Development of Interactive Lift-The-Flap-Book Media Based on Deep Learning Principles to Enhance Elementary Students' Reading Comprehension

Kiki Febriyanti[1], Rusdhianti Wuryaningrum[2], Niswatul Imsiyah[2], Singgih Bektiarso[2], Iwan Wicaksono[2]

[1]Master's Student, University of Jember, Indonesia

[2]Lecturer, University of Jember, Indonesia

ABSTRACT: This study aimed to develop and examine the validity and effectiveness of a Lift-The-Flap-Book learning medium based on deep learning principles to improve elementary school students' reading comprehension skills in historical narrative texts. The study was motivated by students' difficulties in understanding abstract historical texts due to the dominant use of conventional textbooks and teacher-centered learning methods. This research employed a Research and Development (R&D) approach using the 4D development model, consisting of define, design, develop, and disseminate stages. The subjects were upper-grade elementary students at SD Negeri Gucialit 02, Lumajang Regency. Data were collected through expert validation sheets, reading comprehension tests (pretest and posttest), questionnaires, observations, and interviews. The results indicated that the developed media was highly valid, with validation scores of 98% from media experts, 96% from language experts, and 95% from content experts. The effectiveness test showed a significant improvement in students' reading comprehension skills, as reflected by N-Gain scores of 0.78 in the small-group trial and 0.77 in the large-group trial, both categorized as high. Therefore, the Lift-The-Flap-Book based on deep learning principles is valid, effective, and feasible for enhancing elementary students' reading comprehension skills.

KEYWORDS: Deep Learning, Elementary Education, Historical Narrative Text, Lift-The-Flap-Book, Reading Comprehension.

INTRODUCTION

Reading comprehension is a fundamental literacy skill that plays a crucial role in students' academic success, particularly at the elementary school level. Students are required not only to read fluently but also to understand, analyze, and interpret information contained in texts. However, reading comprehension learning outcomes in elementary schools often remain suboptimal, especially in texts that contain abstract concepts, such as historical narrative texts.

Observations conducted at SD Negeri Gucialit 02 revealed that although students showed a high interest in reading activities, they experienced difficulties in identifying main ideas, understanding sequences of historical events, and drawing conclusions from texts. Learning activities were dominated by lecture-based instruction and the use of outdated textbooks, with minimal support from interactive learning media. This condition resulted in low reading comprehension achievement.

Innovative learning media that are interactive, visual, and meaningful are therefore required. One alternative medium is the Lift-The-Flap-Book, an interactive printed book that allows students to explore information gradually by opening flaps. When integrated with deep learning principles that emphasize mindful, meaningful, and joyful learning experiences, this medium is expected to foster active engagement and deeper comprehension. Consequently, this study focuses on developing a Lift-The-Flap-Book based on deep learning principles and evaluating its validity and effectiveness in improving elementary students' reading comprehension skills.

MATERIALS AND METHODS (OR METHODOLOGY)

This study employed a Research and Development (R&D) approach using the 4D development model, which consists of define, design, develop, and disseminate stages. The research was conducted during the 2025/2026 academic year at SD Negeri Gucialit 02, Lumajang Regency. The subjects of the study were upper-grade elementary students (Grades IV and V). Data collection techniques included expert validation, reading comprehension tests (pretest and posttest), questionnaires, observations, and interviews. The validity of the learning media was determined through evaluations by media, language, and content experts. Meanwhile, the effectiveness of the media was analyzed using N-Gain scores derived from students' pretest and posttest results.

RESULTS

The validation results indicated that the developed Lift-The-Flap-Book achieved a high level of validity. The media expert evaluation resulted in a score of 98%, the language expert evaluation yielded 96%, and the content expert evaluation produced a score of 95%. These results suggest that the learning media meets the required standards in terms of visual appearance, linguistic accuracy, and content relevance for elementary school learners.

The effectiveness of the Lift-The-Flap-Book was assessed through small-group and large-group trials. The results showed a substantial improvement in students' reading comprehension skills. The small-group trial generated an N-Gain score of 0.78, while the large-group trial resulted in an N-Gain score of 0.77. Both scores fall into the high category, indicating that the media effectively enhances students' ability to answer explicit questions, identify main ideas, solve text-based problems, and draw conclusions from historical narrative texts.

DISCUSSION

The findings demonstrate that the Lift-The-Flap-Book effectively supports deep learning by promoting active student engagement and meaningful learning experiences. The interactive nature of the media encourages students to explore information independently and connect new knowledge with prior understanding. The visual and manipulative elements of the Lift-The-Flap-Book also help students comprehend abstract historical concepts more concretely. These findings are consistent with previous research indicating that interactive and student-centered learning media significantly improve students' motivation and reading comprehension skills.

CONCLUSION

Based on the results of the study, it can be concluded that the Lift-The-Flap-Book learning media based on deep learning principles is valid, effective, and feasible for improving elementary school students' reading comprehension skills. The implementation of this media contributes to better understanding of historical narrative texts and fosters meaningful, engaging, and joyful learning experiences. It is recommended that this learning media be utilized as an alternative instructional resource and further developed for other learning materials and educational contexts.

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