

THE DEVELOPMENT OF BILINGUAL TEXTBOOK INTEGRATED ISLAMIC SPIRITUAL VALUE ON INVERTEBRATE MATERIAL FOR SENIOR HIGH SCHOOL GRADE 10th

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Abstract

Nowadays, emerging modern schools based on Islamic boarding schools that promote the spiritual competence and global development to emphasize the mastery of science, religious, and international language. However, not all local students are ready to use the international language in learning activity, so it is necessary to develop a bilingual textbook consisting of English and Indonesia Language. This research aimed to develop bilingual textbook integrated with Islamic religious value on invertebrate material, which fulfills validity and practicality. This development research was referred to Fenrich Instructional Development Cycle Model contains analysis, planning, design, development, and implementation phase, which each cycle through the evaluation and revision phase. The development of textbook was conducted in the Biology Department FMIPA UNESA and the limited trial was conducted on 15 students of SMA Progresif Bumi Shalawat grade 10th. The validity of the textbook was assessed by a biology education expert, an animal taxonomy expert, and an Islamic religious expert. The practicality of the textbook was assessed based on the Fry Graph readability test and the students' responses. Data were analyzed descriptive-quantitatively. The validity of the textbooks acquired very valid category, hence the textbook was appropriate to use in the learning activity. The Fry Readability Graph test of the textbook was at 10 level and the student's positive responses to the textbooks get an average of 94% very good category, hence the textbook was practical to use in the learning activity. Thus the bilingual textbook integrated Islamic religious value on the invertebrate material was declared valid and practically used in biology learning activity.

Keywords: Bilingual, Invertebrate, Islamic Spiritual Value, Textbook.

INTRODUCTION

Invertebrates are animals that have no backbone, most of them occupy every habitat on earth. Some invertebrates are very sensitive to changes in the environment. According to Pechenik (2005), the invertebrate group includes several phyla namely Phylum Porifera, Coelenterata, Platyhelminthes, Nematelminthes, Annelida, Mollusca, Arthropoda, Echinodermata, and Chordata without a backbone (Sub-phylum Urochordata, Cephalocordata, and Hemichordata). Each phylum has a distinctive feature that distinguishes between one phylum and another. Indonesia has a high diversity of invertebrates, one of them is the coral sea. This is indicated by the position of Indonesia, located in the central area of the world's coral triangle, and has a widespread species of coral reefs estimated at 50.000 km² which have 75% of coral species diversity in the world (LIPI, 2013).

The biodiversity of biota could be threatened to decrease and extinct if it is not well-preserved by human.

Based on the data of Indonesian Research Institute / Lembaga Ilmu Pengetahuan Indonesia (LIPI) the study of endangered extinct biota, it was found that 70% of endangered species are invertebrates that include 36 species of shells, 35 species of shrimp and crab, two species of horse shoes crabs, and 6 species of sea cucumber (LIPI, 2013). Therefore, it takes an effort in teaching and learning process of biology that can make students not only understand the concept but also build their moral and good manners to contribute in preserving the sustainable ecosystem. The effort to preserve the ecosystem is also supported by Indonesian Council of Ulama / Majelis Ulama Indonesia (MUI) based on Fatwa MUI No.4/2014, about Endangered Animal Conservation to Maintain Ecosystem Balance (MUI, 2014).

Based on the revised of 2013 Curriculum that used in Indonesia, invertebrates material was studied in the Animalia Kingdom in Basic Competence 3.9, "Grouping animals into phyla based on the body layers, body

cavities, body symmetry, and reproduction". Basic Competence 4.9 is "Presenting a report comparing the complexity of the animal's body layer (diploblastic and triploblastic), body symmetry, body cavity, and reproduction". The 2013 Curriculum has four competencies, namely spiritual attitudes, social attitudes, knowledge, and skill. The competence of spiritual attitude stated "Living and practicing the religious teachings which they (students) embrace". In terms of this spiritual aspect, biology learning can be used to instill divine values, morals, and noble character.

The fundamental of Curriculum 2013 refers to Pasal 36 UU No.20/2003, which states that curriculum development should pay attention to the improvement of faith and piety, the enhancement of noble character, the increase of potential, the increase of intelligence, the increase of students attention, the increase of regional potential, the demands of regional and national development, the demands of job development, and the development of science, art, religion, and global dynamics development (Kemendikbud, 2016).

In line with the 2013 Curriculum, currently there are several schools based on International Islamic boarding school (In Indonesia, called *modern pesantren*) that not only emphasizing the competence for Islamic value and global development but also emphasizing the mastery of science, technology, and foreign language proficiency, in this case English language. Lukens-Bull (2000) stated that Islamic boarding schools (*pesantren*) have a focal point to face globalization and international world, but still stick to Islamic religious values. The main goal of *modern pesantren* is to establish a society that is fully modern, fully globalized, fully Indonesian, and fully Islamic, one student at a time.

Based on the analysis of textbooks used in several high schools in Indonesia, known that spiritual competence was generally taught in schools but there is no textbook that contains spiritual competence to meet the spiritual competence of the 2013 Curriculum. Coupled with the new regulation of 2013 Curriculum that requires spiritual and social attitude competencies stated that both of the competencies only taught on Civic and Religious lesson, for another lesson must not be taught by the teacher, just be trained. This new regulation will unfold an opportunity for not be trained the aspects of spiritual and social attitude competencies, in which later the learning will only focus on teaching materials, so the implementation of the Curriculum 2013 cannot be achieved completely.

Based on the previous research conducted by Robiah, et al., (2017) about "Development of Biology Learning Tool Integrated IMTAQ" that concern in reproduction

materials had validity and limited-scale testing that obtained a result that the learning tool that was developed suitable for use in high school. Another research conducted by Kosasia & Sikolia (2015) about "Biology Students' Religious Beliefs: A Hidden Variable Learning of Evolution" recommends that biology teachers should strive to establish students' religious backgrounds because the religious beliefs have a big influence on the way students learn evolution.

The integration between science and Islamic religious value is necessary to avoid any secular influence in the educational system that which turn leads to the gradual loss of Islamic identity among the society (Anas, et al., 2013). To face the current global development, Islamic religious value internalization in science has a purpose to build moral and good manners of students, it will also have an additional value in facing globalization era by using international language in the class discussions.

English is the international language which nowadays English is very much tied to globalization development (Clyne & Sharifian, 2008). However, not all the local students are ready to be taught biology material using English language, so it is necessary to develop a bilingual textbook by combining the Indonesian and English Language on it.

Based on the description above, this research aimed to develop a biology textbook integrated Islamic religious value on invertebrate material for use in biology learning activity for senior high school grade 10th students. This textbook is expected to help students learning and growing their spiritual, moral, and good manners attitudes of students during the study of invertebrate materials.

METHODOLOGY

This research was conducted from November 2017 to May 2018. This development research was referred to Fenrich Instructional Development Cycle Model contains analysis, planning, design, development, and implementation phase, which each cycle through the evaluation and revision phase (Fenrich, 2005). The developed textbook consists of a package of teacher's books and student's books. The development phase was done in Biology Department FMIPA UNESA and tested in limited-scale to 15 students of SMA Progresif Bumi Shalawat grade 10th.

The data were analyzed descriptive-quantitatively. The validity of the textbooks was assessed by biology educational expert, animal taxonomy expert, and Islamic religious expert. The practicality of the textbooks was measured using Fry Readability Graph and students' responses. The instrument used to determine the validity

of textbooks is a validation sheet instrument based on the content, appearance, linguistic, and Islamic Religious value when the overall mode of validation achieves ≥ 3 . The instrument used to find out the practicality of the textbooks was the students' response sheets and Fry Readability Graph. The textbooks are categorized as practical if the average positive response of students reaches $\geq 71\%$ with practical category and the textbook readability is at 10 level.

RESULT AND DISCUSSION

Result

This research was a development research of bilingual textbook integrated Islamic Religious Value on invertebrate materials for senior high school grade 10th students. The developed textbooks consist of a package of student's book and teacher's books. This textbook was a bilingual textbook that using Indonesia and English languages. In addition, this book is also integrated with religious value. The purpose of the development of the textbook was to produce a valid and practical textbook.

In this developed textbook, there is an integration component between the religious value and the invertebrate materials. The special features contained in this developed textbook are *learning objectives* feature, *keywords* feature, *activity* feature, *Islamic religious value integration* feature, *sirah nabawi* feature,

Value component of the textbook. Bilingual textbook integrated with Islamic Religious Value developed is *flashback* feature, and *self-reflection* feature (**Table 1, Figure 1-4**).

The validity of the textbook was required to determine the eligibility of the textbooks before it used in the biology learning activity. This validity assessment instrument is developed based on the eligibility standard of Textbook for SMA/MA by the National Education Standards Corporation (BSNP) 2014. The validity of textbooks can be seen through three main components which are content, appearance, and linguistic component (BSNP, 2014). Because the textbook that was developed integrated with Islamic Religious Value, hence its need to add the validity of Islamic religious value components.

The validity assessment of the textbooks was done through the process of validation by a biology education expert, an animal taxonomy expert, and an Islamic religious expert. Based on the validation results, it is known that the developed textbook had the validity of content, appearance, linguistic, and Islamic religious value with very valid category mode (Table 2), but it still needs some evaluation and revision based on the validator suggestions.

Table 1. Particular features in bilingual textbook integrated Islamic Religious value.






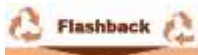

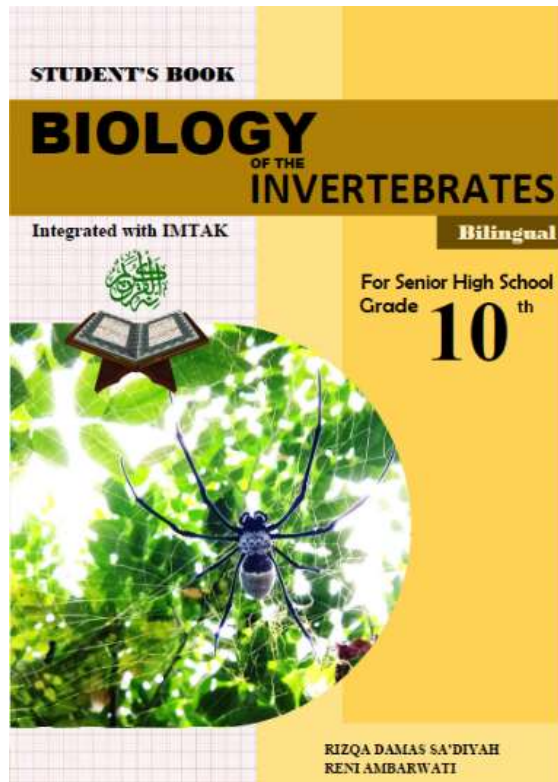
No.	Feature Name	Symbol	Description
1.	Learning Objectives		This feature at the beginning of the topic contains learning objectives of the topic.
2.	Keywords		This feature provide keywords that will be learn in each topic.
3.	Activity		This feature provide the students to do an activity which has been specified
4.	Islamic Religious Value integration		This feature contains Quranic verse that has a connection with the topic.
5.	Sirah Nabawi		This feature contains prophet story with invertebrate in the previous time.
6.	Flashback		This feature provide the students to recall the material which they have been learned.
7.	Self-reflection		This feature provide the students to reflect the spiritual attitude of religious value in daily life.

Figure 2. Profile of textbook in the b...
(a) English Language, (b) I...

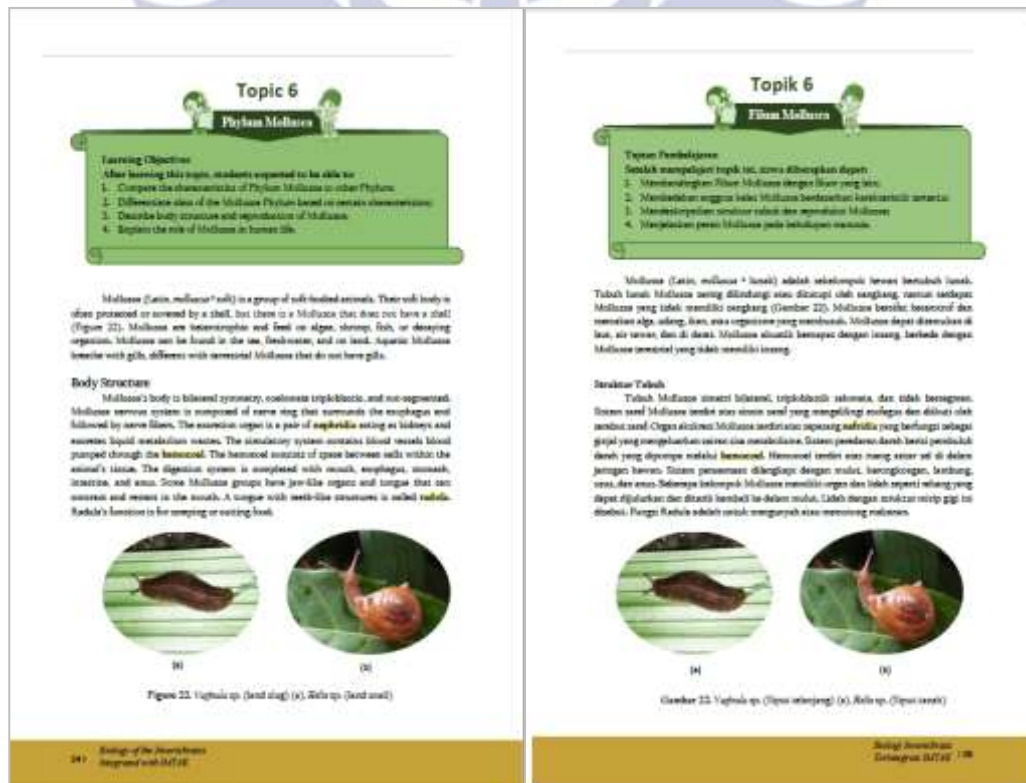


(a)



(b)

Figure 1. Profile of textbook (a) Cover, (b) Introduction.



(a)

(b)



(a) (b)
Figure 3. Profile of textbook Sirah Nabawi feature (a) English Language, (b) Indonesia Language.



(a) (b)
Figure 4. Profile of textbook in Quranic verse, Flashback, and Self-Reflection features (a) English Language, (b) Indonesia Language.

Table 2. Recapitulation of validation result of bilingual textbook integrated Islamic religious value

No.	Aspect	Validator			Average	Description
		V1	V2	V3		
1.	Content Validation					
	Compatibility of Content / Material with KI and KD	4	4	4	4	Very Valid
	Content Updates	4	4	4	4	Very Valid
	Material Coverage and Accuracy	4	4	4	4	Very Valid
	Presenting a Concrete Example in Life	4	4	4	4	Very Valid
	Book Components Arranged Systematically	4	4	4	4	Very Valid
	Category Mode					Very Valid
2.	Appearance Validation					
	Material Appearance Technique	4	4	4	4	Very Valid
	Supporting the Material Appearance	4	4	4	4	Very Valid
	Selection of the Letter Type and Size	4	4	4	4	Very Valid
	Selection of the Textbook Design	4	4	4	4	Very Valid
	Physical Form of the Textbook	4	4	4	4	Very Valid
	Category Mode					Very Valid
3.	Linguistic Validation					
	Language Structure	4	4	4	4	Very Valid
	Conformity with Indonesian Language rules	4	4	4	4	Very Valid
	Conformity with English Language rules	4	4	4	4	Very Valid
	Symbols and Terms Used Appropriately	4	4	4	4	Very Valid
	Conformity of Bilingual Components	4	4	3	3.67	Very Valid
	Category Mode					Very Valid
4.	Islamic Religious Value Validation					
	Relevance Qur'anic Verse with Invertebrate Material	4	4	4	4	Very Valid
	Islamic Religious Value Features Placement Suitability	4	4	4	4	Very Valid
	Conformity of the Qur'anic Verse Writing	4	3	3	3.33	Valid
	Conformity of the Qur'anic translation	4	4	4	4	Very Valid
	Islamic Religious Value Integration Increases the Spirituality attitude of Students	4	4	4	4	Very Valid
	Category Mode					Very Valid

Note:

V1 (Validator 1): Expert on Educational Biology.

V2 (Validator 2): Expert on Animal Taxonomy.

V3 (Validator 3): Expert on Islamic Religious.

The readability results of this textbook was using Fry Readability Graph. The selected discourse was 100 words, then counted the number of sentences and syllables in it. The number of syllables that had been obtained was multiplied by 0.6 for the Indonesian Language discourse, while the English Language discourse does not. This is because the number of comparisons between the number of English and Indonesian syllables is 6:10 (Saroni et al., 2013). After that, it was converted into Fry Readability Graph. Based on the data analysis the number of sentences per 100 words and the number of syllables per 100 words in the sample of both Indonesian and English language was known at the 10 reader class level (Table 3).

The readability test result of Indonesian Language discourse meet the point of the average number

of sentences per 100 words was 6.67 and the average number of syllables per 100 words multiplied by 0.6 was 157 which resulted in the meeting point (6.67, 157). Thus the level of this textbook readability in accordance with the level of the class reader was at 10 reader class level based on Fry Readability Graph. The readability test result of English Language discourse meet the point of the average number of sentences per 100 words was 6.67 and the average syllable number per 100 words was 159.3 which resulted in the meeting point (6.67, 159.3). Thus the level of this textbook readability in accordance with the level of the class of reader was at 10 reader class level based on Fry Readability Graph.

Table 3. Readability result of bilingual textbook integrated Islamic religious value

No.	Sample	Number of Sentences per 100 Words	Number of Syllable
1.	Indonesia Discourse (Number of syllable x0,6)		
	Sample 1	6	156
	Sample 2	6	159
	Sample 3	8	156
	Average	6.67	157
	Reader Class Level		10
2.	English Discourse		
	Sample 1	6	161
	Sample 2	6	153
	Sample 3	8	164
	Average	6.67	159.3
	Reader Class Level		10

Table 4. Recapitulation result of students' positive responses in bilingual textbook integrated Islamic Religious Value

No.	Assessment Component	Percentage of Positive Responses (%)
A. Appearance Component		
1	The physical appearance of the book is interesting.	100
2	The features in the book are presented in an interesting way.	100
3	Placement of features on the textbook is systematic.	80
4	Illustrations (pictures and tables) used appropriately supported the material.	93
5	The type and size of the letters presented in this book can be read clearly.	100
	Average	94.6
	Category	Very Good
B. Linguistic Component		
6	The terms and symbols used in this book are easy to understand.	100
7	The sentences used in this book correspond to the level of readability of Students.	100
8	The language used in this book is communicative.	93
9	The Indonesian and English languages used in this book are easy to understand.	87
10	The use of bilingual language provides benefits in improving the Language skill of the Students.	87
	Average	93.6
	Category	Very Good
C. Content Component		
11	The material presented is easy to understand.	93
12	The material presented in sequence from general to specific.	93
13	Materials presented in accordance with the development of science.	93
14	The material presented stimulates the curiosity of Students.	80
15	This textbook makes Students more motivated in studying Invertebrate Material and its relation with Islamic Religious Value.	80
	Average	87.7
	Category	Very Good
D. Islamic Religious Value (religious value) Component		
16	The religious value content presented is relevant to the material.	100
17	The religious value materials in the textbooks increase the belief of Students to the greatness of Allah SWT.	100
18	The material in textbooks can encourage Students to further increase their faith and piety to Allah SWT.	100
19	The book makes Students increasingly convinced that the Qur'an as a guide of life and the source of knowledge.	100
20	This book makes Students more sympathy and love animals in their environment.	100
	Average	100
	Category	Very Good

The practicality of the textbook in terms of the response of students was done by giving a questionnaire response to the 15 students of SMA Progresif Bumi Shalawat grade 10th. The results of the student responses to four components of content, appearance, linguistic, and Islamic Religious Value components respectively 94.6%; 93.6%; 87.7%; and 100% where each had an excellent or very good category of student's positive responses (Table 4). The questionnaire has 20 questions in which each component has 5 questions. There are 15 students who fill the questionnaire, this questionnaire was using the calculation based on Guttman scale, score 1 if the answer "Yes" and score 0 if the answer "No", so the maximum response that can be obtained is 300 responses. The recapitulation result of the overall answer of students on that answered "Yes" as much as 282 responses. Thus the percentage of positive responses of students was 94%. The results show that the textbook practicality category based on the students' responses was a very good category.

Discussion

The research of the bilingual textbook development integrated Islamic religious value on invertebrate material aimed to know the validity and practicality of the textbook that had been developed. Validity was tested using the Textbook Validity Sheet, while the practicality was tested from the readability and students responses.

Textbooks that had been developed were reviewed and validated by an educational expert, an animal taxonomy expert, and an Islamic religious expert. The validator's review of the textbook revised and assessed for its validity by using the Textbook Validity Sheet. The Textbook Validity Sheet includes content, appearance, and linguistic components of the textbook (BSNP, 2004). The validity sheet added Islamic religious value components because the developed textbook was integrated with Islamic religious value. The recapitulation result of the textbook validity conducted by the three validators was obtained very valid category. However, on the bilingual component criteria the 3rd validator gives score of 3. It was because the researcher used a translation of the Qur'anic verse that refers to an international saheeh translation which the translation is according to *lughawi* (language) only, not by *maknawi* (meaning). It will be better if the translation equipped with both *lughawi* and *maknawi* translation in order not to confuse the Indonesian and English native speaker, so it needs to do revision for the book improvements. The Holy Quran has many beautiful features in terms of both form and content, hence there is no combination of all

translated version can ever encapsulate the original text of Holy Quran. According to Amjad and Farahani (2013) suggested that it cannot suffice to read only one translated version of the Holy Quran for those who do not know the original language.

In the Islamic religious value component especially on the aspect of writing verses of the Qur'an validators 2 and 3 gave a score of 3. It was because the text of the Quranic verses were too small so it was difficult to read, besides that there were some *harakat* on the Qur'an verses that were not complete so it needs to be revised for improvements. The writing of the Qur'anic verses have a fairly complex history from the time of prophethood, the punctuation and *harakat* gave at the time of the reign of Khulafaurrashidin. The punctuation and *harakat* given as the result of creativity and efforts to avoid the mistake in reading the verses of the Qur'an, hence it can be well-preserved until nowadays (Nasrudin, 2015).

The practicality of the textbooks viewed from readability that was used to find out the level of textbooks readability (Saroni et al., 2013). The results of readability test for Indonesia language discourse meet at the point (6,67;157) while for English discourse (6,67;159,3) which both of them have readability for 10 reader class level based on the Fry Readability Graph, so it is suitable for senior high school students grade 10th. The readability level of the textbook needs to be measured in order to know the proportional level of the textbook reader, authors or publishers were advised to always consider vocabulary and sentences that they have made in textbooks in order to make good quality of the textbook (Saroni, et al., 2013).

The results of the textbook validity were in the category very valid, as well as the readability test. The readability level corresponds at 10 reader class level which directly proportional to the results of the practicality test in terms of the students' responses. Through the questionnaire, the responses of students' obtained a percentage of students positive responses of 94% that was very good to use in the learning activity. The validity results showed that the students responses positively to the developed textbooks in appearance-component of 94.6% (very good), linguistic-component of 93.6% (very good), content-component of 87.7% (very good) and Islamic-religious-value-component of 100% (very good). Based on students positive responses after using the textbooks, the textbook was declared very good used in biology learning activity. According to Nor and Malim (2014) education should fulfill all aspects of the learner's growth: the spiritual, intellectual, imaginary, physical aspects either individually or in groups and encourage all these aspects to be achieved perfectly.

Besides that a range of teaching, learning, and pedagogical techniques of the teacher are proposed that may foster students moral (Chowdhury, 2016).

Positive responses of students to the textbook vary widely with the range of 80% to 100%. The lowest positive response of the learner is in the content and appearance component was 80% at the point "the textbook stimulates the students' curiosity" and "the textbook makes the students more motivated to learn the invertebrate material in connection with Islamic Religious Value", as well as the presentation component at the "feature book arrange systematically". Motivation and curiosity is a very important element in learning because it will determine how much information that students will absorb based on the information presented in the learning activities. Students' motivation is the essential element for quality in teaching and learning process (Ullah, et al., 2013). High motivation will make students use higher cognitive processes in learning, hence the students will absorb the material easily. It is necessary to provide teacher assistance in delivering material in an interesting way, hence the students will more motivated to learn invertebrate materials and its relation to Islamic religious value.

Positive responses 100% were obtained on the Islamic religious value component which includes the relevance of Islamic religious value content and the material presented, the role of textbooks in increasing the students' spiritual belief in the greatness of Allah SWT, the main role of the textbooks was to encourage students to improve their faith and piety to Allah SWT, the role of textbooks in making students more convinced that the Qur'an is the guideline of life and the source of knowledge, and the role of textbooks in making students more sympathetic to love animals in their surrounding environment. The component of Islamic religious value in the textbook aimed to grow the spiritual and social attitude of students to fulfill the Core Competence (KI) of 2013 Curriculum by growing the moral and good manners (*akhlaq*) of students. *Akhlaq* and moral values among the students can be achieved through the implementation of the incalculable of noble values in the teachings (Othman, et. al., 2016). Results of positive responses of students on Islamic religious value component integration with invertebrate material was positively correlated with the validation of textbooks that have a very valid category mode. Based on Amir (2017) the effort to integrate science of religion and general science by using the normative theological approach, with makes the argument of naqliyah as its main base with general science that makes the argument of aqliyah

as its main base in the command of Allah SWT that must be socialized to all Muslims.

Textbooks that had been developed contain invertebrate material that is integrated with Islamic religious value sourced from the Qur'an and Hadith. According to Zaglul an-Najjar, in the Qur'an there are approximately 750 to 1000 verses containing scientific verse (Kemenag & LIPI, 2015a). Islamic religious value integration in the textbooks was given at the end of each topic. The topics in this textbook consist of eight topics: Phylum Porifera, Phylum Coelenterata, Phylum Platyhelminthes, Phylum Nematelminthes, Phylum Annelida, Phylum Mollusca, and Phylum Echinodermata (Pechenik, 2005). The integration of Islamic religious value with these invertebrate materials was obtained through literature studies of the Qur'an and Hadith as well as various books with the main reference books collaboration between Kemenag and LIPI (2015a; 2015b) entitled "Animals in Perspective of the Qur'an and Science".

Positive response of students on the appearance component was very good, positively correlated with the validation result of the appearance component of textbook was very valid. This developed textbook had particular features namely integration of material with *Islamic Religious Value*, *Sirah Nabawi*, *Flashback*, and *Self Reflection* at the end of each topic. These particular features hopefully can support the spiritual and social competence of students in addition to achieving the basic and core competencies of invertebrate materials. The textbook is also equipped with self-reflection features to find out the spiritual internalization of IMTAK integration presented in the book. In the implementation phase, a limited trial of 15 students, who delivered their reflection after studying textbooks developed in front of the class, one of the students delivered "*After studying the topic of Arthropoda integrated with IMTAK, I felt more concerned and took attention to the bees which has many benefits, especially for health because it produces honey which in the Qur'an mentioned that in the honey there are substances that can heals for humans. Bees are like a Muslim in the hadith which eat that which is good food like flower nectar and lays that is also good like honey, when the bee lands on something it does not break their environment*". The integration of science and spirituality has a primary purpose to establish moral and good manners, both individually and socially and influence their environment (Sunhaji, 2016). According to Anas, et al (2013), The integration between science and Islamic Religious Value is necessary to avoid any secular influence that will impact the loss of the Islamic identity among the society and students. Based on the research of

Haristiani et al. (2017), the teacher recommends integrating science and Islamic view with life context to enrich students' understanding while clarifying false information.

The positive responses of students' on the linguistic component was very good, positively correlated with the validation result on linguistic component of the textbook that was very valid. The developed textbook has a bilingual component that uses Indonesian and English language. The basis for the development of bilingual language textbooks was to improve the learner's language skills to face globalisation era. Nowadays English is very much tied in globalization development (Clyne & Sharifian, 2008). It will become the door to investment for the Indonesian Nation to interact with the global community. However, not all students are ready to learning biology that delivering with English language, so that it needs to develop bilingual textbooks by combining Indonesia and English language.

The students' responses are accompanied by some suggestions and comments by the students in the comments column of the Students Response Sheet. The suggestions are contained positive responses and feedback about the textbooks. There were many feedback from the students such as "*It will be better to choose one language only in order not to use too many pages*", this suggestion cannot be accepted because the main point of this book was to improve the English ability of the students by showed up the translation of Indonesia and English language in the same context, automatically it will increase the number of pages of the textbook. Another suggestion from the students "*The space between the line of the textbook should be enlarged and book size is too large*" after reviewed back about the layout of the textbook, the space between the line of the textbook is good and had been well supported with the readability test using the Fry readability Graph showing that this textbook is suitable for the 10 reader class level. In addition, the size of textbooks that were considered too large are also actually appropriate for high school learners. High school textbooks generally using the same size of Letter size (8.5 "x 11"). According to BSNP (2014), the book size with ISO standards is A4 and B5, while Letter size is a medium size paper between A4 and B5 paper sizes.

After using the textbook, students also give some positive comments about the textbook. There were many positive responses from the students "*This textbook is suitable for use in international-based schools that have Islamic standardize in their curriculum*", another positive response is about "*This textbook is a very good innovation to build a generation that strong spiritually*

and intellectually". This textbook developed in order to support the main goals of globalization in the *pesantren* environment to establish a society that is fully modern, fully globalized, fully Indonesian, and fully Islamic, one student at a time (Lukens-Bull, 2000).

CONCLUSION

The results show that development of bilingual textbook integrated Islamic religious value on invertebrate material for senior high school grade 10th had been well-developed. The validity test results were stated very valid category. The practicality test results were very practical with the results of readability was at 10 level that appropriate for senior high school grade 10th student and the positive responses of the students were very good category. Thus the textbook declared very valid and practical to use in biology learning activity.

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