



Student's response to the integration of al-Qur'an values on the concept of quantities and units

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Abstract: The study aims to to determine the response of students to the integration of Al-Qur'an values in physics learning on the concept of quantities and units. This research is a survey study. Sampling was carried out using the Purposive Sampling method so that a sample of class X IPA4 was obtained because the class has been given physics learning of the concept of quantities and units by integrating the values of the Al-Qur'an. Students' responses were measured using a questionnaire consisting of three aspects, namely spiritual attitudes, interests/interests, and students' clarity/understanding of learning physics on the concept of quantities and units. This research instrument is a response of students to the integration of Al-Qur'an values in learning physics of concept quantities and units with a percentage of 79.43%, showing very interesting results. Based on these findings, the integration of the value of the Al-Qur'an in the learning process can be used as an alternative in the physics learning process.

Keywords: Quantities and units; integration of Al-Qur'an values; Response

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INTRODUCTION

Education for Indonesia's golden generation in 2045 has three dimensions, namely: great intellectual ability, religious observance, and the strength of local culture. Quality education will help the realization of the golden generation. The learning process of each subject must be able to realize these three dimensions (Fitriana et al., 2020). Likewise, in the process of learning physics, students are expected to be able to master physics material well, obey religion, and appreciate the nation's culture.

Learning by bringing to life the content, context, and learning activities along with the content and context can make learners interested in physics lessons (Rahmawati et al., 2020). Therefore, the response of students is very important in order to improve the learning process. The response intended in this study is the student's response to the integration of Quranic values in the learning process.

Learners learn physics from a variety of sources, for example, books available in the library. However, the content in these books may include cognitive, affective, and psychomotor aspects but it still needs the character-building of students. In reality, the learning of physics that instills religious values is still very rarely carried out. Physics package books published by the ministry of education and private publishers are rarely found touches of integration of the value of the Qur'an. This is natural, because the books compiled and published are intended for students with different religious and school backgrounds. As a result, the qur'anic values that should have been able to be developed through the teaching of physics in schools will become dead. Teachers and lecturers when teaching physics will separate God as the creator in every learning activity. Even though the physics subject matter cannot be separated from the science of the Qur'an because the Qur'an and science confirm each other without having to lose their respective identities (Taher, 2021). The learning of science is expected that students can convince all phenomena and things that exist in this world are Allah creations (Hermawan et al., 2014).

MAN 2 Kota Palu is one of the madrasahs whose implementation public school with Islamic religious characteristics (Rasi'in, 2016). But unfortunately, in general subjects, especially physics, the values of the Qur'an have not been touched. Based on the observations result, during the learning process physics teachers rarely even mention the values of the Qur'an both from explanations delivered in class, handbooks, to practice questions and tests. Many students in MAN 2 Kota Palu think that lessons other than Islamic studies, are "not too necessary" to be learnt because they only discuss world science. It could be these factors that cause the value of daily test results in physics subjects under the Minimum Completion Criteria (KKM), especially in the concept of quantities and units.

In life, we need units and measurement tools to identify length, short, height, low, to weight and light (Widiyatun et al., 2020). We need a measuring instrument to find out that has been designed with units to find out the exact value of the thing we are going to measure (Nasution, 2019). Matter of magnitude and unit is physical matter which is the basis of physical science whose supporting phenomena are recorded in the Al-Qur'an. For example, they are the ones who get a share of what they are trying to do and God is very quick to calculate, found in Q.S. Al-Baqarah verse 202. Undoubtedly God will make calculations with you about your deeds, found in Al-Baqarah verse 248.

And it is enough that God as the Maker of calculations found in Q.S. Az-Zumar verse 39. And He is the fastest Calculating Maker, found in Q.S. Al-An'aam verse 62.

One of the learning alternatives that are feasible to be applied and seen as able to overcome the various problems above is to integrate the values of the Al-Qur'an in the concept of quantities and unit using the Shared model. The shared model is a learning model that combines two complementary subjects and in its planning or teaching creates one focus on concepts, skills, and attitudes (Juriyah, 2021).

In this study, two different subjects were combined so that the use of time was more efficient, namely physics subjects with Al-Qur'an hadith subjects. Physics lessons discuss "quantities and units", while Qur'an hadith lessons discuss "Islam encourages the development of science and technology". Thus, in this study, the learning of quantities and units adopted verses of the Al-Qur'an related to the concept. With the integration of Al-Qur'an values in physics learning, it is hoped that students realize and know that science can actually be used to strengthen faith and the means to draw closer to Allah.

Several previous studies have shown learning outcomes by integrating the values of the Al-Qur'an. The results showed that all Core Competencies and Basic Competencies have the potential to integrate science learning with the values of Quran and Islamic boarding school (Shofa et al., 2020). The integration between worldly and ukhrawi elements, between the spiritual and intellectual dimensions, between the personal and social realms in the context of building harmony in the lives of school citizens, society and the Pluralistic Indonesian nation from all its aspects (Saepudin Mashuri, 2021). The moral values integrated into the mathematical logic of juz 30 verses are taqwa, khauf, gratitude, muroqobah, shidiq, amanah, istiqomah, 'iffah, mujahadah, tawadlu', and patience (Nihayati & Suminto, 2020). From the research that has been done, no one has examined the integration of physics subjects with the value of the Qur'an, especially on the concept of magnitude and units.

Based on the above description, researchers are interested in examining student responses to integrate Quranic values into the concept of magnitude and units.

METHOD

This study used the survey method. A survey method is a survey that obtained the primary source of data and information from respondents as a sample using questionnaires or surveys as a data collection tool. (Andhini, 2017). The data collection technique in this study used non-test instruments in the form of a questionnaire of student responses that had been validated by one lecturer of FTIK UIN Datokarama Palu and one physics teacher of MAN 2 Kota Palu.

Research Design & Procedures

In this study, there were 10 statements related to the learning process given to students. Of the 10 questions, it includes three aspects, namely: students' attitudes towards the learning process; learners' interest in learning; and learners' clarity on the learning process. As for calculating the percentage of responses of learners, you can use the equation that is from (Sugiyono, 2018):

$$P = \frac{f}{N} \times 100\%$$

Notes:

P = Percentage Figures

F = Frequency of students answering

N = Overall number of subjects

The criteria for the response of learners can be interpreted in table 1.

Table 1. Criteria for calculating student responses

Score (%)	Criterion
0 - 39	Very Disinterested
40 - 55	Not Interested
56 - 75	Interested
76 - 100	Very Interested

Population and Sample

The population in this study is students of class X MAN 2 Kota Palu for the 2022/2023 school year, the sample in this study was selected using the Purposive Sampling technique, so that a sample of class X IPA4 was obtained, this is because class X IPA4 has been given physics learning on the concept of quantities and unit by integrating the values of the Al-Qur'an.

Data Collection and Instrument

The procedure of this study consists of three stages, namely: 1) preparation stage 2) implementation stage and 3) final stage.

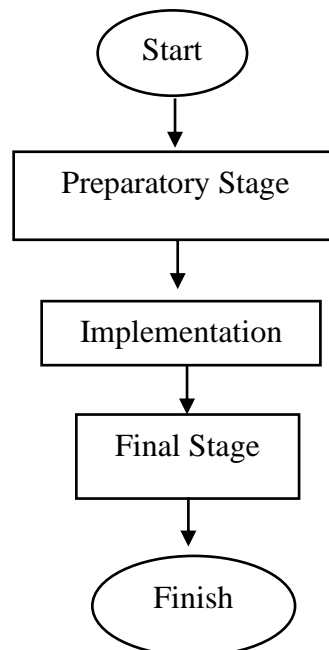


Figure 1. Research Procedure

Preparatory Stage

The steps taken at the preparatory stage include: (1) Compiling a research design; (2) Prepare research instruments in the form of questionnaires; (3) Validate the contents of the research instrument; (4) Revision of the research instrument based on validation, so that a grid of student response questionnaires is obtained as in table 2 below:

Table 2. Student response questionnaire grid

No	Indicators	Statement	Types of Responses
1	The spiritual attitude of learners to the learning process	The learning carried out by the teacher made me know that studying physics subjects can be used to strengthen faith and a means to draw closer to God because of pondering (tafakur) of His creation	Positive
		I did not feel the existence and greatness of God when studying Physics Subjects especially on the concept of quantities and units	Negative
		Expressing admiration orally or in writing for God when obtaining evidence of god's greatness in Physics Subjects	Positive
		I have difficulty connecting the concepts of physics with the Al-Qur'an	Negative
2	Students' interest in learning	The learning carried out by the teacher made me interested in learning the concept of quantities and Units	Positive
		I feel bored in studying quantity and unit materials through experiments	Negative
		I am happy with the learning done by the teacher because I do the experiment independently	Negative
3	Learners' clarity on the process	The learning done by the teacher made it easier for me to understand the amount of the principal and its units; the quantity of the derivative and its units; dimensions; Measurement	Positive
		I have difficulty understanding the concepts described by the teacher, especially in the concepts of Magnitude and Units	Negative
		The learning carried out by the teacher made me understand the concept of magnitude and unit through experiments carried out	Positive

The validation results showed that the student response questionnaire has a good category, so it can be used for research. (5) Request permission from the Head of MAN 2 Kota Palu and teachers of physics subjects to carry out research in MAN 2 Kota Palu; (6) determine the timing of the study.

Data Analysis

Implementation Stage, the steps taken at the implementation stage include: (1) Providing physics learning activities on the concept of quantities and units by integrating the value of the Al-Qur'an; (2) Providing response questionnaires to students; (3) Provide a score based on the answers selected by the learner; (4) Describe the results of the questionnaire data processing.

Final Stage, the steps taken in the final stage include: (1) Processing research data; (2) Analyze the data of the research results; (3) Interpreting the results of the study; (4) Make conclusions from the research conducted; (5) Prepare research reports.

Student response data was obtained from questionnaires given to students after being given learning in quantities and units by integrating the values of the Al-Qur'an using the Shared model. The shared model is a teaching and learning approach that combines two or more subjects that view the same concepts, attitudes, and skills (Trisnowati, 2016). The combination of lesson concepts, skills, and attitudes that are interconnected with one another is covered under one theme, so as to provide a meaningful experience for students. As for the questionnaire of student responses in this study, there are 3 aspects. This aspect is broken down into several indicators with 6 positive statements and 4 negative statements.

RESULT AND DISCUSSION

The results of students' responses to learning physics on the concept of quantities and unit by integrating the values of the Al-Qur'an using the Shared model can be seen in Table 3 below.

Table 3. Results of the student response questionnaire

Aspects	No	Percentage	Average	Criterion
The spiritual attitude of learners to the learning process	1	92,3%	83,7%	Very
	2	65,2%		Interested
	3	91,5%		
	4	85,6%		
Students' interest in learning	1	74%	78%	Very
	2	81%		Interested
	3	77,9%		
Learners' clarity on the process	1	88,9%	76,6%	Very
	2	64%		Interested
	3	83%		
Average Learner Responses			79,43%	Very Interested

Based on Table 3, it shows that the average percentage of students' approval and disapproval of learning applied in the given class is 79.43% with the criteria of being very interested. The results of the per-statement data analysis can be seen in figure 1.

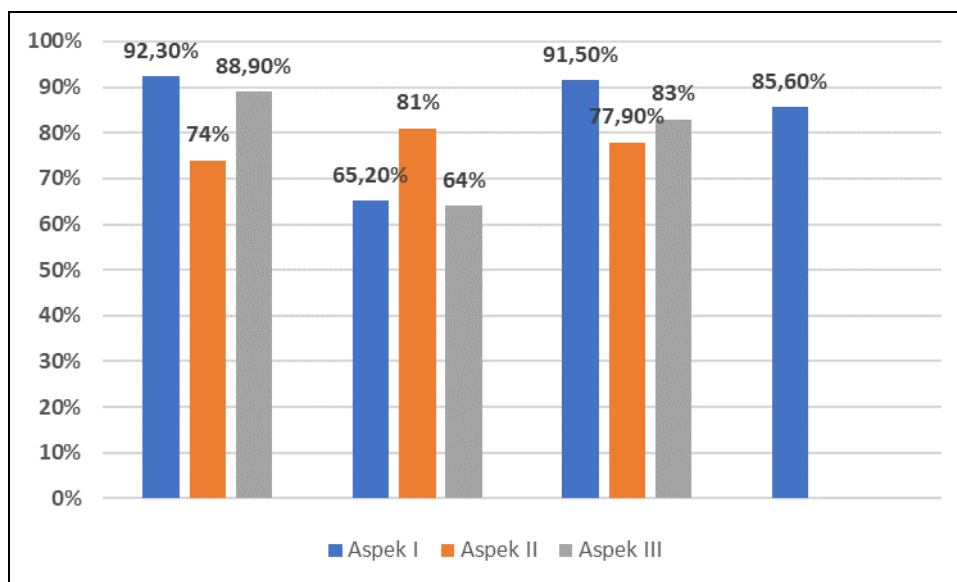


Figure 2. Questionnaire result recapitulation

This research is a survey study. In particular, this study aims to determine the response of students to the integration of Qur'anic values in learning physics of the concept of quantities and Unit. Students' responses were measured using a questionnaire consisting of three aspects, namely spiritual attitudes, interests/ interests, and students' clarity / understanding of learning physics on the concept of quantities and Unit.

Based on the data, information was obtained that the aspect of the highest student response was the aspect of the spiritual attitude of students towards the learning process with a percentage of 83.7%, this shows that after the physics learning process the concept of quantities and Unit with the integration of Al-Qur'an values, most students admitted that most students admitted that after the physics learning process, the concept of quantities and Unit with the integration of Al-qur'an values, most students admitted that most students admitted that after the physics learning process, the concept of quantities and Unit with the integration of Al-qur'an values, most students admitted that most students admitted that strengthening faith and the means to draw closer to God because of the pondering (tafakur) of His creation.

There is an increase in learning outcomes in learning physics of the concept of quantities and Units with the integration of Al-Qur'an values, this is because learning starts from things related to the quantity and units in the Al-Qur'an. This can increase the interest of students. Interest in learning is a person's interest or willingness accompanied by the participation and enthusiasm of students (Choiruhi et al., 2021). The interest is an important aspect of motivation that affects attention, learning, thinking, and achieving (Fuad, 2015). Learning motivation is needed by students, because motivation is the driving force that drives and directs a person's activities (Mustaqim et al., 2013). Grouping interests into three types, namely personal interest, situational interest and interest as a psychological state (Olivia, 2011). Situational

interest learners can improve by bringing the content (topic), context and learning activity to life along with the content and context (Endrawati, 2017). The interest of students in this study is on the criterion of being very interested, which is as large as 78%. This is because the content (topic) discussed in this study attracts the attention of students because by studying physics, you can interpret His verses. The learning context discussed motivates students to understand the meaning of the subject matter they are studying by associating the material with the context of daily life (Asra et al., 2021). As well as the activities carried out by students spur the activeness and enthusiasm for learning of students. So that the understanding and knowledge that will be obtained during the learning process will remain meaningful and will be maintained in long-term memory (Andriyani et al., 2020). Similar research, integrating the values contained in Islam into mathematics learning materials. This can encourage students to actively receive meaningful learning, so that it can help the formation of personal character for good future (Fitriyani & Kania, 2019). Furthermore, in the aspect of students' clarity towards the learning process with a percentage of 76.6%, it means that after the learning process most students get clear comprehension on the concepts of quantities and units. Thus this research showed that students are excited in learning material of magnitude and unit by integrating the values of the Al-Qur'an

CONCLUSION

Based on the results of the study, students' responses to learning showed that students were very interested (79.43%) in learning physics on the concept of quantity and unit by integrating the values of the Al-Qur'an. Thus, learning by inserting the values of the Al-Qur'an can be used as an alternative in the process of learning physics.

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