



## Effectiveness of Insect Encyclopedia E-Book With Mind Mapping Strategy to Train Students' Creative Thinking Skills

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### ABSTRACT

As technology advances, learning materials in learning are expected to be able to apply technological developments and practice the skills needed in the 21st century, namely communication and creative thinking. E-book, which was developed with a mind mapping strategy, is equipped with various features that can support student creativity. This study aims to produce an insect encyclopedia e-book with a mind mapping strategy to practice creative thinking skills for class X Senior High School which is declared effective. The effectiveness of the insect encyclopedia e-book in terms of learning outcomes, mind mapping skills and student responses. Creative thinking skill can be used to solve the problems and develop the idea. The method used is a modified research and development (R&D) method. The data collection technique was through validation, observation, questionnaires and tests. The data analysis technique was carried out quantitatively. Based on the results of the study, the average score of student learning outcomes was 82.60% and the N gain value was 0.50 in the medium category. The average score of students' mind mapping skills in the high category. And reviewed based on the skills of making mind mapping with good categories and based on student responses positively.

### INTRODUCTION

The rapid development of Science and Technology has an impact on the learning process in the world of education. Nowadays, learning is on the current conditions. Technology is the main need of students in the learning process. The use of smartphones properly can improve development in the field of learning (Wu & Cen, 2017). However, according to research conducted by Jet and Razak (2021) based on their research, many students use smartphones not for studying but for playing social media.

The main learning activity of a student is reading, students' interest in reading can be developed with the guidance of the teacher. Teachers are responsible for building knowledge and instilling experience in the learning process. There are many commercial products that can be used to access information such as books, media, and software. The development of technology that is put to good use can help students access information. Appropriate and appropriate learning media make students more focused, active and independent. Students are more interested in digital book services in the form of e-books compared to printed books (Hidayah et al., 2019). E-books provide easy access for students to get information anytime and anywhere. The learning process carried out using e-books can create an active and motivating learning atmosphere (Fathonah & Ratnasari, 2021). An active class situation and high motivation by students when studying can facilitate the achievement of learning objectives.

E-books were developed by utilizing the potential of the environment because based on research conducted by Wardhani & Kerlin (2019) the use of environmental potential

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