Development of Visual Information-Based Teaching Materials to Enhance Reading Skills in English Language Learning

by Sri Wahyuni

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Abstract

This study aims to develop valid, practical, and effective reading materials based on visual information for the English Education Program. The study is motivated by the lack of reading materials that utilize visual information in English language learning. The research uses the ADDIE development model, with data collection methods including observation, interviews, and documentation studies. The data obtained were analyzed using the SPSS software. The results show that: (1) in the analysis phase, a pressing need for the development of reading materials based on visual information to improve students' reading skills was identified; (2) in the design phase, the learning materials and visual information design received excellent ratings in accordance with the curriculum requirements and student characteristics; (3) in the development phase, the visual information book and its supporting system met high criteria for validity, practicality, and effectiveness; (4) in the implementation phase, the application of visual information had a positive impact on improving students' reading skills; (5) effectiveness testing showed that the use of visual information in reading skill learning was effective, with the t-test results showing that the t-value (4.697) was greater than the t-table value (1.69) and the significance level was less than 0.05 (0.000). In conclusion, the use of reading materials based on visual information has been proven to improve students' reading skills, showing a significant difference between the experimental group using visual information and the control group not using visual information.

INTRODUCTION

Reading plays a crucial part in the educational process and intellectual development. An A person's standard of living can be reflected in how they optimize their capacity. One effective way to enhance personal growth is through reading. It acts as a gateway for individuals to explore a wide range of understanding (Bambang, 2011).

Granger & Meunier (2008) stated The reading is not only a phase of educational comprehension but also an enjoyable activity because it yields favorable outcomes for the reader, particularly for learners of second languages. Uslu (2020) asserts that reading is an interactive meaning construction activity that includes components such as vocabulary, structural knowledge, semantic knowledge, background knowledge about content, and metacognitive skills necessary to understand written texts. Furthermore, Iwahori (2008) described reading as a very complex activity, as Deep understanding is required for real reading comprehension, the the capacity for evaluation, application, analysis, and inference.

Reading is recognized as a learning process that enhances knowledge and reveals the meaning embedded in written texts. According to Klingner et al. (2007), reading involves constructing meaning by integrating various complex processes, such as word recognition, vocabulary knowledge, and their overall impact. Within the scope of literacy, the ability to read is defined as the skill to connect written discourse with representations of experiences, thoughts, emotions, and ideas in a way that aligns with its intended meaning.

Reading skills are essential not only during formal education but throughout a person's life (Harsiati, 2018). This also means that the general purpose of reading is tto understand the writer's point of view to the reader by way of written (Inawati & Darningwati, 2020). According to a survey, 23.5% of Indonesia's population reads to gain new information. This aligns with Bambang (2011), who stated claimed that the Indonesian people do not yet consider reading to be essential.

Regarding English learners, reading is more than just comprehending a text; it also involves learning grammar and expanding one's vocabulary, and accurately pronouncing words. Babapour et al. (2018) emphasized that comprehension is a vital aspect of reading, describing it as a sophisticated mental process in which past experiences and knowledge significantly contribute to interpreting a text. Furthermore, reading comprehension is regarded as a multifaceted skill that requires both lower-level operations, like word identification, and higher-level operations, like extracting and integrating information from the text (Tavakoli, 2011). The improvement of these skills is influenced by various factors, with one key factor being the availability of instructional materials that meet students' needs.

The role of instructional materials is crucial, as they serve as the primary medium of learning. Through instructional materials, both teachers and students can understand the competencies that students need to master and the strategies that will be implemented to achieve learning objectives. Therefore, teachers are expected to create instructional materials that align with Students' learning objectives and requirements, as well as instructional materials designed by teachers., to better target students (Tomlinson, 2013).

Similar results were found in research by Nurhayati (2020), which indicated that reading materials developed based on ESP and e-learning criteria were categorized as excellent. The study also showed that the developed materials improved Students' ability to understand written texts. Studies carried out by Rijal and Egok (2019) also showed the reading materials following the

preview, question, read, reflect, recite, review (PQ4R) method helped students comprehend texts more effectively.

A Susanti et al. (2018) research demonstrated that the evolution of reading materials based on gender and cultural familiarity was effective in enhancing Reading comprehension skills of students. This indicates that applying equality of gender principles when creating reading materials can increase students' interest, both male and female. Furthermore, the cultural information, vocabulary, background, location, plus additional elements embedded in the materials that aid in activation prior knowledge, facilitating understanding throughout the process of reading comprehension.

The development of supplementary learning products, such as English Supplementary Materials based on Aswaja, is another effort To enhance The reading habits of pupils abilities. Andriyani et al. (2019) stated believe The primary source of information for reading instruction, while Supplementary books aid pupils in improving their sentence structure and vocabulary. structures, particularly for foreign language reading. Reading may be considered An interactive exercise aimed at understanding the meaning contained in the material.

From a review of existing studies, despite various findings on reading materials and other field discoveries, the researcher sees a gap in the research outcomes and believes there is a need for further research, particularly in the creation of reading materials that rely on visual data.

To improve students' ability to comprehend and manage information from reading materials, instructional materials must be developed with this objective in mind. These It is possible to develop materials using visual data, as visual information utilizes mental imagery that may improve pupils' comprehension of what they read (Zeigler & Johns, 2005).

Several Research has shown that incorporating graphic data in English instruction positively contributes to improving learners' proficiency in language. Research by Hashemi & Pourgharib (2013), Sadeghi, Karim, and Farzizadeh (2013), and Carney & Levin (2002) supports this perspective showed that visual information strengthens memory, enhances comprehension, and improves the acquisition of new English vocabulary. Furthermore, visual information-based learning has been shown to reduce students' Feelings of nervousness or stress experienced during English listening assessments. (Lee et al., 2015). Therefore, visual information-based language learning, especially in English, can improve students' vocabulary mastery, Productive and receptive skills. In light of this, several factors highlight the importance of researching and developing reading materials that incorporate visual information.

METHODS

This study is a Research and Development (R&D) study that uses the ADDIE development model. The instruments used to collect data in this study are: 1) Questionnaire; 2) Tests (pre-test and post-test); 3) Interview Guide; 4) Observation Checklist. This study uses two data analysis techniques: qualitative data analysis and quantitative data analysis. The qualitative data analysis technique uses a flow model. The first step in the flow model is data reduction. This technique is used to select data that appears in the written field notes. The last step is data conclusion or verification, which the researcher performs on the data.

RESULT AND DISCUSSION

1. Analyze Stage Results

During the analytical phase, the implementation of reading skill lessons in English at Universitas Tuanku Tambusai was examined through a questionnaire. The results revealed that the The creation of reading materials incorporating visual information is essential. This stage of analysis encompasses curriculum evaluation, needs assessment, and an examination of student characteristics, and analysis of the problems faced by students. Document analysis of the curriculum for the Study Programme in English Education at Universitas Pahlawan Tuanku Tambusai shows that reading is a crucial ability for pupils to acquire. This is evidenced by the presenting of A few mandatory reading programmes, such as Reading I, Reading II, and Reading III. The analysis of needs concluded that, overall, students still face challenges in beginning the process of drafting. The analysis of the traits of students, based on their reading skills and response to learning, also highlighted the issues students face. These issues related to instructional materials in the reading process were identified through a questionnaire, with the items Categorized into activities that are done before, during, and after reading.

2. Design Stage Outcomes

The research's design phase sought to ascertain the book's final layout. The analytical step served as the basis for the book's design. From the phase of analysis, it was determined that both faculty members and students need a book that motivates pupils to get proficient in the competencies anticipated while reading materials. Additionally, faculty members need a book that can assist them in teaching reading materials to students. Therefore, this design stage resulted in the creation of three books: 1) a book on development models, 2) a student textbook, and 3) a teacher's guidebook.

3. Development Stage Results

Product The stage is development of developmentnphase. During this phase, a number of actions were taken by the researcher, including: (a) conducting formative assessment, and (b) making changes to the prototype.

a. Conducting Formative Evaluation

1. Validation Findings of the Model Book for Reading Materials Based on Visual Information

Table 1. Validation Results of the Model Book for Reading Materials Based on Visual Information

Final Analysis of Model Book Validation Findings			
No	Evaluated Aspect	Average	Category
1	Content	4.42	Very Valid
2	Graphics	4.45	Very Valid
3	Language	4.04	Valid
4	Learning Category	4.33	Very Valid
	Average	**4.31**	Very Valid

Based on the table above, it can be concluded that the validation results carried out by the experts show that the model book for reading materials based on visual information received an average score of 4.31, which places it in the very valid category. The validation results from experts indicate that the book is very valid regarding language, learning categories, images, and content. According

to the feedback from six validators, the model book for reading materials based on visual information is deemed worthy of use with minor revisions.

2. **Results of the Teacher's Book Validation for Reading Materials Based on Visual Information**

Table 2. Results of the Teacher's Book Validation for Reading Materials Based on Visual Information

No	Evaluated Aspect	Average	Category
Final Analysis of Lecturer Book Validation Findings		
1	Content	4.47	Very Valid
2	Graphics	4.44	Very Valid
3	Language	4.32	Very Valid
4	Learning Category	4.33	Very Valid
	Average		Very Valid

Based on the table above, It is able to be concluded considering the teacher's book for reading materials based on visual information received a mean score of 4.39, which places It is highly legitimate category. The validation results indicate that the construction of the book, Regarding the content, graphics, Both language and learning categories are highly legitimate. According to every validator, the book is worthy of usage with a few simple adjustments, so all evaluated aspects are within acceptable criteria, and no major revisions or revalidation are necessary.

3. **Validation Results of the Student's Book for Reading Materials Based on Visual Information**

Table 3. Validation Results of the Student's Book for Reading Materials Based on Visual Information

No	Evaluated Aspect	Average	Category
Conclusion of Studens Book Validation Results		
1	Content	4.14	Valid
2	Graphics	4.31	Very Valid
3	Language	4.25	Very Valid
4	Learning Category	4.35	Very Valid
	Average	4.26	Very Valid

Based on the table above, It might be concluded that the student's book for reading materials based on visual information received an average score of 4.26, which places it in the very valid category. The validation The findings indicate that the development of the book, regarding the content, graphics, language, and learning categories, is valid. Every validator agreed that the book is worthy of usage with a few simple adjustments, so all evaluated aspects are within acceptable standards and don't need significant changes or revalidation.

b. Conducting Revisions

Following expert suggestions and feedback from the Focus Group Discussion (FGD), The items created in this study were revised, which include the models book, both the student's and the instructor's books. The current revisions resulted in Prototype II, which is valid and can proceed to limited testing. Based on the suggestions from the validators, revisions were made to the model of

visual information learning. While every validator supplied evaluations, some aspects of the model required improvement. These suggestions were incorporated, resulting in a valid learning model, and the revisions were made as part of the formative evaluation process.

4. Implementation Stage

The implementation of the model was carried out at Universitas Tuanku Tambusai through a limited trial. This trial was aimed at determining whether the model complied with the expected goals before moving to an expanded trial. Prior to the implementation, the researcher provided guidance to the instructors on how to use The classroom model. Furthermore, instructors were supplied with all development products, including the teacher's book, the student's book, and the model book, to help them understand the model's implementation.

Considering the outcomes of the trial conducted at Universitas Tuanku Tambusai, the use of The model of visual information learning in improving proficiency in reading achieved an 4.17 on average, placing it in the category of good. Following these results, an expanded trial of the paradigm for learning visual information for reading skills was carried out.

After the product revisions were made according to the validators' suggestions and evaluations, the next step was to conduct a small-group trial. Prior to the trial, talks were conducted with the educators and learners about the application of the model for visual information learning and the use of supplementary materials, such as both the student's and the instructor's books. During the trial, the model's implementation was influenced by the teachers' previous teaching habits, which could affect the results.

Once the product was revised, an expanded trial of the product was carried out. Before this trial, the researcher conducted discussions with the teachers, students, and observers to ensure thorough preparation.

5. Stage of Evaluation

a. Practicality Results

   1. **Practicality of the Model Book for Reading Materials Based on Visual Information**

The practicality of the model book for reading materials based on visual information was evaluated in terms of its practical application across each aspect of the evaluation criteria. The average score was 4.15, which places the model book in the **practical** category. Therefore, the model book is considered practical and suitable for use.

   2. **Practicality of the Teacher's Book for Reading Materials Based on Visual Information**

The teacher's book's usefulness for reading materials based on visual information was also evaluated. The average score was 4.15, which places the teacher's book in the **practical** category. Therefore, The instructor's book is considered useful and appropriate for use.

   3. **Practicality of the Student's Book for Reading Materials Based on Visual Information**

The practicality of the student's book for reading materials based on visual information was assessed similarly. 4.39 was the average score, which places the student's book in the very practical category. Therefore, the student's book is considered quite useful and appropriate for use.

b. Effectiveness

The effectiveness of the model was tested through a quasi-experiment. The object of this quasi-experiment was to compare the learning outcomes of students using the visual information model against those using a conventional learning model in terms of reading skills. This study's

quasi-experimental goal was to determine the advantages of The model of visual information learning over the standard model.

The results indicated A notable distinction between the experimental group, which used the visual information learning model for reading proficiency, as well as the control group, which didn't. In addition to the survey results, the researcher also assessed students' reading skills by administering a test. The students who were taught using the visual information learning model showed greater improvement than those who were taught using the conventional model.

CONCLUSIONS

Based on the findings presented in the previous chapters, it can be concluded that the use of visual information in teaching English reading skills at Universitas Tuanku Tambusai has a significant impact. The analysis stage highlighted the importance of developing reading materials based on visual information, as identified through surveys conducted during the research. In the design stage, it was established that both the design of English reading materials and visual aids effectively support the improvement of students' reading abilities, aligning with curriculum requirements and student characteristics. The development stage confirmed that the products, such as visual information books and supporting systems, meet high standards of validity, practicality, and effectiveness. During the implementation stage, the integration of visual data into the learning process had a substantial positive effect on students' learning outcomes. The effectiveness test further demonstrated that the use of visual information significantly improved students' reading skills in English. These conclusions affirm that the integration of visual information is relevant, effective, and can be widely applied to enhance English reading instruction at the university level.

CONFLICTS OF INTEREST STATEMENT

Regarding the publishing of this study, the authors state that they have no conflicts of interest.

AUTHOR CONTRIBUTIONS

Putri Asilestari conceptualized the research, designed the study framework, and developed the visual information-based reading materials. Zalisman contributed to the theoretical framework, supervised the research process, and provided critical feedback for revisions. Sri Wahyuni performed data analysis, validated the research findings, and contributed to the manuscript writing. Nurhidayah Sari assisted in data collection, coordinated participant involvement, and contributed to the revision and refinement of the manuscript. The final draft of the work was reviewed, approved, and discussed by all authors.

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