



## Development of supplementary respiratory system teaching materials integrated with Islamic values in the formation of an attitude of caring about the dangers of smoking

Liviana Putri Wiradani<sup>1</sup>✉, Lisdiana Lisdiana<sup>2</sup>, Priyantini Widyaningrum<sup>2</sup>

<sup>1</sup>SMA Al-i'tishom Grabag Magelang, Indonesia

<sup>2</sup>Pascasarjana, Universitas Negeri Semarang, Indonesia

### Article Info

Article History :  
Received  
March 2022  
Accepted  
August 2022  
Published  
December 2022

Keywords:  
supplement of teaching materials, respiratory system, attitude to care for the dangers of smoking.

### Abstract

SMA Al-I'tishom is a boarding school that applies two curricula, namely the national education curriculum and the pesantren curriculum. Seeing the condition of the school environment with the background of Islamic boarding schools and the absence of integrated teaching materials with Islamic values. This study aims to develop a supplementary respiratory system teaching material that integrates Islamic values in the formation of an attitude of caring about the dangers of smoking. This development research refers to the ADDIE development model which consists of the Analysis, Design, Development, Implementation, and Evaluate. The test of the validity of the teaching material supplements was carried out by three biology learning experts as validators. The practicality test is carried out through learning in class XI science high school students. Test the effectiveness of teaching material supplements through a pre-experiment with a one-shot-case-study design. The test results show that the average percentage score of the validity of the three validators is 88.33% with very valid criteria. The results of the practicality test obtained an average of 90.45% with very practical criteria. The results of the learning implementation trial obtained an average score of 89.50% with very practical criteria. The results of the trial of the attitude of caring about the dangers of smoking obtained an average score of 85%. Based on the results of the validity test, practicality test, and effectiveness test, the supplement of Islamic values integrated respiratory system teaching materials produced through research can be declared valid and can form an attitude of caring about the dangers of smoking.

✉ correspondence :  
Kliwonan II, Grabag, Susukan, Grabag, Kec. Grabag, Kabupaten  
Magelang, Jawa Tengah, Indonesia 56196  
E-mail: livianaputriwiradani@students.unnes.ac.id

## INTRODUCTION

The rapid development of technology indirectly affects the pattern and education system in Indonesia. Education has an important role in determining the development and development of the nation, through education we can instill a good attitude in students and provide competencies for students in Indonesia. As stated in the Law of the Republic of Indonesia number 20 of 2003 concerning the National Education System. In the goals of national education, the religious dimension is an integrated part of the goals of national education. This is in line with the opinion of Makhin, Maryuningsih, & Saifuddin (2014) that national education aims to produce young people who are able to face the times with faith and piety to God Almighty. Schools as educational implementing institutions are fully responsible for preparing the next generation who are capable of mastering technology and equipped with 21st Century competencies.

Based on the results of field studies, SMA Al-Itishom is a boarding school that applies two curricula, namely the national education curriculum and the pesantren curriculum. Seeing the condition of the school environment with the background of Islamic boarding schools and the absence of teaching materials integrated with Islamic values, the researchers innovate to integrate with Islamic values in the teaching materials used by teachers in the teaching and learning process so that students are able to integrate the concepts related to the knowledge gained with Islamic values contained in the verses of the Qur'an, especially on the material of the respiratory system. Turner & Fauconnier (2014), explain that integration is a mixing or blending that is usually carried out on two or more cultures and languages into a single unit.

Researchers develop a supplementary biology teaching material that integrates Islamic values in the formation of an attitude of caring about the dangers of smoking. The integration of Islamic values in science learning will give strength to the affective, psychomotor, and cognitive domains (Jonasen & Hung, 2008; Anshori, 2021; Kurniati et al., 2020; Mansir & Purnomo, 2020; Khaidir & Suud, (2020). The concept of

integration of Islam and science in learning can be a solution to instill spiritual values in students and contribute to producing good human beings who apply knowledge and skills in accordance with Islam (Muspiroh & Noviyanti, 2013).

At this age, teenagers are now very unstable in terms of making decisions, if the action taken is a contemporary style, then they will be very tempted by their faith and the school environment in the social community will have greater potential in terms of their association. This agrees with Hurlock (1999), as the age of maturity approaches, adolescents become anxious to leave the stereotype of teenagers and to give the impression that they are almost adults, adolescents begin to focus on behaviors associated with adult status, namely smoking, drinking, using drugs and engaging in sexual acts. They assume that this behavior will give them the image they want. Things like this will harm and damage the next generation if negative things are done.

## METHODS

This research is included in research and development (Research and Development), namely research that is used to produce certain products, and test the effectiveness of these products. The product in question is in the form of a supplementary respiratory system teaching material that integrates Islamic values in the formation of an attitude of caring about the dangers of smoking. The development of this supplement for respiratory system teaching materials refers to the ADDIE model, namely Analysis, Design, Development, Implementation, and Evaluation.

The supplementary character of teaching materials is equipped with relevant verses of the Koran according to the material and is equipped with an explanation of the relevance of Islamic values on each page. This is adjusted to the school environment that has a boarding school background. According to Usman (2016) and Anido et al. (2002), that in the education system, teaching materials play a role as a reference when learning takes place and the most important learning resource for learning.

The supplement product for teaching materials developed was validated by three teams of biology learning experts. Validation data from experts was analyzed qualitatively as input to improve the product being developed. Questionnaire data regarding expert responses related to the feasibility of developing products were analyzed by transforming the average value of all observed aspects into qualitative sentences with criteria. The feasibility of supplementing respiratory system teaching materials was analyzed based on the responses of students and educators to the use of Islamic values integrated respiratory system teaching supplements. The analysis in the formation of attitudes to care about the dangers of smoking is analyzed based on the results of the values contained in 3 aspects of the instrument, namely knowledge, attitudes, and actions. The research was conducted once in an experiment in class XI IPA SMA AL-I'TISHOM.

**RESULTS AND DISCUSSION**

The feasibility test of supplementation of respiratory system teaching materials integrated with Islamic values in the formation of an attitude of caring about the dangers of smoking was validated by 3 biology students. The results of the feasibility test are presented in Table 1.

**Table 1.** Validation Results of Teaching Materials Supplements

No	Indicator	Average Value	Criteria
1	Opening	85.71%	Very Valid
2	Contents	100%	Very Valid
3	Closing	75%	Valid
Average		86.90 %	Very Valid

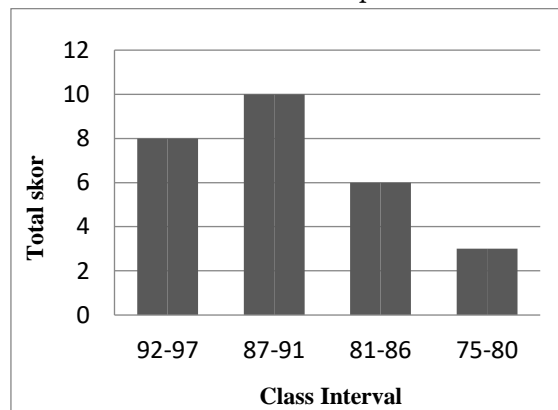
The data in Table 1 shows the average percentage value of the validity of the teaching material supplements developed is 86.90% with very valid criteria and feasible to use. Furthermore, an analysis of the practicality of the supplementary respiratory system teaching materials was carried out with Islamic values in the formation of an

attitude of caring about the dangers of smoking which was obtained from the responses of students and educators as well as the implementation of learning. The results of student and educator responses are presented in Table 2. The results of the implementation of learning are presented in Figure 1.

**Table 2.** Results of Student and Educator Responses to Teaching Material Supplements

No	Indicator	Average Score	Criteria
1	Student	90.01%	Very Valid
2	Educator	88.69%	Very Valid
Average		89.35%	Very Valid

The data in Table 2 shows that the average acquisition of the percentage of student responses is 90.01% with a very practical category. Based on the results of the analysis of student responses, it can be obtained data that students give a positive response to learning using supplementary teaching materials that have been developed.



**Figure 1.** the results of the implementation of learning

Figure 1 shows that the average presentation of the results of the implementation of learning is 89.07% with a very practical category. The average score of students can pass the KKM (Minimum Completeness Criteria). This is due to the dominant portfolio given to environmental problems to the dangers of smoking that are often encountered. As the results of previous preliminary studies, information has been

obtained that students tend to be more interested in applied biology learning. These results indicate that learning by using supplementary teaching materials that have been developed can be carried out well.

Based on the data from the practicality analysis, the results showed that on average each aspect of the practicality assessment scored 90.01%, 88.69%, and 89.07% with very practical criteria. Practicality data shows that learning using supplementary teaching materials that were developed gave a positive response for teachers and students, so it was practical and feasible to use in the learning process, especially respiration material.

The implementation of learning has a percentage with a very good predicate. This is because with the supplementary respiratory system teaching materials supplemented with Islamic values that provide an overview of the school environment so that students are easy to understand. This agrees with Siahaan & Pramusinto (2018) that learning discipline, school environment, and learning facilities simultaneously and partially have a positive influence on student learning outcomes.

According to Hanif & Rohman (2016) Aspects of the integration of Islamic values in learning can be applied in the following ways: (1) Always mention the name of Allah swt; (2) Use of the term; (3) Visual illustrations; (4) Applications or examples; (5) Insert relevant verses or hadiths; (6) Historical tracing; (7) Network topics; and (8) Symbols of the verses of the gift. The aspects used by researchers in the development of supplements for teaching materials for integrated respiratory system biology with Islamic values are the aspects of inserting verses of the Qur'an or hadiths that are relevant to the material, mentioning the name of Allah swt, and applications or examples that are in the supplement. teaching materials.

Students have responded positively to the learning activities carried out with the supplement of teaching materials integrated with Islamic values because there are cottage subjects that have a lot of relevance to the concept of natural science and exemplary nature in the subjects of aqidah morality so that they are able to train students'

abilities in thinking and behaving. always consistent and not contradictory.

'sattitude can change because of a discrepancy or discomfort that arises from within the person himself. The existence of this uncomfortable tension motivates us to change our behavior or our attitudes in an effort to avoid distressing feelings (Griffin, 2003). Weak law enforcement and the lack of community participation in securing these addictive substance products cause the active smoker's indifferent attitude towards the environment and the attitude of not caring and not respecting the rights of others is the cause of smokers continuing to smoke in public places.

Changes in a behavior do not immediately lead to the expected goals, but are carried out gradually. These stages occur with five stages, namely before thinking, thinking, decision or determination, action, and maintenance (Thomas & Turner, 2006). The focus of the researchers is to see to what stage the behavioral changes made by students in interpreting the attitude of caring about the dangers of smoking in the supplementary respiratory system teaching materials.

The current lifestyle of teenagers is troubling so that by providing literacy materials on commonly used teaching materials will provide a stimulus for an attitude of caring about the dangers of smoking in the hope that students can understand the negative impact of using active and passive cigarettes so that students will draw conclusions independently and must avoid the dangers of smoking. smoke.

Lots of teenagers have used cigarettes as a target to get rid of the turmoil that hit them. After understanding the respiratory system material and the dangers of smoking, it is hoped that it will provide awareness or a caring attitude towards oneself and the environment. This can be seen from the results of the research conducted and presented in Table 3.

**Table 3.** Results of the Assessment of Attitudes Concerning the Dangers of Smoking

No	Indicator	Average Value	Criteria
1	Knowledge	88.58%	Very Valid
2	Attitude	92.12%	Very Valid
3	Actions	87.03 %	Very Valid
Average		89.24 %	Very Valid

Table 3 shows that the supplement of Islamic values integrated respiratory system teaching materials has a positive impact on the formation of an attitude of caring about the dangers of smoking. In the knowledge indicator, students are able to give an average score of 88.58%, attitude indicator 92.12%, and action indicator 87.03%.

With the supplement of integrated teaching materials with integrated Islamic values, Islamic values are able to familiarize students with growing attitudes towards the dangers of smoking in class XI at SMA AL-ITISHOM, Magelang Regency.

## CONCLUSION

Based on the results of the research that has been carried out, it shows that there is a supplement of biology teaching materials on respiratory materials integrated with Islamic values that has been developed, which links biological materials, especially on the respiratory system material, with Islamic values in the verses of the Qur'an and hadith. The development of supplementary materials for biology teaching materials for respiration integrated with Islamic values was declared feasible and valid to be used in learning.

The attitude of caring about the dangers of smoking based on supplementary respiratory system teaching materials integrated with Islamic values provides awareness of the dangers of smoking.

## REFERENCES

- Anido, L. E., Fernández, M. J., Caeiro, M., Santos, J. M., Rodríguez, J. S., & Llamas, M. (2002). Educational metadata and brokerage for learning resources. *Computers & Education, 38*(4), 351-374.
- Anshori, I. (2021). Problem-Based Learning Remodelling Using Islamic Values Integration and Sociological Research in Madrasas. *International Journal of Instruction, 14*(2), 421-442.
- Griffin, Em. A first Look at Communication Theory. 2003. Singapore: McGraw Hill Higher Education
- Hanif, I. & Rohman, F. (2016). Development of Plantae Biology Learning Devices Based on Integrated Inquiry-Based Islamic Values to Improve Concept Understanding of High School Students. *Journal of Education: Theory, Research and Development. 1* (11),2163-2171
- Hurlock, Elizabeth, B. 1999. Developmental Psychology: "An Approach Along the Range of Approaches" (translated by Istiwi Dayanti & Soedjarno) Jakarta: Erlangga Publisher.
- Jonasen, D. H. & Hung, W. 2018. All problems are not equal: implications for problem-based-learning. The interdisciplinary Journal of Problem-based Learning, 2 (2): 6-28.
- Khaidir, E., & Suud, F. M. (2020). Islamic education in forming students' characters at as-shofa Islamic High School, pekanbaru Riau. *International Journal of Islamic Educational Psychology, 1*(1), 50-63.
- Kurniati, K., Nurdin, N., & Nurasmawati, N. (2020). Improving Students' Cognitive and Affective Domains Students through Fostering Teacher Development. *International Journal of Contemporary Islamic Education, 2*(2), 56-70.
- Mansir, F., & Purnomo, H. (2020). Islamic Education Learning Strategies Based on Multiple Intelligences in Islamic School. *Psikis: Jurnal Psikologi Islami, 6*(1), 48-57.

- Muspiroh, & Novianti. 2013. Integration of Islamic Values in Science Learning (Islamic Education Perspective). *Journal of Islamic Education*. 28 (3).
- Siahaan, C., & Pramusinto, H. (2018). The Influence of Learning Discipline, School Environment, And Learning Facilities on Learning Outcomes. *Economic Education Analysis Journal*, 7(1), 279-285.
- Thomas, R. & Turner, L.H. (2007). *Introducing Communication Theory. Analysis and Applications*. 2007. Singapore: McGraw Hill.
- Turner, M., & Fauconnier, G. (2014). Conceptual integration and formal expression. In *Metaphor and symbolic activity* (pp. 183-204). Psychology Press.
- Usman, Y. D. (2016). Educational Resources: An Integral Component for Effective School Administration in Nigeria. *Online Submission*, 6(13), 27-37.