaningful and enjoyable learning methods and strategies, but also in providing more varied and functional learning tools and teaching materials [4]-[6]. This serves to enhance the interaction process between students and educators and the interaction of students with their learning environment [7]-[9]. Variative teaching materials are teaching materials that can utilize learning

resources available in the learning environment and can be accessed by educators or students [10]-[12]. Learning resources that are easily accessible and can be used as additional references for teaching materials are the verses of Allah subhânahû wa ta'âlâ in the form of the Qur'an and the words of the Prophet Muhammad shallallâhu'alaihi wasallam in the form of hadiths.

Teaching materials are all materials (both information, tools, and texts) that are arranged systematically, which display a complete figure of the competencies that will be mastered by students and are used in the learning process with the aim of planning and reviewing the implementation of learning. Thus, teaching materials usually contain all the material coverage of all subjects [13], [14]. The material itself is a media or means used to convey learning messages, can be in the form of visual messages, audio or audio-visual messages [15], [16]. In general, media can be used to convey messages, and can be categorized into two, namely printed teaching materials and non-printed teaching materials [17]-[19]. One of the branches of science that requires teaching materials is biology.

One of the theories in biology that discusses the origin of the existence of living things and the development of their lives is the theory of evolution [20], [21]. Evolution is the process of gradual change in living things from simple forms to more complex forms over a long period of time [22]-[24]. In biology, evolution means that all the diverse forms of life that exist today are the result of a gradual and continuous process of modification of ancestral forms [25]-[27]. This process of descent with modification does not lead to the formation of a finished end product [28], [29]. Evolution modifies all living things and will continue to produce changes in the future, as it has done in the present [30]-[32].

The theory of evolution explains that the diversity of life of all species on earth today is derived from a common ancestor [33], [34]. After studying the theory of evolution, researchers found many errors in the theory of evolution that contradict Islamic beliefs [35], [36]. One example is the theory of evolution put forward by Darwin, one of the figures who adhered to the theory of evolution, that the diversity of life of all species on earth today comes from the same ancestor, so that from this theory the assumption arose that humans and apes come from the same ancestor or in one of its interpretations that humans come from apes. In fact, the Qur'an and hadith which are the main sources of Islamic beliefs have clearly stated that human ancestors came from the Prophet Adam 'alaihis salâm who was directly created from the earth without undergoing the evolutionary process intended by Darwin.

Moreover, in reality there are indeed some Muslims who have supported the theory of evolution, some of them even use verses of the Qur'an which are interpreted according to their own interpretation without referring to the interpretation of the mufassirs to support the theory of evolution, and this is certainly a fatal error and will have a bad impact on the faith and can even damage the faith of a Muslim. Therefore, it is very necessary to have information from the verses of the Qur'an and hadiths of the creed that can be used as a basic reference for Islamic creed for Muslim students who want to study the theory of evolution, and this can be included directly in the evolution module itself [37], [38]. In addition, the material contained in the module is very dense with a poorly organized material structure according to the researcher so that it feels difficult for students to understand the evolution material contained in the module, then the discussion chapters with their table of contents are not included so that it is less practical to use if the reader wants to find a particular topic of discussion in the theory of evolution.

Previous research has shown that there are challenges in accepting the theory of evolution among students, especially those from religious backgrounds such as Islam and Christianity. The study found that the acceptance of the theory of evolution tends to be lower in certain programs, such as Biomedicine and Health, compared to other programs that are closer to the biological sciences [37]. One of the main factors influencing the low acceptance is the perceived conflict between religious beliefs and the theory of evolution. As a solution, previous studies have suggested integrating the evolutionary perspective into teaching and opening up discussion about the perceived conflict. The current study fills this gap by developing a biology learning module based on the values of the Qur'an and Hadith. This module not only aims to improve students' academic understanding of the theory of evolution, but also strengthen their religious character, thus creating a balanced learning approach between science and faith values.

This module also needs to be designed more systematically with a neat material structure, clear chapter divisions, and a table of contents to make it easier for users to understand and find the topic of discussion. In this context, the development of a module that integrates the values of the Qur'an and hadith is important to build the religious character of students. Religious character reflects the appreciation and practice of religious values, including strong belief in God, obedience to religious teachings, and high moral attitudes such as honesty, discipline, and responsibility [39], [40]. In education, the formation of religious character aims to integrate spiritual and intellectual values, so as to produce individuals who are academically intelligent and have a life view based on the principles of faith [41], [42]. This integration is an important foundation in building a harmonious, ethical, and noble society.

This study develops biology teaching materials, especially the evolution module, by integrating verses from the Qur'an and hadiths of faith as the main learning sources. The novelty of this study lies in the integrative approach that connects the scientific concept of evolution with a religious perspective based on Islamic faith. This

module not only functions as a means of learning biology, but also as a medium to strengthen the values of Muslim students' faith, thus providing a holistic understanding of science and religion. In addition, this module is designed with a more systematic structure, including a more organized arrangement of materials, clear chapters, and a table of contents to make it easier for users to find certain discussions. This approach has not been widely developed before, especially in the context of Islamic higher education.

The urgency of this study lies in the importance of providing learning guidance that not only supports students' academic competence but also protects students' faith from misunderstandings about evolution. The theory of evolution often causes polemics among Muslims because of interpretations that conflict with the principles of faith [43], [44]. The absence of a module that integrates an Islamic perspective in discussing the theory of evolution can cause confusion and even potential damage to the faith of Muslim students who study it. Therefore, the development of this module is an urgent need to avoid errors in belief by providing valid references based on the Qur'an and hadith that are in accordance with the interpretations of scholars, improving the quality of learning through scientifically and practically relevant teaching materials, and filling the literature gap in providing biology modules with an integrative perspective that combines science and religion.

Furthermore, this study supports holistic education that includes intellectual and spiritual dimensions, thus producing graduates who have a strong scientific understanding as well as strong religious beliefs. Thus, this study is expected to be an important reference in the development of biology teaching materials in Islamic educational environments and provide real contributions to improving the professionalism of educators in compiling creative and relevant teaching materials. The purpose of this study is to develop a biological evolution module based on Qur'anic and Hadith values to improve academic understanding, religious character, and learning guidance according to the principles of Muslim students' faith.

2. RESEARCH METHOD

This study uses a research and development (R&D) method with reference to the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) development model. The stages in this study are explained as follows:

The analysis stage is carried out to identify the need for module development. The researcher analyzed the biology curriculum, especially on the evolution material, and evaluated the existing learning modules. A study was also conducted on Islamic literature, including relevant verses of the Qur'an and hadith. Surveys or interviews with lecturers and students were used to determine the weaknesses of the existing modules and learning needs that focus on integrating Qur'anic values. The module is designed by integrating the values of the Qur'an and hadith into the evolution material. The module design includes the preparation of a systematic structure, consisting of chapters with a clear table of contents to facilitate user navigation. The module content is arranged to include the concept of evolution scientifically equipped with an Islamic perspective, based on the interpretation of the Qur'an and authentic hadith, so as to provide a holistic view to students. In addition, this module is also equipped with exercises and evaluations designed to strengthen students' academic understanding while developing their religious character.

The module was developed based on the design that had been designed. The module content was validated by biologists, education experts, and scholars or interpreters to ensure scientific accuracy and conformity with the principles of Islamic faith. Revisions were made based on input from experts. The completed module was tested in biology learning in the classroom. The trial was conducted on biology students at an Islamic college to assess the effectiveness of the module in improving academic understanding and religious character. Data were obtained through observation, questionnaires, and interviews. The evaluation was conducted to assess the success of the module from various aspects, including students' understanding of the material on evolution, strengthening religious character through the appreciation of the values of the Qur'an and hadith, and feedback from students and lecturers as input for improving the module in the future.

This study involved biology students from an Islamic college, Department of Biology Education, Faculty of Tarbiyah and Teacher Training, UIN Alauddin Makassar as the main subjects. Additional information was obtained from biology lecturers and education experts. As a sample of the study, students were selected using a simple random sampling technique with a total sample of 60 students consisting of 2 classes, each class consisting of 30 students and 1 as a control class and 1 as an experimental class. This study uses various data collection techniques to obtain comprehensive and in-depth information. The techniques used include observation, semi-structured interviews, questionnaires, and documentation studies. Observations were carried out during the module trial process to see the learning activities and interactions of students in understanding the material on evolution and the appreciation of the values of the Qur'an and hadith. Interviews were conducted with lecturers of Biology Education to obtain input regarding the validation of the module content and its effectiveness. Questionnaires were given to students to measure their understanding of the concept of evolution, acceptance of the integration of Qur'anic values, and strengthening of religious character. Documentation studies were conducted by analyzing curriculum materials, previous learning modules, and supporting literature. The research instrument grid includes

aspects of academic understanding consisting of 25 multiple-choice questions (indicators: mastery of the concept of evolution, ability to explain the relationship between science and religion) and strengthening of religious character consisting of 25 items (indicators: application of Qur'anic values, spiritual awareness). The categories for students' academic understanding and religious character are presented in table 1 below:

Table 1. Categories of academic understanding and religious character

Category	Interval	
	Academic understanding	Religious character
Very Not Good	0 – 20	25 – 45
Not good	20.1 – 40	45.1 – 65
Enough	40.1 – 60	65.1 – 85
Good	60.1 – 80	85.1 – 105
Very good	80.1 – 100	105.1 – 125

In this study, data analysis was conducted through qualitative and quantitative approaches to obtain a comprehensive understanding. Data from observations, interviews, and documentation studies were analyzed using thematic analysis techniques. Data from the questionnaire were analyzed statistically to measure students' academic understanding and strengthening of religious character. Descriptive analysis was used to describe the distribution of responses.

3. RESULTS AND DISCUSSION

The initial stage in developing this module includes five main analyses. Front-end analysis was conducted to identify learning problems, such as incomplete teaching materials (not including a table of contents, learning instructions, practice questions, and bibliography), materials that were too dense and poorly structured, and inconsistencies with the evolution course syllabus. In addition, previous teaching materials did not include verses of the Qur'an and hadiths of faith, which have the potential to cause misunderstandings related to the theory of evolution. The student analysis focused on ninth-semester students of the Biology Education Department at UIN Alauddin Makassar, with limited trial subjects of six students from biology classes 5.6.

They were selected based on their willingness and relevant background, considering that the class had completed the evolution course. The next stage was concept analysis, which considered the evolution course syllabus as an initial reference for designing a concept that was appropriate to the students' ability level. Task analysis was conducted based on the researcher's experience while attending lectures, where paper assignments were the main part of the evaluation. Furthermore, the objective analysis is formulated based on the department syllabus, with the hope that students can understand the theory of evolution as a whole, including the definition, history, mechanisms, and instructions for the occurrence of evolution. This module is also equipped with verses of the Qur'an and hadiths of faith to strengthen understanding and maintain students' faith in studying the theory of evolution.

The stages of product design in the development of an evolution module with the content of verses of the Qur'an and hadiths of faith include three main steps. The selection of media is carried out to determine learning media that are relevant to the characteristics of the material, namely a module that is developed by adopting several reference books to support biology learning in class. The selection of the format involves compiling a module equipped with supporting components such as learning materials, images, verses of the Qur'an, hadiths of faith, and practice questions. This aims to increase students' interest and motivation to learn, as well as broaden their horizons.

Furthermore, the initial design of the module is made based on a needs analysis. The module was developed to address deficiencies in previous teaching materials, such as the absence of a table of contents, learning instructions, learning objectives, practice questions, and bibliography. This module is also equipped with additional verses of the Qur'an and hadiths of faith that are relevant to the theory of evolution. The initial draft of the module (called prototype 1) consists of 190 pages covering evolution material, practice questions, scoring instructions, and Islamic content. This prototype was then validated by experts to ensure its feasibility and relevance.

The resulting module was then validated by two validators, namely by reviewing aspects of the feasibility of the module content, use of language, presentation of module components, completeness of components, presentation of verses of the Qur'an and hadiths of faith and graphics. The results of the expert validation were used as a basis for revising the module. In this case, the author refers to the suggestions and instructions from the experts. The validators in this study were Mr. A. Lecturer in the Department of Biology Education and Mr. H. Lecturer in the Department of Arabic Language Education. The assessment results can be seen with a summary of the validator assessment results can be seen in Table 2.

Table 2. Results of the validator's assessment of the developed module

Assessment Aspects	Assessment Results	Category
Eligibility of content	3.87	Very valid
Language use	3.37	Valid
Component presentation	3.87	Very valid
Component completeness	3.75	Very valid
Presentation of Al-Qur'an verses and hadith beliefs	3.75	Very valid
Graphics	4.00	Very valid
Average	3.76	Very valid

Based on the data above, the average validator assessment of the developed module is in the very valid category so that it can be used with minor revisions and is suitable for testing on a limited scale in the field. This limited trial stage was carried out at the Faculty of Tarbiyah and Teacher Training, Alauddin State Islamic University, Makassar. The number of student samples was 6 students majoring in biology education in the ninth semester, 1 male and 5 female. This limited trial aims to measure the level of practicality of the developed module. The practicality of the developed module is measured using a research instrument in the form of a student response questionnaire. The practicality of the developed module can be seen in the following Table 3.

Table 3. Results of student response questionnaire

Assessment Indicators	Statement	∑ Score
A. Interest	1. I enjoy using the module	3.16
	2. This is the first module for me	3.66
	3. The images/illustrations are clear and easy to understand	3.50
	4. Interesting (writing, font size, images, image position and color)	3.33
	5. Practical and easy to use	3.50
B. Material	6. The questions are interesting and challenging to solve	3.16
	7. The material does not need to be presented again by the teacher because I already understand it	2.83
	8. The presentation of the verses of the Qur'an and the hadiths of the creed are sufficient as a basic guide to the creed of a Muslim	3.66
	9. The verses of the Qur'an and the hadiths of the creed increasingly convince me of the truth of Islamic teachings	3.66
	10. The theory of evolution is important to study based on the verses of the Koran and the hadiths of the faith	3.50
C. Language	11. The language used in this module is easy to understand	3.33
	Total	37,29
	Average	3,39
	Category Rating	Positive

Based on table 3, it can be explained that the assessment category obtained from the results of the student response questionnaire is positive for the developed module. Thus, the criteria for the practicality of the evolution module containing verses of the Qur'an and hadiths of faith have been achieved. Based on the results of the validation and student responses to the teaching module, the researcher then disseminated the module to IX semester Biology Education students to determine the increase in academic understanding and also the religious character of students after learning using a module that integrates the values of the Qur'an and hadith in learning evolution as an innovation of biology modules based on faith education in improving religious character.

The increase in students' academic understanding can be measured through the results of tests given before and after using the module. This test measures the mastery of basic concepts in the theory of evolution, such as the history of evolution, the mechanism of change in species, and the relationship between evolution and biological life.

The results of descriptive statistics on students' academic understanding related to the topic of evolution using biology module teaching materials related to human evolution integrated with the values of the Qur'an and hadith are presented in table 4 below:

Table 4. Description of students' academic understanding of the topic of evolution

Class	Interval	Category	F	%	Mean	Median	Min	Max
	0 – 20	Not very good	0	0				
Eksperimen	20.1 – 40	Not good	2	6.7%	76	75	40	90
	40.1 – 60	Enough	9	30%				

	60.1 – 80	Good	18	60%				
	80.1 – 100	Very good	1	3.3%				
	0 – 20	Not very good	2	6.7%				
	20.1 – 40	Not good	3	10%				
Control	40.1 – 60	Enough	12	40%	68	70	20	90
	60.1 – 80	Good	10	33.3%				
	80.1 – 100	Very good	3	10%				

Table 4 above compares the distribution and size of the central tendency of the two groups (Experimental and Control). The experimental group showed better overall performance, with 60% of participants in the "Good" category and an average score of 76, while the control group was more evenly distributed, with 40% in the "Enough" category and an average score of 68. The range of scores in the experimental group (40–90) was narrower than the control group (20–90), indicating greater variation in scores in the control group. Overall, the experimental group performed better and was more focused, while the control group showed more varied results and tended to be lower. Next, the descriptive results of the religious character of students after taking a biology course on the topic of evolution using the integrated module teaching materials of the values of the Qur'an and Hadith are presented in Table 5 below:

Table 5. Description of students' religious character in the discussion of evolution

Class	Interval	Category	F	%	Mean	Median	Min	Max
	25 – 45	Not very good	0	0				
	45.1 – 65	Not good	1	6.7%				
Eksperimen	65.1 – 85	Enough	10	30%	86	89	65	105
	85.1 – 105	Good	19	60%				
	105.1 – 125	Very good	0	0				
	25 – 45	Not very good	0	0				
	45.1 – 65	Not good	3	10%				
Control	65.1 – 85	Enough	13	43.3%	80	85	60	100
	85.1 – 105	Good	14	46.7%				
	105.1 – 125	Very good	0	0				

Table 5 shows a comparison of students' religious character after participating in evolution learning with an integrated module of Qur'anic and Hadith values. The experimental group showed better results, with 60% of students in the "Good" category (average 86), while the control group was more evenly distributed, with 46.7% in the "Good" category and an average of 80. This shows that the experimental module is more effective in strengthening students' religious character, with most students in the experimental group achieving a "Good" level or higher, while the control group was more in the "Enough" category. In interviews conducted with student participants in the study, most participants stated that the use of a module that integrates Qur'anic and Hadith values in learning the theory of evolution provided a clearer and easier-to-understand understanding of the material. One participant stated, "This module really helped me to understand the theory of evolution, especially because there is an explanation that links it to religious values. I feel more confident that science and religion can be in line, not contradictory." This is in line with the results in Table 4, where the experimental group performed better, with 60% of students in the "Good" category and an average score of 76.

In addition, participants also felt that the integration of Qur'anic and hadith values in the module not only helped them understand the theory of evolution scientifically, but also strengthened their religious character. One student said, "With the verses of the Qur'an and hadith in the module, I feel more confident in studying the theory of evolution, because I know that it does not conflict with my beliefs." This supports the results found in Table 5, where 60% of students in the experimental group were in the "Good" category for the religious character aspect, with an average score of 86. Other interview participants also mentioned that the use of religious materials in the module made them appreciate the importance of scientific knowledge that is in line with Islamic teachings, which strengthened their beliefs.

The short-term implications of this study are improving the quality of biology learning at the tertiary level, especially in biology education study programs, by providing more structured and relevant learning materials, and integrating religious dimensions that are important to Muslim students. In the long term, this research can make a major contribution to the development of higher education curriculum, especially in creating a holistic learning model, where science and religious values can go hand in hand. The contribution of this research to the field of education is to provide innovation in biology learning that does not only focus on academic achievement, but also on the formation of students' religious character, which in turn can produce graduates who are not only academically intelligent, but also have strong faith and high moral integrity. This approach can be

adopted more widely in various disciplines in Islamic universities to create a more comprehensive and Islamic-nuanced academic environment.

Previous research shows that Islamic educational values derived from the Qur'an have a central role in shaping the basic principles of Islamic education, such as seeking knowledge, moral values, and social justice [45], [46]. In addition, this study also underlines the importance of the evolution of Islamic educational values along with changes in history and Islamic society, although the basic principles remain consistent [47]. These findings provide a strong basis for efforts to integrate Islamic values into various modern educational contexts. The current study is relevant to previous studies because it continues efforts to integrate the values of the Qur'an and Hadith in education, especially in the teaching of the theory of evolution in biology. This is in line with the findings of previous studies that emphasize the importance of Islamic values in education, but more specifically in the teaching of the theory of evolution which is often a challenge for Muslim students. Thus, the current study not only supports the relevance of previous findings but also expands its application to the context of modern science learning, especially in Islamic universities.

This research offers novelty in the development of a biology learning module that integrates Qur'anic and hadith values in the material on the theory of evolution, aiming to eliminate the tension between science and religion by connecting the two aspects in one comprehensive module. However, this study has limitations, such as the limited number of samples (only six students) and the scope that only includes students of the Biology Education Department at UIN Alauddin Makassar, so that the results are difficult to generalize to a larger population or other disciplines. Therefore, it is recommended to conduct further trials with larger samples and involving various universities and disciplines, as well as exploring the development of similar modules for other science courses that integrate religious values. This study also opens up opportunities for long-term evaluation of the impact of using the module on students' academic understanding and religious character, as well as the development of more holistic religious value-based teaching methods.

4. CONCLUSION

The results of this study indicate that the development of a biology module that integrates Qur'anic and Hadith values in learning the theory of evolution has a significant positive impact on two main aspects: academic understanding and strengthening students' religious character. In terms of academic understanding, the experimental group using a module based on religious values performed better than the control group, with 60% of students in the "Good" category and an average score of 76. This indicates that a module that integrates scientific material with religious values can improve students' understanding of the theory of evolution, which is often considered to be contrary to religious teachings. On the other hand, in terms of religious character, the experimental group also showed better results, with 60% of students in the "Good" category and an average score of 86. This shows that the integration of Qur'anic and Hadith values in learning not only strengthens students' scientific understanding, but also improves their faith and religious personality aspects. Thus, this approach is proven to be effective in creating a balance between science and religion in biology education, while strengthening students' religious character. For further research, it is recommended to expand the trial of this module with a larger sample size and involve students from various departments or universities to obtain more representative and in-depth results regarding the impact of integrating religious values in science learning.

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AUTHOR CONTRIBUTIONS

Conceptualization, M.I.S. and F.A.F.; Methodology, M.I.S. and F.A.F.; Software, M.I.S.; Validation, M.I.S., F.A.F. and M.B.H.; Formal Analysis, M.I.S.; Investigation, M.I.S.; Resources, F.A.F. and M.B.H.; Data Curation, M.I.S.; Writing – Original Draft Preparation, M.I.S.; Writing – Review & Editing, M.I.S., F.A.F. and M.B.H.; Visualization, M.I.S.; Supervision, F.A.F. and M.B.H.; Project Administration, F.A.F.; Funding Acquisition, M.B.H.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY

Not applicable.

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