



## Needs Analysis for Development of Interactive Electronic Textbooks Based (IETB) on Kvisoft Flipbook Maker Applications Integrated with Islamic Values

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### ABSTRACT

The use of technology and character building for students is an effort that can be made to improve the quality of education. Interactive Electronic Textbooks Based (IETB) that are integrated with Islamic values are able to empower students' brain abilities to think critically, creatively, and practice problem solving skills presented by teachers in class, so that learning objectives can be achieved properly. The purpose of this study is to analyze the development of IETB based on the Kvisoft Flipbook Maker application that integrates Islamic values in learning. The methods used in this research are field studies and literature studies. The research subjects were the principal, teachers and students of class XI majoring in science at SMA IT Bina Ilmi Palembang. Literature study was conducted by collecting various relevant sources. Meanwhile, the field study was obtained by going directly to the research location by interviewing the principal and class XI biology teacher as well as distributing needs questionnaires and conducting online learning observations. Based on a literature study, IETB based on the Kvisoft Flipbook Maker application can help students improve creative thinking skills and the integration of Islamic values in learning materials can improve critical thinking skills. The results of the field study found that SMA IT Bina Ilmi Palembang needed IETB to help teachers and students maximize learning and instill Islamic values according to the IISN curriculum used. This product can not only be used in Integrated Islamic Schools but can also be used in other Islamic based schools throughout Indonesia.

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## INTRODUCTION

The development of technology and information from time to time has reached all aspects of life and provided many changes,

either directly or indirectly. The impact of the development of information technology is currently very visible in the field of education, where there are many emerging digital learning resources so that teachers at this time are not

the only source of knowledge obtained by students (Marenden, 2021). According to Sudatha (2020), the impact of technological developments in the world of education indirectly requires teachers to be responsive and able to adapt to existing developments, as well as being able to optimize learning resources in an effective manner.

The use of technology in education has the potential to support success and efforts to improve the quality of education. According to Hendriyani (2018) the use of technology in teaching and learning activities in the classroom is able to create a new and meaningful learning atmosphere for students. One form of using technology in learning activities is the use of electronic textbooks. Electronic textbooks have added value compared to printed books that are sold freely in the market, this is because in their use they require the help of gadgets or other supporting tools so that students' skills in accessing and analyzing digital information can be formed (Ismail, 2018).

Electronic textbooks that are able to attract students' attention are interactive electronic textbooks (IETB), where these electronic books are equipped with additional features such as images, videos and animations (Supriadi, 2015). According to Nursela, *et al.*, (2021) The existence of these additional features will further strengthen the material explained by the teacher and be able to make students explore the learning material presented. Empowering the brain's ability to think logically, creatively, analytically and systematically as well as being able to practice problem solving skills together presented by the teacher in class (Sari, 2019).

Interactive electronic textbooks can use various types of applications, one of which is the Kvisoft Flipbook Maker application. The Kvisoft Flipbook Maker application is software that converts PDF format files to digital pages that can be made into digital magazines,

catalogs, and also learning e-books (Hidayatullah, 2016). The Kvisoft Flipbook Maker application is an interactive application that supports learning media that does not only contain text or images but can also be developed by including motion animations, learning videos and audio to clarify the learning materials in it (Wibowo & Pratiwi, 2018).

In addition to being able to use technology properly and effectively, another effort that we can do to improve the quality and quality of education is to cultivate character. According to Zannah (2020) we can instill character in students by incorporating spiritual and social values in the learning process, because this is one of the achievements that must be fulfilled in implementing the 2013 curriculum. that must be formed both in the school environment and in the community (Astuti, 2018).

Schools that have internalized spiritual values or Islamic values in teaching and learning activities are Integrated Islamic Schools. Integrated Islamic Schools are schools that apply Islamic education in learning based on the Qur'an and the Sunnah of the Prophet Muhammad (Yasyakur, 2017). In learning activities, Integrated Islamic Schools teachers are required to be able to integrate Islamic values in learning, teachers are asked to have basic knowledge about the science being taught and its relation to the Qur'an and the Sunnah of the Prophet Muhammad. This is a challenge for teachers who teach at the Integrated Islamic School.

The integration of Islamic values is carried out for all subjects including biology learning. The integration of Islamic values in biology learning can be done by various methods, one of which is developing teaching materials that have Islamic values in them (Amri, 2017). Bina Ilmi Islamic Senior High School as one of the Integrated Islamic schools in the city of Palembang in teaching and learning activities has never used interactive electronic textbooks

(IETB), books integrated with Islamic values or the Kvisoft Flipbook Maker application. This encourages researchers to analyze whether SMA IT Bina Ilmi Palembang needs interactive electronic textbooks that are designed to help teachers and students maximize learning. This research is limited only to the needs analysis stage, because the analysis process is an important stage in designing a product whose results can be used as a basis in the product development process according to the needs in the field.

## **MATERIALS & METHODS**

The method used is descriptive method. The descriptive method is a research method that describes a phenomenon or event factually from the data obtained as it should (Isnawati, 2020). According to Wibawa (2019), in educational research, descriptive methods are more directed to solving practical problems which are seen from the direction of the existing problems.

Data collection techniques used in this study were observation or field studies and literature review. Field observations were carried out by coming directly to the Islamic High School Terpadu Bina Ilmi Palembang by conducting offline interviews with school principals and class XI biology teachers while still adhering to health protocols, as well as distributing student needs questionnaires and online biology learning observations due to the absence of teaching and learning activities that were carried out. held offline at the Integrated Islamic High School Bina Ilmi. While the literature review is carried out by collecting relevant research and sources to support the needs analysis process for developing interactive electronic textbooks (IETB) based on the Kvisoft Flipbook Maker application that is integrated with Islamic values.

## **RESULT AND DISCUSSION**

A needs analysis was carried out as a basis for developing an Interactive Electronic Textbook (IETB) based on the Kvisoft Flipbook Maker application that was integrated with Islamic values. As for the results of the principal interview from the IETB needs analysis based on the Kvisoft Flipbook Maker application which is integrated with Islamic values, information is obtained that the curriculum used at SMA IT Bina Ilmi Palembang is the national curriculum in collaboration with the Indonesian Integrated Islamic School Network (IISN) curriculum. According to Hildani & Safitri (2021) The Indonesian IISN curriculum is unique by integrating Islamic values in learning, collaboration between science and technology development with Islamic values and knowledge. SMA IT Bina Ilmi Palembang uses the integrated model in integrating Islamic values into learning.

High School IT Bina Ilmi Palembang still uses packages on the market. The integration pattern of Islamic values in learning is left to each teacher who teaches based on an integrated RPP. The process of teaching and learning activities in SMA IT Bina Ilmi Palembang during the online learning period is divided into two forms namely, synchronous learning and Ansynchronus. Synchronous learning is face -to -face learning online using the Zoom Meeting and Google Meet application which is carried out when the teacher explains learning materials, while learning Ansynchronus is non -face -to -face learning using the Google Classroom application to collect tasks and attendance of students' attendance.

The results of the interview with the biology teacher in class XI from the IETB needs analysis based on the Kvisoft Flipbook Maker application which is integrated with Islamic values, it was found that the learning tools used

by biology teachers at SMA IT Bina Ilmi Palembang were developed and made by the biology subject teachers themselves using the learning model. scientific research, question and answer, discussion and inquiry learning. According to Chodijah, *et al.*, (2012), the ability of teachers to make and develop independent learning plans and develop learning implementation plans, especially at the elementary, middle and upper education levels, is a standard that must be met. In line with the contents of Government Regulation No. 57 of 2021 article 20 concerning education personnel standards, it is explained that the minimum criteria for competence and qualifications that must be possessed by educators in carrying out their duties and functions are learning designers (Peraturan Pemerintah RI No 57, 2021). Learning resources and media used by biology teachers are biology textbooks provided by schools. Biology learning at SMA IT Bina Ilmi Palembang had not previously used interactive electronic textbooks (IETB), the Kvisoft Flipbook Maker application or Islamic values integrated textbooks recommended by IISN.

Biology teachers at SMA Islam Terpadu have an obligation to integrate Islamic values into learning. According to Ismail (2018) teachers who teach in integrated Islamic schools must be able to collaborate general learning with Islamic religious education in one curriculum. This pattern of integration will later be applied to all school activities, both in

the classroom and outside the classroom, these activities cannot be separated from Islamic values.

Biology teachers at SMA IT Bina Ilmi Palembang still have difficulty implementing learning that is integrated with Islamic values. There are several factors that cause teachers to experience difficulties, including: 1) the absence of special guidelines on how to integrate Islamic values, 2) the absence of special training or programs made by schools to integrate Islamic values in learning, 3) the lack of existing references so that teachers find it difficult to include Islamic values in learning activities 4) the teacher's lack of knowledge about Islamic values related to science. According to Muspiroh (2016), there are several ways that teachers can do to include messages and Islamic values in learning, namely; 1) foster admiration and understanding that all phenomena that occur on earth are the power of Allah, 2) emphasize learning on process skills, so that students are able to find facts from existing events and make students active, 3) the object of study used is taken from the environment around, this will make it easier for students to see natural phenomena whose purpose is to grow students' faith in Allah SWT.

Furthermore, an analysis of student needs for the IETB based on the Kvisoft Flipbook Maker application is carried out, which can be seen in the table below:

**Table 1. Results of Analysis of Student Needs for the Development of IETB Based on the Kvisoft Flipbook Maker Application that integrates Islamic values**

No	Question	Percentage (%)
1	Do you think Biology is a difficult subject to learn?	
	a. Yes	70
	b. No	30
2	How do you study Biology?	
	a. Memorized	20
	b. Understood	-
	c. Memorized and Understood	80
3	How is the Yesng learning model applied by your Biology teacher at school?	

No	Question	Percentage (%)
	a. Explanation/lecture model	90
	b. Practical model	-
	c. Project delivery model	10
	d. Problem based learning model	-
4	What obstacles did you find from the biology teacher Yesng teaching at the school?	
	a. Teachers do not master the learning material	-
	b. Teachers are less able to relate the material to everyday life	-
	c. Teachers are less able to use learning media (laptops, projectors, etc.) so that learning seems monotonous.	-
	d. The teacher does not invite students to practice, as a result, the material that should be practiced directly becomes incomplete to be understood.	30
	e. Teachers are less creative and innovative in teaching	50
	f. The teacher is too focused on the book	-
	g. The teacher is not able to invite us to think critically, as a result, learning becomes teacher-centred	20
5	What problems do you often experience in studying Biology at school?	
	a. I am not interested in the way the teacher explains when teaching (too monotonous)	20
	b. I do not understand the material presented by the teacher	20
	c. I sometimes get bored in class, because learning is centered on the teacher only	60
6	What would you do to overcome problems in studying biology?	
	a. Looking for other learning resources (both online/offline) to add insight into learning materials	60
	b. Give advice in good language to the teacher, to do practicum often	20
	c. Frequently asking questions so that learning does not seem monotonous (one-way)	10
	d. Looking for other reading books / other reading sources. So that the material presented is easy to understand.	10
7	In your opinion, what learning model is the most interesting?	
	a. Lecture	10
	b. Answer and Question	10
	c. Discussion	20
	d. Problem Based Learning	30
	e. Project	30
8	Do you want a change in the way Biology teachers teach?	
	a. Yes	100
	b. No	-
9	Have you ever studied Biology using Interactive Electronic Textbooks?	
	a. Yes	-
	b. No	100
10	Does your school Already use the Kvisoft Flipbook Maker application in the learning process?	
	a. Yes	-
	b. No	100
11	Has the biology teacher at your school Already started integrating/incorporating Islamic values into learning?	
	a. Already	-
	b. Yet	100
12	Does your school Already use Biology textbooks that are integrated with Islamic values?	
	a. Already	-
	b. Yet	100
13	Does your school Already use interactive electronic textbooks that are integrated with Islamic values?	
	a. Already	-
	b. Yet	100
14	Is Yesng's textbook used at your school already able to stimulate your critical thinking skills?	
	a. Very stimulating	-
	b. Stimulating enough	40
	c. Not stimulated	60
15	What problems do you experience when you study using printed Biology books at school?	
	a. Material is difficult to understand	

No	Question	Percentage (%)
b.	Books are less visually appealing (views)	20
c.	Too many terms that confuse students	10
d.	Lack of real examples in everyday life	70

From the results of the questionnaire on student needs for the development of interactive electronic textbooks (IETB) based on the integrated kvisoft flipbook maker application of Islamic values distributed to 10 students, 70% of students stated that biology is a difficult subject for them to learn and 30% of students think that biology can them easily. According to research Jayawardana (2017) Biology is still a scary and difficult subject for students to understand, this is because a lot of material is related to scientific language or Latin. This has an impact on the enthusiasm and learning outcomes of students, learning biology should be easy for students to learn because the material being studied is related to their daily lives.

Furthermore, students choose several ways to overcome the less than optimal material they get with 60% of students looking for other learning resources (both online/offline), 20% of students choosing to give advice to teachers to often do practicum and 10% of students choosing to ask questions frequently and 10 Another % of students choose to look for other reading books. As many as 80% of students use memorization and understanding learning methods while 20% of other students choose memorization in studying biology. All students want a change from the way teachers teach, this is reinforced by 50% of students stating that teachers are less creative and innovative in teaching with 90% of students answering the learning method used is the lecture model and 10% of students answering the practicum model.

In addition, 30% of students answering teachers rarely invite students to do practicals, as a result the material that should be practiced

directly becomes incomplete to be understood. As many as 20% of students answered that the teacher was less able to stimulate critical thinking, as a result, learning became teacher-centered. The problems they encountered when studying biology in class were 60% of students answered that they were sometimes bored in class, because learning was centered on the teacher only, 20% of students did not understand the material presented by the teacher and 20% of other students answered that they were less interested in the teacher's explanation which seemed monotonous. . As many as 30% of students answered that the interesting learning model was problem-based learning, 30% of students chose project-based learning, 20% of students chose the discussion model, 10% of students chose the question and answer model and 10% of students chose lectures.

The teacher's role in learning biology is very important, the teacher plays a role in facilitating, guiding and also motivating students in inquiry and information discovery activities, the teacher in this case is referred to as an inquiry guide (Amin, 2016). An unpleasant learning process can reduce students' enthusiasm for learning, so that biology learning can run well and learning objectives are achieved. Teachers should invite students to design aspects that will be achieved in learning, so students will feel ownership and besides that this will minimize overstructuring in students and make learning more meaningful (Arianti, 2018).

In addition, all students answered that they had never studied biology using interactive electronic textbooks and had never used the Kvisoft Flipbook Maker application in the

learning process, and all students 100% answered that the teacher had not included Islamic values in learning and all students answered that they had never used books. biology lessons that are integrated with Islamic values. As many as 60% of students answered that the books used in school have not stimulated critical thinking skills and 40% of students answered that they stimulated critical thinking skills. 70% of students answered the problems they experienced when studying using Biology textbooks which were the lack of real examples in everyday life, 20% of students answered that the books used were not visually appealing and 10% of students answered too many terms which made students confused.

Based on the data from the needs analysis in this study, it is necessary to develop an interactive electronic textbook based on the Kvisoft Flipbook Maker application that integrates Islamic values. According to Vitrianingsih (2021) Abstract learning such as learning science and biology in it requires the use of technology in the teaching materials used, this will have an impact on increasing students' enthusiasm and interest in learning. In addition, the benefits of using the IETB are that it is easier to apply, is not limited by time and space and does not require more energy in its use. According to Rahmadani, (2018), the use of interactive electronic textbooks is more effective and efficient to use in learning activities, this is because; 1) access to information can be obtained more quickly, and 2) support the visualization of materials that are abstract and more interesting so that they are easier to understand, and 4) create interactions.

## CONCLUSION

Based on the results of the needs analysis as the first step in developing an interactive electronic textbook (IETB) based on the Kvisoft Flipbook Maker application that integrates

Islamic values, it is concluded that teachers and students need other teaching materials besides textbooks provided from schools in addition to maximizing learning during the Covid-19 pandemic. 19 Integrated Islamic High School Bina Ilmi Palembang also requires online-based learning applications to maximize the teaching and learning process with the synchronous system that has been implemented in schools. This will also support the successful implementation of the IISN curriculum implemented in the Integrated Islamic School (IT). The book that is needed by teachers and students in this needs analysis is an interactive electronic textbook (IETB) based on the Kvisoft Flipbook Maker application that is integrated with Islamic values, so this book really needs to be developed. Furthermore, it is necessary to follow up on this research, it is necessary to carry out a needs analysis on a wider scale and continue this research to produce interactive electronic textbooks that are valid, practical and also effective for use in learning activities both online and offline.

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