

DEVELOPMENT OF PHYSICS MODULE BASED ON AL-QUR'AN VALUES TO IMPROVE SPIRITUAL ATTITUDE

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Abstract. This research is development research where the background of this research is the aim of national education, namely creating students who are intelligent, have faith and are devoted to God Almighty and have noble morals. Developing a spiritual attitude is one way to realize the goal of national education, namely to form pious people. The aim of the research is to describe the validity of the physics module based on Al-Qur'an values, the practicality of the physics module based on Al-Qur'an values and the effectiveness of the physics module based on Al-Qur'an values. The subjects of this research were 24 students. This research uses the development of the ADDIE model (Analysis, Design, Development or Production, Implementation, and Evaluation). The instruments used in this research were module validation sheets, practitioner response questionnaires (educators/teachers and students), as well as student spiritual attitude questionnaires. Module eligibility criteria are seen from the aspect of validity. The practicality criteria are seen from the teacher's assessment and students' responses to the module, and the effectiveness criteria are seen from the increase in students' spiritual attitude test results. Based on the results of the analysis, a conclusion was obtained: the physics module based on Al-Qur'an values which was developed based on expert assessment was declared valid and suitable for use with minor revisions, the physics module based on Al-Qur'an values was reviewed from the responses of physics teacher practitioners and participants students are in the very good category, the effectiveness of the physics module based on Al-Qur'an values is seen from the spiritual attitudes of students which are analyzed using N-gain. The average score is 0.43, which is in the medium category, which means that there is an improvement in attitude. students' spirituality so it can be said that the physics module based on Al-Qur'an values developed is effective in improving students' spiritual attitudes.

Keywords: *Module, Al-Qur'an values, Spiritual Attitude.*

INTRODUCTION

In The National Education System states that one of the important goals of education is to produce people who believe and are devout. This is in accordance with the 2013 curriculum which explains that basic competency (KD) in physics in core competency 1 (KI 1) and core competency 2 (KI 2) develops attitude abilities related to divine (spiritual) values and social attitudes, of course the attitudes in question on KI 1 and KI 2 will emerge with learning about knowledge and skills on KI 3 and KI 4 (Nurhadi, 2014: 107).

The learning process chosen is Al-Quran-based physics learning where physics material is linked to Al-Quran verses. By learning physics based on the Koran, it is hoped that students will realize and know that science can actually be used to strengthen faith and as a means to get closer to Allah (spiritual attitude). Apart from that, it is hoped that students will consciously believe in the greatness

of God in the creation of the universe and existing physical phenomena, so it is very important to always present religious values in every lesson. Based on observations made at SMAIT Nurul Fikri Makassar, the teaching of physics material based on Al-Quran values has not been fully implemented in the learning process as the teacher only conveys physics material in general, namely the concept of physical laws and the equations that accompany it. In fact, as an Islamic school education center which has a vision to become a reference elementary school in cultivating a generation of pious, Muslim, intelligent, independent and skilled learners in facing global challenges, it should link Al-Quran verses with learning materials so that there is no separation between scientific knowledge. (physics) with religion is known as the dichotomy of science.

This is also proven based on the results of an interview with one of the physics teachers at SMAIT Nurul

Fikri Makassar that so far the teaching materials used in the physics learning process have only been textbooks and worksheets. Physics learning takes place only in one scientific discipline, and has not been synergized with Al-Quran verses and religious values. This is because there are no books as teaching materials based on Al-Quran verses and Islamic values. According to him, students need teaching materials that can be used for independent learning and are synergized with Al-Quran verses and religious values.

Furthermore, student analysis was also carried out so that it was found that there was only one class in class X at SMAIT Nurul Fikri Makassar and that class would be the focus of this research. Meanwhile, after interviews with students at the school, they stated that the physics learning carried out so far was not interesting because the teacher only explained the material and did not relate it to the verses of the Koran. Students also stated that media or teaching materials were needed that were close to students' lives so as to motivate students to study physics in more depth. The solution to the existing problems is to develop printed teaching materials in the form of modules based on Al-Quran values. Based on the explanation above, the author conducted research with the title "Development of a Physics Material Module Based on Al-Quran Values to Improve the Spiritual Attitude of SMAIT Nurul Fikri Makassar Students.

METHOD

This research is a Research and Development (R&D) research conducted to produce a physics module based on Al-Qur'an values to improve the spiritual attitude of students. This research was conducted at SMAIT Nurul Fikri Makassar. This research starts from September 2021 to February 2022. In general, spiritual attitudes have several indicators, namely: Pray before and after doing something, carry out worship on time, give greetings at the beginning and end of the presentation according to your religion, be grateful for the blessings and grace of God Almighty, appreciating human ability to self-control, express gratitude when you succeed in doing something, surrender yourself to God if you fail in doing something, protect the living environment around homes, schools and communities, maintaining good relations with the people created by God Almighty, be grateful to God Almighty for the natural phenomena that occur, respect other people to carry out worship according to their religion (Kemendikbud, 2017).

The procedure for developing a physics module based on Al-Qur'an values uses the ADDIE development model. Based on the ADDIE development concept proposed by Robert Maribe Branch, a design in this research can be drawn up. This design explains more about the concepts and procedures in research and development. Based on the concept of ADDIE development proposed by Robert Maribe Branch, in this study a design was developed to develop a learning resource in the form of a physics module based on Al-Qur'an values in accordance with the stages of the ADDIE development model. This development research phase uses the following stages: (i) the analysis phase includes an analysis of the performance gap of the learning process, determination of instructional

objectives, student analysis, identification of the required resources; (ii) the design stage, at this stage the researcher prepares KD specifications and learning objectives, prepares materials, and designs physics modules based on Al-Qur'an values; (iii) the development stage, at this stage the validation of the physics module based on the values of the Qur'an and instruments is carried out by experts, then revision of the development product is carried out according to the suggestions / criticisms of the validator so as to produce a physics module based on the values of the Qur'an and valid instrument; (iv) the implementation stage, at this stage the physics module based on the values of the Qur'an that has been validated by experts and declared valid is then tested for the product that has been developed. In the limited trial phase, students and teachers were involved to analyze the responses to the physics module based on the values of the Qur'an. This trial aims to see the quality of the products that have been developed. In addition, a spiritual attitude questionnaire was conducted before and after the use of the physics module based on the values of the Qur'an. The test is useful to see the increase in the spiritual attitude of students. The increase in the spiritual attitude of students shows that the physics module developed is effective; (v) evaluation stage, at this stage is the stage that exists in every stage of ADDIE model development. Evaluation is carried out before moving on to the next stage and making revisions related to the analysis that has been carried out.

RESULT AND DISCUSSION

The Validity of the Physics Module Based on Al-Qur'an Values

a. The Results of the Validation of the Al-Qur'an Values-Based Physics Module.

After conducting an analysis in the field, the next stage is the design and development stage. The development stage is the validation of the physics module based on the values of the Qur'an by three experts. The aspects of assessing the content of the physics module based on the values of the Qur'an that are validated include aspects of format and components, content aspects, and language aspects. The results of the analysis of the coefficient of content validity of the expert agreement index with the analysis of the Aiken's V index can be presented in Table 1.

Table 1. Test of Content Validity Analysis of Physics Modules Based on Al-Qur'an Values

Aspect	Amount of Score Item Validity	V	Category
Format and Components	2.44	0.81	Valid
Module Content Based on Al-Qur'an Values	7.44	0.74	Valid
Language	1.33	0.67	Valid

Source: Processed Primary Data (2022)

b. The Results of the Questionnaire Validation of Teacher Practitioners' Responses to the Physics Module Based on Al-Qur'an Values.

Each assessment component available on the teacher practitioner response questionnaire sheet instrument consists of several assessment items that are assessed with a Likert Scale. Then the content validity coefficient analysis was carried out using the Aiken's V expert agreement index on the practitioner response questionnaire, from the results of the Aiken's V index analysis with the Likert scale, the validator acquisition score can be presented in Table 2.

Table 2. Analysis Test of Content Validation of Teacher Practitioner Responses with Aiken's V

Aspect	Amount of Score Item Validity	V	Category
Integrated Material/Content Values of the Qur'an	4.44	0.74	Valid
Presentation	4.33	0.72	Valid
Language	2.78	0.69	Valid
Graphics	5.56	0.79	Valid

Source: Processed Primary Data (2022)

- c. Results of Questionnaire Validation of Student Practitioners' Responses to Physics Modules Based on Al-Qur'an Values.

Each assessment component available on the student practitioner response questionnaire sheet instrument consists of several assessment items that are assessed with a Likert Scale. Then the content validity coefficient analysis was carried out using the Aiken's V expert agreement index on the practitioner response questionnaire, from the results of the Aiken's V index analysis with the Likert scale, the validator score can be presented in Table 3 below.

Table 3. Test of Analysis of the Validation of the Contents of the Student Practitioner Responses with the Aiken's V Index

Aspect	Amount of Score Item Validity	V	Category
Integrated Material/Content Values of the Qur'an	5.67	0.81	Valid
Presentation	5.22	0.75	Valid
Language	2.78	0.69	Valid
Graphics	1.56	0.78	Valid

Source: Processed Primary Data (2022)

- d. Spiritual Attitude Questionnaire Validation Results.

Each component of the assessment available on the questionnaire instrument of the spiritual attitude of students consists of several assessment items which are assessed with a Likert Scale. Then the content validity coefficient analysis was carried out using the Aiken's V expert agreement index on the spiritual attitude questionnaire, from the results of the Aiken's V index analysis with the Likert scale the validator score can be presented in Table 4 below:

Table 4. Test of Validation of the Contents of the Spiritual Attitude Questionnaire of Students with Aiken's V Index

Aspect	Amount of Score Item Validity	V	Category
Religious Motivation	13.44	0.79	Valid
Awareness	10.44	0.80	Valid
Self-Actualization	13.89	0.77	Valid

Source: Processed Primary Data (2022)

Practicality of the Physics Module Based on Al-Qur'an Values

- a. Assessment of Teacher Practitioners' Responses to the Development of a Physics Module Based on Al-Qur'an.
The purpose of analyzing the teacher response data to the physics module based on the values of the Qur'an is to see how the teacher's response to the physics module based on the values of the Qur'an has been developed. It is shown in Table 5.

Table 5. Teacher Practitioner Assessment Scores on the Quality of Physics Module Development Based on Al-Qur'an Values

Aspect	Amount of Score Item V Validity	V	Category
Integrated Material/Content Values of the Qur'an	69	72	95.8
Presentation	64	74	88.9
Language	43	48	89.6
Graphics	79	84	94

Source: Processed Primary Data (2022)

- b. Assessment of Student Practitioners' Responses to the Development of a Physics Module Based on Al-Qur'an Values.

Table 6. Student Practitioner Assessment Scores on the Quality of Physics Module Development Based on Al-Qur'an Values

Aspect	Amount of Score Item Validity	V	Category
Integrated Material/Content Values of the Qur'an	625	768	81.4
Presentation	326	384	84.9
Language	553	672	82.3
Graphics	152	192	79.2

Source: Processed Primary Data (2022)

The purpose of analyzing the data on student responses to the physics module based on Al-Qur'an values is to see how student practitioners respond to the physics

module based on Al-Qur'an values that have been used during learning. Based on the assessment of student practitioner responses to the developed physics module.

The Effectiveness of the Al-Qur'an Value-Based Physics Module to Improve Students' Spiritual Attitudes.

The effectiveness of the physics module based on Al-Qur'an values developed can be measured by assessing the spiritual attitudes of students after being given a physics module based on Al-Qur'an values. The assessment was given using a test of 48 questionnaire questions given to students before and after the use of the physics module based on the values of the Qur'an that had been developed. The spiritual attitude of students after being given a physics module based on Al-Qur'an values is in the good category, this can be seen in the ability of students to answer the questionnaire given. Most of the students completed the given questionnaire well. Furthermore, an analysis of the increase in the spiritual attitude of students was carried out using the data from the pretest and posttest gain and N-gain results. The spiritual attitude test was carried out before and after the use of the physics module based on the values of the Qur'an that had been developed. The questionnaire given consists of 48 statements to see how students have increased spiritual attitudes. The results of the N-gain analysis can be seen in the following diagram:

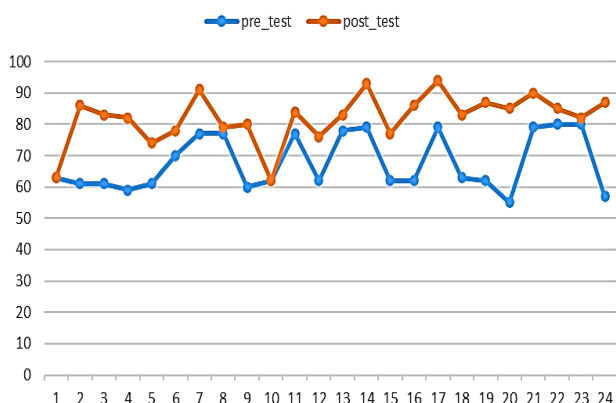


Figure 1. Pretest-Posttes Spiritual Attitude

All The results of the pre-test and post-test of students were analyzed with n-gain to see the increase in the spiritual attitude of students before and after being given a physics module based on Al-Qur'an values. The results of the N-gain analysis are presented in the form of a line diagram as shown in Figure 4.6. The results showed that most of the students' spiritual attitudes experienced an increase from the test before being given a physics module based on Al-Qur'an values with a test after being given a physics module based on Al-Qur'an values. However, there were 2 students with the same pre-test and post-test scores or in other words, there was no increase in spiritual attitudes, 2 students experienced an increase in spiritual attitudes in the high category, 14 students experienced an increase in spiritual attitudes in the high category, moderate and 6 students experienced an increase in spiritual attitudes were in the medium category.

The effectiveness of the physics module based on Al-Qur'an values can be seen based on the results of the

spiritual attitude test of students in class X IPA SMAIT Nurul Fikri Makassar. The spiritual attitude test is given before and after students use the physics module based on Al-Qur'an values in physics learning. Based on the results of data analysis, the scores of students' spiritual attitudes before being given a physics module based on Al-Qur'an

The results of the spiritual attitude test before and after using the physics module based on the values of the Qur'an, then an N-gain analysis was carried out to see the increase in the spiritual attitude of students. The results of the analysis obtained an average n-gain score of 0.43 and can be seen in appendix D.8. This means that there is an increase in the spiritual attitude of students in the medium category. So that the physics module that has been developed is effective in improving spiritual attitudes. This is shown in the activeness of students participating in the learning process using the developed Al-Qur'an values-based physics module. Learning based on Al-Qur'an values emphasizes how students are able to understand related physics material associated with the Qur'an so as to improve the spiritual attitude of students. In addition, positive student responses were obtained related to the usability of the physics module.

The effectiveness of the physics module based on Al-Qur'an values can be seen based on the results of the spiritual attitude test of class X Science students at SMAIT Nurul Fikri Makassar. The spiritual attitude test is given before and after students use the physics module based on Al-Qur'an values in physics learning. Based on the results of data analysis, the spiritual attitude scores of students before being given the physics module based on Al-Qur'an.

As Suryadi (2005) states that teaching materials can be said to be effective if students are active in the learning process and students respond to the learning being carried out. In the Big Indonesian Dictionary (2021), the word effective means effect, influence, consequence or can bring results. So effectiveness is activeness, usefulness, the existence of suitability in an activity of the person carrying out the task with the intended target. The most important aspect of effectiveness is knowing the level or degree of product application (Rochmad, 2012). Gustinasari, et al (2017) stated that the level of effectiveness can be seen from the spiritual attitudes of students. The effectiveness of the learning module can be measured by looking at the increase in students' spiritual attitudes.

The analysis that has been carried out can be concluded that the physics module based on Al-Qur'an values that has been developed can improve spiritual attitudes. This is in line with research conducted by Sudi Laely Nurakhmah (2019) with research results that physics learning modules based on Al-Qur'an values can improve cognitive learning outcomes and students' spiritual attitudes. This can be seen from the percentage of participants' spiritual attitude scores. students amounting to 0.10 by calculating the gain score. The same thing was also done by Derma Yulita (2017) with research results that modules based on Al-Qur'an values were effectively used in improving spiritual attitudes, this could be seen from the completeness scores obtained by students of 91.76%.

CONCLUSION

The validity of the physics module based on the values of the Qur'an which was developed based on expert judgment is declared valid and suitable for use with minor revisions. The practicality of the physics module based on Al-Qur'an values in terms of the responses of practitioners (teachers) and students is in the very good category. The effectiveness of the physics module based on Al-Qur'an values seen from the spiritual attitudes of students analyzed by N-gain is in the medium category which means that there is an increase in the spiritual attitudes of students so that it can be said that the physics module is based on Al values. - The developed Qur'an is effective in improving the spiritual attitude of students.

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