

STUDENTS' PERCEPTIONS OF THE INTERNALIZATION OF ISLAMIC VALUES IN BUFFER SOLUTION TEACHING MATERIALS

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Abstrak. Pembelajaran yang bermuatan nilai ketuhanan memiliki peranan penting dalam menyiapkan generasi yang lebih berkualitas, yang menguasai ilmu pengetahuan dan teknologi dengan moral yang baik. Penelitian bertujuan menganalisis persepsi siswa terhadap bahan ajar kimia pada materi larutan penyangga dengan internalisasi nilai keislaman. Penelitian membandingkan persepsi siswa terhadap bahan ajar yang selama ini digunakan dengan bahan ajar yang diinternalisasi dengan nilai keislaman. Persepsi nilai keislaman dalam penelitian ini diukur dengan cara menganalisis motivasi, kegunaan, dan keyakinan bahan ajar larutan penyangga yang mengintegrasikan nilai keislaman. Jenis penelitian ini adalah penelitian *ex post facto* melalui pengumpulan data secara langsung kepada responden melalui metode angket, wawancara, dan observasi. Teknik analisis data dilakukan dengan cara deskriptif kualitatif. Penelitian ini dilakukan kepada 50 siswa kelas XI dan XII. Sasaran analisis kebutuhan ini difokuskan kepada siswa yang belajar di sekolah berbasis Islam. Hasil penelitian menunjukkan bahwa jumlah siswa pada kategori sangat membutuhkan bahan ajar dengan internalisasi islam adalah sebanyak 36 orang (72%), dibutuhkan 14 orang (28%), dan tidak ada yang berpandangan bahan ajar dengan internalisasi islam tidak dibutuhkan. Simpulan penelitian bahwa siswa di sekolah berbasis Islam memiliki persepsi yang baik dan membutuhkan bahan ajar larutan penyangga dengan menginternalisasi nilai keislaman.

Kata Kunci: Persepsi siswa, internalisasi nilai keislaman, bahan ajar

Abstract. Learning that has a divine value has an important role in preparing a generation of higher quality, who masters science and technology with good morals. This study aims to analyze students' perceptions of chemistry teaching materials on buffer solution material with Islamic internalization values. This study compares students' perceptions of teaching materials that have been used with teaching materials internalized with Islamic values. The perception of the Islamic value in this study was measured by analyzing the motivation, use, and belief of the buffer solution teaching material that integrates Islamic values. This type of research is *ex post facto* research by collecting data directly to respondents through questionnaires, interviews, and observations. The data analysis technique was done by descriptive qualitative method. This research conducted on 50 eleventh and twelfth-grade students. The target analysis of these needs is focused on students studying in Islamic-based schools. The results showed that the number of students in the category of "highly need teaching materials with Islamic internalization" was 36 people (72%), 14 people are in "need" category (28%), and no one was of the view that teaching materials with Islamic internalization were not needed. From this study, we can conclude that students in Islamic-based schools have good perceptions and need buffer solution teaching material with Islamic internalization values.

Keywords: Students' perception, Internalization of Islamic Values, Teaching Material

INTRODUCTION

The implementation of the Curriculum 2013 emphasized aspects of core competencies. After experiencing the learning process, the quality of a student is demonstrated through the achievement of these core competencies (Aminah & Sari, 2016). The Curriculum 2013 includes 4 core competencies, namely spiritual attitude competency (KI-1), social attitude competency (KI-2), knowledge competency (KI-3), and skills competency (KI-4). The competency and character base of the Curriculum 2013 is expected to be able to form students who can independently improve and use their knowledge, internalize character values so that they are manifested in daily behavior. One of the expected character values in Curriculum 2013 can be realized through internalizing Islamic values in learning in Islamic-based schools so that learning objectives are achieved.

Achieving the goal of internalization, especially in building students' spiritual attitudes is certainly not easy, especially if the achievement of this spiritual competence is only charged to the teacher in the class during learning. Unequal teacher competence in understanding students' spiritual values can be an obstacle to the achievement of students' spiritual attitude competencies. Students' spiritual attitude is associated with the establishment of individuals who believe and be cautious (Hasanah, dkk., 2017). According to Zubaedi (2011), the spiritual dimension includes several things. Among them is everything related to the unknown or uncertainty in life, and how to find meaning and purpose in life. The spiritual dimension also relates to the awareness to use resources and strengths within oneself, and to have feelings of attachment to oneself and God. The success of achieving educational goals, especially in this spiritual aspect should not only be left to the teacher but also needs to be supported by other factors.

One of the supporting factors of successful curriculum implementation is teaching material. Teaching material is an important part of the implementation of the education process. The use of teaching materials is one way to carry out learning to be more effective (Tenaw, 2015). The use of teaching materials will make it easier for teachers and students to carry out learning, improve the quality of learning, and achieve learning objectives (Permadi, 2016). Planting good values and characters to students can also be done through the use of appropriate teaching materials (Liniswanti, dkk., 2015; Maulida, dkk., 2015; Okmarisa, dkk., 2016). Therefore, internalizing teaching materials to instill the value of a spiritual attitude to students is certainly worth doing. The existence of Islamic internalization teaching materials that can direct students to always be aware of their attachment and the universe to the Greatest can be an alternative solution that helps teachers and students in achieving the goals of the establishment of Indonesian people who believe and have faith.

Internalization of Islam is an effort to incorporate, unite Islam and Islamic values into the developed teaching material. So far, religion and science often become two separate and independent things, whereas the dichotomy of religion and science has great implications for educational aspects. This implication can be seen from the perspective of society towards science and education, educational institutions, educational curricula, and the psychology of society in general (Hamzah, 2015). One of the potentials to internalize Islamic values in learning science is chemistry. Chemical learning involves all dimensions, namely processes, products, attitudes, and applications. Therefore, learning chemistry is an effective activity to develop students' spiritual character, in the form of characters related to awareness of relationships with the Almighty God (Sari & Vebrianto, 2017).

The establishment of student spiritual character, in addition to being one of the core competencies in the 2013 Curriculum, is also a unique educational goal that distinguishes Islamic-based schools from public schools. One of the establishments of students' spiritual character can be done through the internalization of Islamic values into chemistry teaching

materials. Darmana and Batubara (2016) state that the quality of the scientific level of chemistry itself will not diminish with the internalization of the spiritual aspects of teaching material. This effort is even considered as an appropriate effort because it can restore students' understanding that discoveries and all scientific phenomena are a form of God's power about their occurrence.

Initial studies conducted by analyzing chemistry teaching materials used in Islamic-based schools still use general teaching materials on the market. Chemistry teaching materials on the market today that include touches of religious values and can help build students who can glorify God's creation through the learning process are very rare. This is reasonable, considering the preparation and publication of these books is intended for students with different religious and school backgrounds. This result in Islamic values that can be developed through the teaching of chemistry in schools will become empty, whereas one of the mandates of national education is to form students who have spiritual intelligence. Especially for Islamic-based schools that have an orientation towards achieving a higher spiritual attitude than public schools.

Analysis of various articles that have been published in various journals on chemistry teaching materials with Islamic internalization values or verses of Al-Qur'an has been carried out, including in petroleum material (Faeha, dkk., 2019), colloids (Usman, dkk., 2017), thermochemistry (Fitriani, dkk., 2016), and chemical bonds (Rahmah, 2017). Faeha, dkk. (2019) found chemistry teaching materials based on the integration of Islam-Science that was successfully developed including worth-using in supporting chemistry learning. While Usman, dkk. (2017) prove that Al-Qur'an based chemistry learning modules developed on colloidal material are decent and effective to use. This is confirmed by research by Fitriani, dkk. (2016) that chemistry teaching materials with the integration of spiritual values also do not reduce the scientific level. The use of chemical modules with the integration of Islamic values has also been shown to show better learning outcomes than conventional learning (Rahmah, 2017). Various development of this teaching material proves that the integration of spiritual values is very feasible to do because it does not reduce the scientific level of teaching materials and has succeeded in increasing student learning activities and outcomes, as well as the students' character values. This reinforces the urgency of developing buffer solutions teaching material especially for use in Islamic-based schools that have a higher spiritual attainment orientation than public schools.

The challenge in achieving students' knowledge competency is the ability of students to understand abstract and unknown chemical concepts (Treagust & Chittleborough, 2001). The buffer solution is an abstract and conceptual chemical material, although the role of the buffer solution is real and can be applied (Arnas, 2012). Teacher explanations of material often use various molecular formulas, chemical equations, and various processes that occur at the microscopic level that are difficult for students to understand (Setiadi & Irhasyuarna, 2017). Students who have difficulty in abstract thinking can lead to not achieving optimal learning outcomes (Drastisianti, 2019).

The study aims to determine students' perceptions of the development of chemistry teaching materials, especially in the buffer solution material with Islamic internalization values. The students' perceptions revealed are measured by analyzing the motivation, use, and belief of the buffer solution teaching material that integrates Islamic values. Motivation in question is the encouragement of students to learn material buffer solutions that can form a positive attitude towards learning material. Perception related to the use of teaching materials leads to the expansion of additional insights and advantages of Islamic internalization compared to general teaching materials. Meanwhile, perceptions about beliefs lead to students' self-awareness of the relationship of subject matter with God's power.

METHODS

This study was included in the post-facto research where data collection was carried out by researchers through data collection instruments directly to respondents. According to Kringler (1964) in Tadjiri (2014), ex post facto is a study with independent variables that have occurred or have been carried out without any treatment. The researcher begins by observing the visible relationship between the independent variables and the dependent variable. The main characteristic of ex post facto research is that researchers do not give treatment or have been done without any control.

This research was conducted on 50 students from grade XI and XII students of Bogor Insantama Senior High School, both male and female. The data collection process is a very important stage in research. Data to be collected will be used to test the hypotheses proposed in the study. Data obtained through questionnaires, interviews, and observations. The results were analyzed in descriptive qualitative way by explaining students' perceptions.

The questionnaire contains statements that lead to concluding students' perceptions in assessing the use of teaching materials used so far and the level of need for new teaching materials with Islamic internalization. The questionnaire used in this study used the Guttman Scale to obtain clear, firm, and consistent answers from respondents. The data obtained are only two choices: yes and no. The questionnaire was also equipped with open-ended questions related to the reasons for choosing respondents' answers.

The open interview was conducted with 3 main questions and developed according to the condition of the interviewees to a better exploration of the conditions of the students' needs for Islamic internalization teaching materials. Reinforcement the result of questionnaires and interviews is also done through direct observation in the field under the characteristics of ex post facto research. The data analysis technique was done in a descriptive qualitative manner, namely by pouring the results of the analysis based on the percentage of responses and elaborating the reasons stated.

RESULTS AND DISCUSSIONS

Students' perceptions of the internalization of islamic values in buffer solution teaching materials started by analyzed levels of student needs. Based on the analysis, it shows that the number of students in the category "highly needed" is 36 people (72%), 14 people (28%) are in "needed" category, and no one has the view that teaching material with Islamic internalization is sufficient or even unnecessary. The results of student data analysis can be seen in Table 1.

Table 1. The results of the analysis of students' perceptual needs

Average score	Frequency	Percentage	Valid Percentage	Cumulative Percent
Highly needed	36	72.0	72.0	72.0
Needed	14	28.0	28.0	100.0
Slightly needed	0	0.0	0.0	100.0
Not needed	0	0.0	0.0	100.0

Students 'needs for teaching materials with Islamic internalization are related to students' perceptions of teaching materials used today. Figure 1 shows 77.36% of students assume that teaching materials are not currently optimized for learning due to various reasons. The reasons given were too much writing (15.09%), uninteresting and boring (30.19%), difficult to understand (22.64%), and lack of application examples (9.43%).

While 22.64% of students felt that they could use existing textbooks because they were considered interesting and complete teaching materials (9.43%) and because each book was a source of knowledge so it would be useful (13.21%).

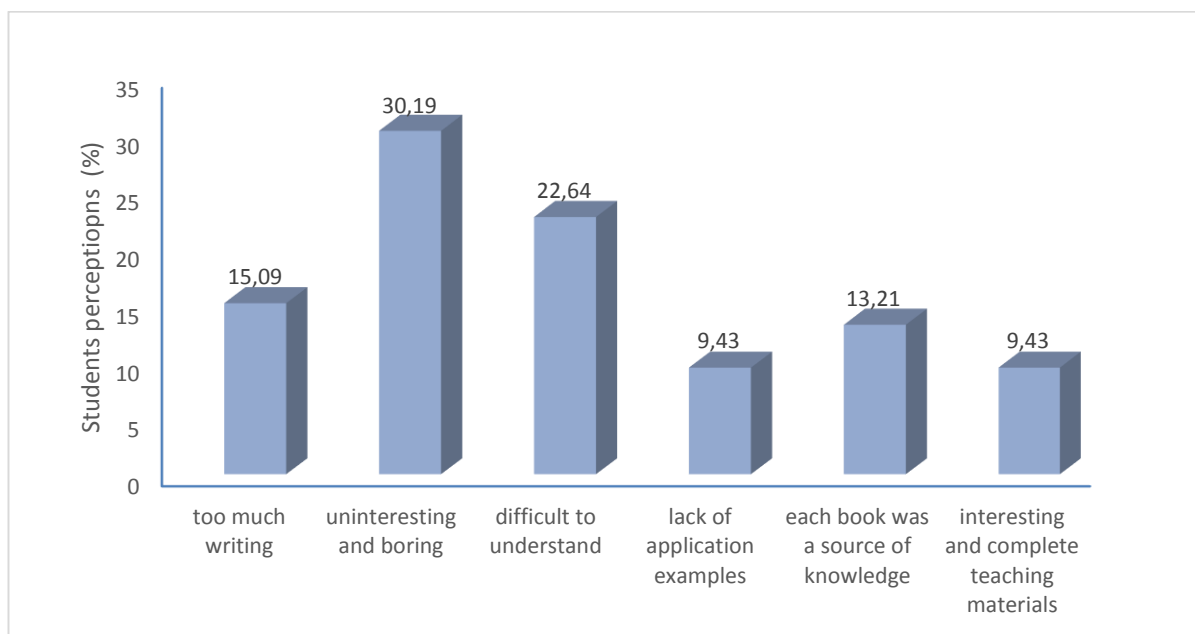


Figure 1. Students' perceptions of current teaching material

Chemical teaching materials used generally refer to the 2013 curriculum. According to Hasibuan and Silaban (2017), the quality of chemistry textbooks developed based on the 2013 curriculum is higher compared to the KTSP curriculum. The use of appropriate teaching materials will help improve student learning outcomes. This has been proven by many studies, including by Habibati *et. al.* (2019) on the electrolyte and non-electrolyte solution, Andini & Yulian (2018) on the basic laws of chemistry, and Rahmi *et. al.* on the hydrocarbon material. However, the need for teaching materials that are in accordance with the needs of students in addition to those that indeed meet the curriculum standards really need to be developed.

Chemistry teaching materials used in Islamic-based schools are still using chemistry books as in public schools. This causes 77.36% of students to assume that teaching materials are not currently optimized for learning due to various reasons. A person needs to have a good perception of an object so that he will have the ability to understand the material and recall the object, the ability to explain the material, and summarize and summarize these materials (Slameto, 2010 in Novianti, 2016). Non-optimal uses of teaching materials that are commonly used correlate with student activities during learning. Based on observations made, it appears that non-optimal use of teaching materials causes student activities during learning to be lacking. Learning development both in terms of methods and media is expected to increase student activity during learning. The development of learning methods has been proven to increase student learning activities (Setiadi & Irhasyana, 2017).

Students' perceptions that are the reason for the need for teaching materials with Islamic internalization are also analyzed based on the results of the questionnaire distributed. Figure 2 shows 45.71% expressed pleasure and need with the existence of textbooks with the internalization of Islam on religious grounds, that they are Muslims while Islam indeed covers all things in life including in studying science (chemistry). There

are 37.14% felt that chemistry books with Islamic internalization would be interesting, motivating, and intriguing in learning. While the rest of the respondents (17.14%) stated that teaching materials with Islamic internalization would add insight and be useful.

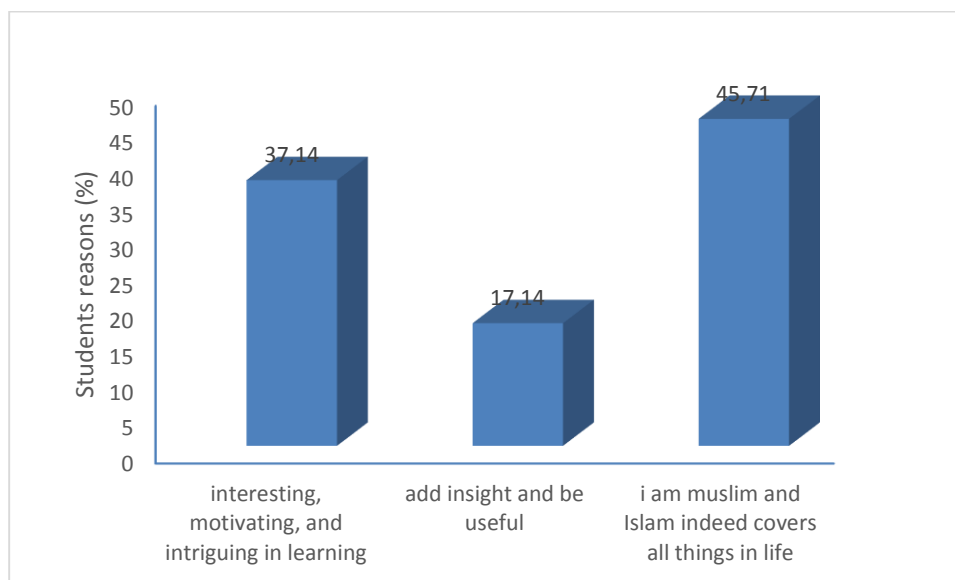


Figure 2. Students' reasons for the need for teaching materials with Islamic internalization

One of the reasons students consider it important to have teaching materials with Islamic internalization is motivation. There are 37.14% of students thought teaching materials with Islamic internalization would increase student motivation. This is because students consider teaching material to internalize Islam is still very rarely found so that its existence makes them curious and interesting to learn. An interest in teaching materials with Islamic internalization was also shown by an increase in positive attitudes in learning material. A positive attitude towards the subject matter is a positive attitude towards the object of learning including an interest in the subject matter, the importance of the subject matter, a subject matter outside of school, and subject matter in the future. Susilowati (2017) found that students showed a very good positive attitude towards science subjects with the integration of Islamic values.

Insight becomes another reason students consider the importance of chemistry teaching materials with Islamic internalization. This is reasonable because teaching materials with internalizing Islam, besides containing chemical material in general, are also equipped with material reinforcement from an Islamic perspective. Saputro (2011) states that the process of integrating Islamic values in chemistry textbooks can be done by citing Qur'an verses related to the theme of chemical materials both at the beginning and in the contents of the subject matter described. This verse quote is also equipped with an explanation of the meaning contained in the verses. Chemistry teaching materials with the internalization of Islamic values allow the formation of strong theories, complementarity, and mutual confirmation between chemical materials with religion.

The students' dominant reason for the need of teaching materials with Islamic internalization is awareness as a Muslim and Islam that regulates all aspects of life. Besides being a reason for student needs because of the encouragement of awareness as a Muslim, teaching materials with Islamic internalization have also been proven to be able to develop students' spiritual attitudes after their application in learning. Susilowati's research (2017) shows that increasing religious attitudes with high criteria occur after using science

teaching materials integrated with Islamic values. Science teaching materials with the integration of Islamic values affect students' religious attitudes. Research by Jamilah, dkk. (2014) also shows that positive results that contribute to producing good human beings who can apply knowledge and skills following Islam are obtained through the integration of religious values into the learning curriculum.

Students' needs for chemistry teaching materials with Islamic internalization are also strengthened by the results of interviews. Based on the results of interviews, students in Islamic-based schools, in general, have understood the unity between sciences, including chemistry, with Islam. This causes awareness of the importance of holding teaching materials by internalizing Islamic values also getting stronger. It is undeniable that chemistry teaching materials that are commonly used today especially in Islamic-based schools still have many shortcomings in supporting the mission of Islamic-based schools in particular and generally in achieving the goal of establishing a complete Indonesian human being. This has implications for the suboptimal use of existing textbooks by students and the lack of student activity during learning. Based on this, the development of chemistry teaching materials with Islamic internalization is an urgent matter to do.

CONCLUSION

Based on the results of the study, it can be concluded that the number of students in the category of highly needed teaching materials with Islamic internalization is 36 people (72%), 14 people (28%) are needed, and no one has the view that teaching material with Islamic internalization is sufficient or even not needed. With the non-optimal use of textbooks currently used and various reasons related to the need for teaching materials, the existence of teaching materials with Islamic internalization is very much needed.

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