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## ANALYSIS OF STUDENTS' RESPONSES TO BIOLOGY TEACHING MATERIALS BASED ON AL QUR'AN VALUES

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### ABSTRAK

Bahan ajar merupakan salah satu komponen penting dalam proses pembelajaran. Bahan ajar harus sesuai dengan kompetensi dasar supaya tercapai tujuan pembelajaran. Penelitian ini bertujuan untuk menganalisis respon peserta didik pada tingkat MA/SMA di Provinsi Aceh terhadap bahan ajar biologi berbasis nilai Alquran. penelitian ini menggunakan rancangan R&D. bahan ajar yang akan diberikan ke peserta didik sudah melewati fase pengembangan dan validasi ahli. Instrumen yang digunakan berupa angket respon peserta didik yang diuji sebanyak 2 kali, dalam skala kecil dan skala besar. Analisis data menggunakan rumus persentase respon. Hasil penelitian menunjukkan bahwa respon peserta didik tingkat MA/SMA di Kota Lhoksumawe, Pidie dan Aceh Besar Provinsi Aceh yaitu sangat tertarik terhadap bahan ajar biologi berbasis nilai Alquran. hasil analisis diperoleh dari perhitungan skala kecil (30 peserta didik) diperoleh respon dengan nilai rata-rata 89,93 dan skala besar (70 peserta didik) dengan nilai rata-rata 90,79.

**Kata Kunci:** Respon, Bahan Ajar, Materi Biologi, Nilai Al-Quran.

### ABSTRACT

Teaching materials are one of the important components in the learning process. Teaching materials must be in accordance with basic competencies in order to achieve learning objectives. This study aims to analyze the response of students at the MA / SMA level in Aceh Province to biology teaching materials based on Koranic values. this research uses an R&D design. teaching materials that will be given to students have passed the development phase and expert validation. The instrument used was a learner response questionnaire which was tested twice, on a small scale and large scale. Data analysis using the percentage response formula. The results showed that the response of MA/SMA level students in Lhoksumawe City, Pidie and Aceh Besar Aceh Province was very interested in biology teaching materials based on Quranic values. the results of the analysis obtained from the

calculation of a small scale (30 students) obtained a response with an average value of 89.93 and a large scale (70 students) with an average value of 90.79.

**Keywords:** Response, Teaching Materials, Biology Materials, Quranic Values.

## **INTRODUCTION**

Teaching materials are a set of subject matter that refers to the curriculum used in order to achieve predetermined competency standards and basic competencies. Teaching materials are considered as one of the important components in learning activities in education [6]. The Teaching materials are said to be good if they contain material that is explained systematically and easily understood with the use of appropriate language and with the use of media that is attractive to students. Teaching materials in a lesson must follow the curriculum set by the minister of education.[5]

The curriculum used in education now is the 2013 curriculum which makes attention in the process of developing students no longer only focused on cognitive and psychomotor development but the character and attitude of students is also a big concern [7]. Attention to the development of character and attitude is what makes the education system with religious values

in it to form the character and attitude of good and ideal students. Religious values that are associated in the learning process are now generally only in the realm of KI I and do not enter the realm of KI III which is part of the learning material, even though this is not enough to achieve the demands of the 2013 curriculum. Learning materials need to be associated with religious values in order to make students closer to religion, especially Islam, which contains many scientific values related to science (biology). [1]

From the results of interviews with several biology teachers at the MA /SMA education level in Aceh province, information was obtained that, generally teachers rarely connect the verses of the Koran in the teaching process, only linking gratitude to the presence of God, especially learning material on the reproductive system and sensory system in students. In the learning process, the teacher only discusses the theory without connecting it with the Quran so

that students do not find out about the verses of the Quran related to the material, they only receive biological knowledge related to the material.

The integration of spiritual values into learning is also part of the goals of education in Indonesia as contained in the amended version of the 1945 Constitution in article 31 paragraph 1 which states "The government shall seek and organize a national education system, which enhances faith and piety and noble character in order to educate the nation's life, which is regulated by law". The same article in paragraph 5 also mentions the same thing, namely "The government advances science and technology by upholding religious values and national unity for the advancement of civilization and the welfare of mankind". These two articles emphasize to us that the purpose of Indonesian education is not only limited to developing the potential and educating the nation but also to form the character of a religious nation. [2]

Teaching materials based on Quranic values can be one of the media that can be used in the learning process, in order to achieve all basic competencies in the biology learning

process. This study aims to analyze the response of MA / SMA level students to biology teaching materials based on Quranic values. Teaching materials are specifically designed for sensory system material and reproductive system material, this is because the material is very much explained in the Koran. Therefore, it is natural that the learning of these materials is taught based on Quranic values.

## **RESEARCH METHODS**

The research design of Research and Development (R&D) consists of two words, Research which means research and Development which means development. The main activity of this research is to conduct research and literature studies to produce the design of a product. The second activity is development by testing validity, so that the products developed are tested and can be utilized by the wider community [12]. Biology-based teaching materials that will be given to students for response analysis have passed the feasibility test phase of material experts and media experts. Student responses were tested twice, namely small scale (30 students) and large scale (70 students).

The population in this study were all students in MA / SMA in Aceh Province who were taught by Biology teachers Alumni of Biology Education Study Program UIN Ar-Raniry Banda Aceh. While the sample is part of the population that can be represented, Determination of the sample in this study using Purposive Sampling technique, namely determining the sample based on certain considerations with the aim that the data obtained is more representative [13]. The sample is MA/SMA level students in Lhoksumawe City, Pidie and Aceh Besar Aceh Province, both public and private, as well as 10% of students who have learned the sensory system and reproductive system material.

This research instrument is a questionnaire containing a list of questions from a certain topic given to respondents, in a study using a closed questionnaire, where the answers are already available, so that respondents only have to choose from those available. The questionnaire is in the form of a rating scale or graded scale, with questions showing levels. [14]. The questionnaire for students' responses to the teaching materials developed uses a Likert scale. Likert scale technique is a

scale that provides an alternative value consisting of five categories. Researchers can modify the scale according to their needs in the data collection process [9]. This study modified the scale into four categories, namely strongly agree (4), agree (3), disagree (2), and disagree (1).

$$%NRP = \frac{\sum NRS}{NRS_{max}} \times 100$$

Description: *%NRP* (Percentage of learner response scores);  $\sum NRS$  (Number of learner response scores); *NRSmax* (Maximum learner response value).

Table 1. Percentage Criteria for Learner Response.

Percentage Interval	Criteria
81,25 < NRS ≤ 100%	Very Interested
62,5 < NRS ≤ 81,25	Interested
43,75 < NRS ≤ 62,5	Less Interested
25 < NRS ≤ 43,75	Not Interested

## RESULTS AND DISCUSSION

From the results of research that has been carried out on three different vegetation in the Bukum Village Forest Area with a total of 30 plots, 39 species of ferns (Pteridophyta) were found with a total of 811 individuals. There are 14 families of ferns, where the Polypodiaceae family is the most common family with eight species, and

the Blechnaceae, Davalliaceae, Dryopteridaceae, Hymenophyllaceae, Marattiaceae, Nephrolepidaceae families are the least number of species, namely one species each. Biology teaching materials based on Al-Quran values that have been validated by experts are then tested and implemented in MA/SMA where Biology Education Study Program alumni teachers of UIN Ar-Raniry Banda Aceh teach in North Aceh District, Pidie District, and Aceh Besar District to see students' responses. Learners' responses to Koranic value-based Biology teaching materials in the small-scale trial of 30 learners can be seen in Table 2.

Table 2: Learners' Response to Teaching Materials for Biology Based on Quranic Values in Small Scale Tests

No	Aspect	Assessment				Total Score	Max Score	(%)	Criteria
		Disagree	Less agree	Agree	Totally agree				
1.	Graphics	0	3	21	36	213	240	88,75	Very interested
2.	Content/Mate	2	8	33	47	305	360	84,72	Very interested
3.	Language	0	0	21	39	219	240	91,25	Very interested
4.	Effectiveness of teaching materials	0	0	18	72	342	360	95,00	Very interested
Overall Total		2	11	93	194	1079	1200	89,93	Very interested

Table 3. Learners' Response to Biology Teaching Materials Based on Quranic Values on Large Scale Tests

No	Aspect	Assessment				Total Score	Max Score	(%)	Criteria
		Disagree	less agree	agree	Totally agree				
1.	Graphics	7	17	35	81	470	560	83,93	Very interested
2.	Content/Mate	8	21	54	127	720	840	85,71	Very interested
3.	Language	0	0	12	125	545	560	97,32	Very interested
4.	Effectiveness of teaching materials	0	0	32	178	808	840	96,19	Very interested
Overall Total		15	38	133	511	2543	2800	90,79	Very interested

Based on the results of data analysis with 10 statements filled out by 30 students from 3 MA / SMA schools, the number who chose the "strongly agree" category was 194 frequencies, and the number who chose "agree" was 93 frequencies (Table 2). In the small-

scale trial, overall students gave a positive response, namely they were very interested in the developed Quran-based Biology teaching materials. The percentage of students' responses to these teaching materials for more details can be seen in Figure 1.

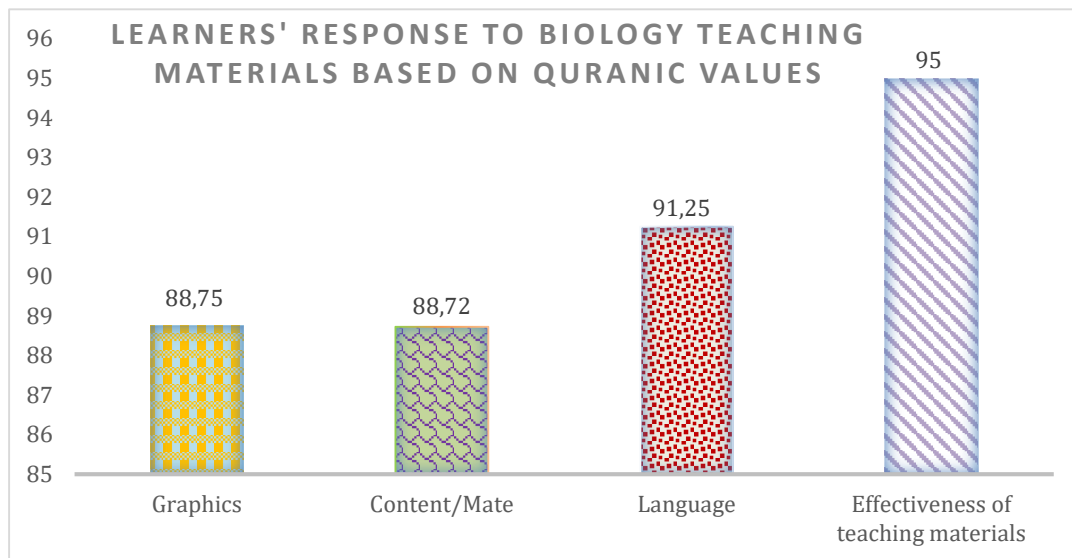


Figure 1. Percentage of Learners' Response to Biology Teaching Materials Based on Quranic Values in the Small Scale Trial

In Figure 1, it can be seen that the percentage of students' responses to the graphic aspect is 88.75% (very interested), the content/material aspect is 84.72% (very interested), the language aspect is 91.25% (very interested) and the effectiveness aspect of teaching materials is 95% (very interested).

Based on the results of data analysis with 10 statements filled out by 70 students from 7 MA / SMA schools, the number who chose the "strongly agree" category was 511 frequencies, and the number who chose "agree" was 133 frequencies (Table 3). In the large-scale trial, overall the learners also gave a positive response, namely they were

very interested in the teaching materials for Biology based on the *Quran* that were developed. The percentage of students' responses to the teaching materials for more details can be seen in Figure 2

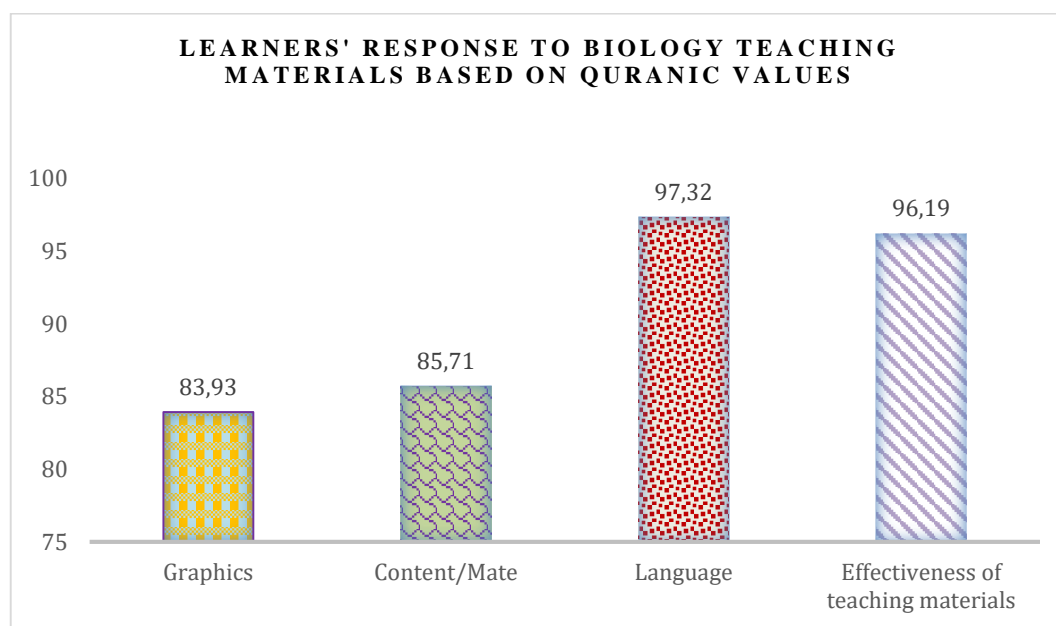


Figure 2. Percentage of Learners' Response to Biology Teaching Materials Based on Quranic Values in Large Scale Trials.

Figure 2, it can be seen that the percentage of students' responses to the graphic aspect is 83.93% (very interested), the content/material aspect is 85.71% (very interested), the language aspect is 97.32% (very interested) and the effectiveness aspect of teaching materials is 96.19% (very interested).

Students are very interested in the development of Koran-based Biology teaching materials because the teaching material is explained concisely and equipped with appropriate and interesting images that can make it easier for students to better understand the material without the teacher explaining in detail. In addition, there is an integration of the value of the Koran in the content of teaching materials that can increase knowledge about the relationship between science and the

Koran so that students are enthusiastic about reading and encourage their curiosity. Biology learning will be more interesting for students and meaningful in its utilization if Islamic spiritual values are integrated in the preparation stage and learning process [8]. Teaching materials that refer to the source of the Koran can support the learning resources of teachers and students in the learning process so that the educational objectives from KI-1 to KI-4 can be connected as a whole [10].

Therefore, the Koran-based Biology teaching materials that have

been developed can be one of the alternative media that is easy to apply and apply in the learning process because it has a more attractive appearance and contains important information accompanied by illustrative images so as to make students easy to understand the material presented. In addition, this teaching material can also be one of the learning resources for students as a reference in learning material about the sensory system and reproductive material. [15]

## **CONCLUSIONS**

The response of MA/SMA level students in Lhoksumawe City, Pidie and Aceh Besar Aceh Province is very interested in biology teaching materials based on Quranic values. the results of the analysis obtained from the

calculation of a small scale (30 students) obtained a response with an average value of 89.93 and a large scale (70 students) with an average value of 90.79.

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