Student’s Response to the Integration of Al-Qur’an Values on the Concept of Coulomb's Law

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ABSTRACT
This study aims to determine student responses to integrating Qur’anic values into the Concept of Coulomb's Law. This research is survey research. Sampling was carried out using the saturated sampling method so that all members of the population were used as samples. Student responses were measured using a questionnaire consisting of three aspects, namely spiritual attitude, interest/interest, and student clarity/understanding of learning the Concept of Coulomb's Law. This research instrument is a student response to integrating Al-Qur’an values into the Concept of Coulomb's Law with a percentage of 80.5%, showing very interesting results. Based on these findings, the integration of Al-Qur’an values in the learning process can be used as an option in the learning process on the Concept of Coulomb's Law.
1. Introduction

The integration of the Al Qur’an and science in modern education has two important things, namely spiritual moral formation and intellectual power. Integrating the Al Qur’an as a guide for Muslims with science is a must, because the Al Qur’an itself is a source of knowledge that covers all aspects of life, with the addition of science and technology that is currently developing rapidly, it is not impossible if later the world of education will produce a generation of thinkers who have high spirituality compared to the past.

With the integration of the AlQur’an and science, it is hoped that the learning carried out will be more meaningful and easier to understand. So that the purpose of education is directing students to become intellectual individuals and high piety can be realized. The form of formulation of the integration of the Al Qur’an and science can be realized by making the holy book the main base or source of science, expanding the boundaries of Islamic studies material, and avoiding the dichotomy of science. Lastly, but not least can cultivate a person of character ulul albab, Tracing verses in the Al Qur’an that talk about science, Developing the world of education now and in the future.

Universitas Islam Negeri (UIN) Datokarama Palu is one of the Islamic Universities located in Central Sulawesi Province. Some general courses, especially Tadris IPA on physics material, have not been integrated with the values of the Al Qur'an. Based on the results of observations, during the lecture process, lecturers rarely even never mention the values of the Al Qur'an either from explanations delivered in the lecture room, handbooks, to practice questions as well as midterm exam sand final semester exams.

In life, we need to know concept of Coulomb’s Law because the science can be applied as an electrostatic air purifier capable of ionizing dust and smoke particles in the air by making it pass through an electric cell. Collector plates charged with opposite polarity are touched with dust and charged smoke

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particles, The phenomenon of attraction on Coulomb's law also works in copiers. So, the aluminum cylinder that was in the copier turned out to be a source of positive charge and negatively charged paper. So, there is a tug-of-war and projection of the image that has been copied on the paper so that the photocopying process is complete. Concept of Coulomb's Law is a concept part of the Electricity and Magnetism course taught to fifth-semester science students. Concept of Coulomb's Law whose supporting phenomenon is recorded in the Al Qur’an. An example of the Limitless in His glory is He who has created opposites in whatever the earth produces, and in men’s own selves, and in that of which (as yet) they have no knowledge, is found in Q.S. Yaasiin: 36. Then, Tell the believing men to lower their gaze and to be mindful of their chastity; this will be most conducive to their purification—and, verily, God is aware of all that they do, found in Q.S. An Nuur: 30.

Several previous studies have shown learning outcomes by integrating the values of the Al Qur’an. The results of the study show that physics learning based on science-Islamic integration can improve learning outcomes and grow students' Islamic character. Integrate Islamic religious education with science and technology, it is hoped that the learning carried out will be more meaningful and easier to understand. Students gained an integrated and thorough learning experience from a science point of view and Islam.

Based on the description above, researchers are interested in conducting research to determine the response of students to the integration of Al Qur'an values in the concept of Coulomb's Law.

2. Literature Review
2.1 Student Response

In the contemporary Indonesian dictionary, a response is a reaction. Meanwhile, according to the big dictionary of science, a response is a metabolic psychological reaction that is present due to the presence of a stimulus. In general, a response or reaction can be interpreted as a result or impression obtained through observation.

Responses are movements that are coordinated by a person's perception of the events of the surrounding environment. So what is meant by the response, in this case, is the experience of the subject, event, or relationship obtained by concluding information and interpreting the message. A response will be formed when the process of stimulation or the giving of action or because that leads to the result of the reaction and effect. The response will arise from the receipt of the message after the occurrence of communication.

2.2 Integration of Al Qur'an Values

In Indonesian integration means blending until it becomes a whole and

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round unity. Educational integration is the process of adjustment between different elements so as to achieve a harmony of functions in education. Educational integration requires curriculum integration and more specifically requires lesson integration.

Integration is an attempt to bridge between exclusively Islamic thought and western secular thinking, resulting in a completely new scientific pattern and paradigm. The integration of Al Qur'an verses is to connect science with the Al Qur'an so that many values can be applied in everyday life because the Al Qur'an is a guide for Muslims. The Al Qur'an is not a book of science, but much of the science is derived from the Al Qur'an. Many phenomena have been described in the Al Qur'an but have not been fully captured.

In the realm of science, there are no barriers between one another, but specialties that run competitively and provide mutual reinforcement in all aspects of human life. The Al Qur'an also does not teach any scientific separation. The Al Qur'an invites Muslims to learn the qauliyah verses that have been passed down to their apostles.

2.3 The Concept of Coulomb's Law

Coulomb's law is a law that describes the relationship between the force arising between two points of charge that are separated by a certain distance and the value of the charge and the separation distance between them. Coulomb's law itself comes from the last name of the scientist who discovered the coulomb human, namely Charles Agustin de Coulomb.

Electric charge is divided into two, namely positive electric charge and negative charge. When the two electric charges are close to each other, they will experience interaction. If the charge is not similar, there is a mutual attraction interaction while if the charge is similar, there is a reject interaction. The attraction and reject interaction event between two charges is caused by the coulomb law.

Coulomb's Law: "The magnitude of the force of attraction or repulsion between two electrically charged bodies is directly proportional to the charge of each object and inversely proportional to the square of the distance between the two bodies".

3. Methodology

This research used the survey method. The survey method is to collect respondents' data or information using questionnaires or questionnaires that are distributed directly or through intermediaries such as telephone or online media. The data collection technique in this study used a non-test instrument in the form of a student response questionnaire. This instrument is adapted from previous research with the title Student's Response to The Integration of Al-Qur'an Values on The Concept of Electric Field Strength. Furthermore, it has been validated by

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3.1 Research Design & Procedures

In this study, there were 10 statements related to the learning process given to students. Of the 10 questions, it covers three aspects, namely: student attitudes towards the learning process; students' interest/interest in learning; and learner clarity on the learning process. As for calculating the percentage of responses, students can use the equation from\(^{20}\):

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

Information:
- \(P\) = Percentage Number
- \(f\) = Frequency of students answering
- \(N\) = Total number of subjects

The criteria for learners' responses can be interpreted in Table 1.

Table 1. Criteria for Calculating Student Response

<table>
<thead>
<tr>
<th>Score (%)</th>
<th>Criterion</th>
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<tbody>
<tr>
<td>0 - 39</td>
<td>Very disinterested</td>
</tr>
<tr>
<td>40 - 55</td>
<td>Disinterested</td>
</tr>
<tr>
<td>56 - 75</td>
<td>Interested</td>
</tr>
<tr>
<td>76 - 100</td>
<td>Very Interested</td>
</tr>
</tbody>
</table>

3.2 Population and Sample

The population in this study is UIN Datokarama Palu FTIK Tadris Science Semester V students who program the Magnetic Electricity course for the 2022/2023 academic year. The sample in this study was selected using saturated sampling so that all members of the population were used as samples. This is often done if the population is relatively small\(^{21}\).

3.3 Data Collection and Instrument

The procedure in this study consists of three stages, namely:
1) preparatory stage
2) implementation stage and
3) Final stage.

The steps taken in 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 research instruments based on validation.

The validation results show that the student response questionnaire has a good category, so it can be used for research. (5) Carrying out research at UIN Datokarama Palu FTIK Tadris IPA Semester V; (6) determine the timing of the study.

3.4 Data Analysis

Implementation Phase, the steps taken during the implementation phase include: (1) Giving lectures on the Concept of Coulomb's Law by integrating the values of the Qur'an; (2) Providing response questionnaires to students; (3) Giving a score based on the answer chosen by the student; (4) Describe the results of questionnaire data processing.

Final stage, the steps taken at the final stage include:
1) Processing research data;
2) Analyzing research data;
3) Interpreting the results of the study;
4) Making conclusions from the research conducted;
5) Compile research reports.

Student response data was obtained from the questionnaire given to students after being given learning the amount and units by integrating the values of the Qur'an using the Shared model\(^{22}\). As for the student response


\(^{22}\)Juriyah, ‘Profil Implementasi Model Shared Pada Pembelajaran IPA Terpadu Di Indonesia: Kajian Literatur (2012-2021)’, *Jurnal Inovasi Penelitian Dan Pengabdian Masyarakat* 1,
questionnaire in this study, there are three aspects. The aspect is broken down into several indicators with six positive statements and four negative statements.

4. Results And Discussion

The results of student responses to learning magnitudes and units by integrating Al Qur'an values using the Shared model can be seen in Table 2 below.

<table>
<thead>
<tr>
<th>Table 2. Student Response Questionnaire Results</th>
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<tbody>
<tr>
<td><strong>Aspects</strong></td>
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<tr>
<td>The spiritual attitude of learners to the learning process</td>
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<tr>
<td>Students' interest in learning</td>
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<td>Learners' clarity on the process</td>
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<td><strong>Average Learner Responses</strong></td>
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</tbody>
</table>

Based on Table 2, shows that the average percentage of student approval and disapproval of learning applied in the class given is 81.5% with the criteria of being very interested.

This research is survey research. In particular, this study aims to determine the response of students to the integration of Al Qur'an values in the course of electricity and magnetism Concept of Coulomb's Law. Student responses are measured using a questionnaire consisting of three aspects, namely spiritual attitude, interest, and clarity/understanding of students towards electrical and magnetic courses Concept of Coulomb's Law.

Based on the data, information was obtained that the highest aspect of student response was the aspect of students' spiritual attitudes towards the learning process with a percentage of 83.2%, this shows that after the learning process of physics Concept of Coulomb's Law with the integration of Al Qur'an values almost entirely learners admit to strengthening faith and means of drawing closer to God because of the contemplation of His creation.

There is an increase in learning outcomes in the electrical and magnetic course Concept of Coulomb's Law with the integration of Al Qur'an values, this is because learning starts from things related to the Concept of Coulomb's Law in the Al Qur'an. This can increase student interest. If students have an interest in an activity then they can like and also pay attention to the activity with a sense of pleasure. This huge interest will certainly affect the way and also the level of laziness of a person. Students' situational interest can increase by bringing topics, contexts, and learning activities to life along with their content and context. Students' interest in this study is on the criteria of being very interested, which is 80.2%. This is because the content discussed in this study is very interesting for students because by studying the Concept of Coulomb's Law can interpret His verses. The learning context discussed motivates students to dive into the meaning of the subject matter they are studying by relating the concept to the

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context of everyday life. The activity carried out by students spurs enthusiasm for student learning. So that the understanding and knowledge gained during the learning process remain memorable, and stored in long-term memory.

Similar research, the need for science learning is based on three things, namely: hadharat an-nash (Text culture), hadharat al-‘ilm (culture of science) dan hadharat al-falasifah (philosophical-ethical culture) Then followed by implementing a philosophical-analytical scientific approach and explanatory and exploratory approach to religious and social values in practical learning, it can be said to be a structure of science learning that no longer leaves values. Science and religion are one unit. The difference between the two lies only in the perspective. Knowledge comes from God. All kinds of approaches to reality are ultimately capable of being unified and integrated by contemplating the concept of the oneness of God.

Furthermore, in the aspect of clarity of students to the learning process with a percentage of 81.0%, this shows that after the learning process most students more clearly understand Concept of Coulomb’s Law. Thus, this research shows that students are very interested in learning the Concept of Coulomb’s Law by integrating the values of the Al Qur’an.

5. Conclusion
From the results of the study, students' responses to learning the Electricity and Magnetism course, especially in the concept of Coulomb’s Law, showed that students were very interested (80.2%) in integrating the values of the Al Qur’an. Thus, the lecture process by integrating the values of the Al Qur’an can be used as an option in the learning process.

REFERENCES


