

## **E-book Needs Analysis as a Learning Resource for Studying global warming material in Junior High Schools**

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**Abstract.** *This study was conducted aimed at analyzing the interactive e-book needs of global warming material as a source of learning in junior high school. The method used in this study is a survey method for 80 seventh grade students and 6 science teachers in the middle school city of Lampung city. Data collection is done using questionnaires and interview guidelines. The questionnaire given to students consisted of seven questions and eight questions for science teachers and interviews with science teachers with eight questions. Based on the teacher's response shows that most teachers have never used their interactive e-book using textbooks only for learning global warming. Based on student responses that have never used an interactive e-book. Students acknowledge that they have difficulty understanding abstract material so they need learning resources that can help understand abstract material. In general, the response of students and teachers stated that they expected an interactive e-book so students could easily understand the material that was abstract because the interactive e-book was equipped with pictures and videos. The results of the survey will be used as a basis for developing an interactive e-book on global warming material that will be used as a learning resource for students.*

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Date of Submission: 01-11-2020

Date of Acceptance: 13-11-2020

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### **I. Introduction**

Competition that occurred in the 21st century fostered very tight competition, thus demanding the development of the quality of human resources [1]. The 21st century was also marked by the rapid development of science and technology. As a result of the rapid development, one of the many jobs that were lost was replaced by machines, both production machines and computer machines [2]. For this reason, we need superior quality resources that are ready to face fierce competition [3, 4, 5].

Preparation of resources can be done through quality education. In order for the learning process to be carried out properly there are 4 main components that must be involved, namely students, teachers, learning environment, and learning resources [6]. The use of learning resources in learning activities is very important, especially supported by increasingly rapid technological developments, [7]. Integration of Information and Communication Technology (ICT) in learning resources in science learning by using appropriate strategies will help students in building the cognitive structure of students and mastering the material in depth [8].

E-books are learning resources that can be developed based on Information and Communication Technology (ICT). Interactive e-books can be designed to provide interaction between students and learning resources, so they can train students' thinking skills [9]. Interactive e-book is an electronic book in an interactive format containing information that contains text and images, graphics, audio, video that allows users to interact, create, and communicate [10]. The existence of an interactive e-book is expected to help students understand abstract material.

Global warming is one of the science material that is abstract in class VII, where students are required to understand the process of global warming which they cannot observe with their eyes. Several studies have been carried out in an effort to develop interactive e-books and have been shown to increase students' interest in learning [11, 12, 13]. Based on the results of previous studies that have been conducted, it will be the basis of research for the use of interactive e-books in the learning process. This research will be conducted for science teachers and middle school students. The purpose of this study was to analyze interactive e-book needs as a learning resource for studying global warming.

## II. Method

In this study using a survey method by giving questionnaires to 80 grade VII junior high school students as well as questionnaires and interviewing guidelines for 6 science teachers who taught VII grade science at JHS 2, JHS 33, and JHS 35 in Bandar Lampung city. The questionnaire consists of 7 questions for students and 8 questions for teachers. In addition there are several questions for teacher interviews regarding the learning resources used. After the teacher and student respondents have finished answering the questionnaire, the data will be analyzed to calculate the percentage of respondents' answers.

## III. Result and Discussion

Based on the survey conducted, the results of this study indicate that as many as 83% of teacher respondents did not use e-books in science learning activities. Teachers only use printed books from publishers provided in schools and as many as 17% of teachers have used e-books but are not interactive obtained from the results of downloading through websites on the internet and not global warming material.

Based on the results of interviews with science teachers stating that they never made an e-book. They also expect the existence of learning resources in the form of interactive e-books, especially on abstract material that is easily understood by students. This interactive e-book is expected to have interactive evaluation questions, interesting images and animations, communicative languages and interaction spaces. thus, the use of interactive e-books can be used as additional learning resources that can improve mastery of students' concepts in the learning process, so that it is expected to reflect abstract concepts into concrete students easily understand them.

Based on student responses it is known that 100% of students use learning resources in the form of textbooks from certain publishers, 85% use student worksheets. Students stated that they had never used an interactive e-book especially on global warming material. Students also stated that the need for interactive e-book development, especially in the matter of global warming. They hope that the e-book will be developed later to contain an attractive display, interesting images and animations, communicative languages, the existence of interaction spaces and interactive evaluation questions so that they can help students understand abstract material

## IV. Conclusion

The results of the research obtained will be used as a basis for developing an interactive e-book on global warming material. Most of the student and teacher respondents stated that they needed to develop interactive e-books, especially global warming material. They hope that the e-book that will be developed later can help students understand abstract material. Based on the respondent's teacher stated to contain an attractive appearance, interesting images and animations, communicative language so students are interested in learning and easy to understand

## Acknowledgments

The Author would like to thank the Postgraduate School Science Education Study Program for supporting this research

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