

DEVELOPING A LUMI-BASED INTERACTIVE E-BOOK FOR TEACHING PARTS OF SPEECH TO JUNIOR HIGH SCHOOL NU SYAMSUDDIN MALANG STUDENTS

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Email: Anisartg0@Gmail.Com**Abstract**

This research aimed to develop a Lumi-Based interactive e-book for teaching Parts of Speech to eighth- and ninth-grade junior high school students. Many junior high school students experience difficulties in learning English, particularly in understanding Parts of Speech. Limited vocabulary, low confidence in using English, and the use of conventional teaching methods and learning media often make grammar learning less engaging and effective. Therefore, there is a need for interactive learning media that can support students in learning Parts of Speech in a more meaningful and enjoyable way.

This research employed Design and Development Research (DDR) using the ADDIE model, which consists of Analysis, Design, Development, Implementation, and Evaluation. Data were gathered through classroom observations, interviews with the English teacher, questionnaires for students, and expert validation questionnaires. The developed product was a Lumi-Based interactive e-book containing explanation of eight categories of Parts of Speech, images, interactive exercises to facilitate students' learning.

The analysis stage revealed that students faced difficulties in understanding in understanding Parts of Speech because of fear of making mistakes, the lack of ability to understanding sentences in English, and the limited use of interactive learning media in the classroom. Following the development process, the e-book was evaluated media content, and language experts, and revision were made based on their feedback to improve the quality of product. The implementation results showed that the Lumi-Based interactive e-book received positive responses from students and was considered suitable for supporting the teaching and learning of Parts of Speech.

In conclusion, the Lumi-Based interactive e-book is a feasible and interactive learning media for teaching Parts of Speech to junior high school students. Its interactive features provide students with opportunities to learn independently while increasing their engagement and motivation in learning English.

Keywords: *Lumi education, interactive e-book, Parts of Speech, Design and Development Research, junior high school students.*

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1. INTRODUCTION

The ability to understand more than one language provides many advantages. Moreover, proficiency in English is very important because English is widely used as an international language in global communication, particularly in education technology, and the workplace

(Sepniwati et al., 2025). Many sources of information, such as academic journals, books, and digital platforms, are presented in English, so understanding English helps people gain more knowledge

However, English learning in schools still faces many challenges. The challenges are varied in students' backgrounds, such as prior experience in learning English, learning motivation, and learning style. In addition, limited learning media, including the lack of interesting teaching materials and the limited use of technology, also affect the effectiveness of the learning process (Songbatumis, 2020). These challenges make it necessary to create a more engaging learning process that meets students' needs. To address the challenges, learning media can be used to support English learning. One of the learning apps that can be used is Lumi. Lumi is a digital learning platform that helps teachers create interactive learning materials.

One of the problems regarding vocabulary mastery is the limited availability of the learning media used in high schools, especially in junior high school (Seliani et al, 2022.). One of the junior high schools is a junior high school in Malang named NU Syamsuddin. NU Syamsuddin was founded by the NU Foundation in 1982. It is located at Jl. L.A. Sucipto Gg. Pesantren 23, Blimbing, Malang Regency, East Java. Based on the initial observation done by the researcher, the researcher found that the students of junior high school NU Syamsuddin Malang still find difficulties in mastering english. The teachers confirm that they need learning media to help teachers and students in the English learning process. Therefore, the researcher is interested in developing interactive learning media for the students of NU Syamsuddin Malang using the Lumi platform. The purpose of this study is to develop a Lumi-based interactive e-book for junior high school students to learn parts of speech.

2. METHOD

2.1. Research Design

The design of the current research was Design and Development Research (DDR) designed by Richey & Klein (2014). DDR refers to systematic study that includes design, development, and evaluation processes to provide an empirical foundation for the production of instructional and non-instructional products. Additionally, it also establishes the existence of a new or enhanced model in its development is a systematic approach that involves designing, developing, evaluating instructional and non-instructional products, aiming to provide empirical evidence and create new or improved models (Richey & Klein, 2014). This study will focus on the development of an instructional learning medium in the form of a Lumi-based interactive e-book that will be used to teach parts of speech to junior high school students. This research will introduce differences in terms of learning content, media design, and evaluation procedures.

2.2. Research Procedure

In the current research, the researcher used Analysis, Design, Development, Implementation, and Evaluation (ADDIE). By using this model, the researcher started the analysis process by collecting data and information related to problems that occur in the location, this stage was used as a foundation for the next stage of development. As mentioned by Branch (2010), ADDIE is a design process with systematic approach that most commonly used.

2.2.1. Analysis

This stage will be conducted to identify the problems faced by junior high school students in learning English, particularly in understanding part of speech, and to ensure that the development of a Lumi-based interactive e-book will be an appropriate solution to address these problems. The research will be conducted at SMP NU Syamsuddin Malang as the research site. The researcher will interview English teacher about the problems students face in learning, as well as the learning media that the teachers usually use, and about the difficulties from the students when learning English

2.2.2. Design

The researcher will design a Lumi-based interactive e-book for teaching parts of speech to junior high school students based on the results on the analysis stage. The materials will include eight basic parts of speech: noun, pronouns, verb, adjectives, adverbs, prepositions, conjunctions, and interjections. The materials for each topic will be designed using simple and clear explanations, examples, images, and interactive practice activities to suit the students' level.

2.2.3. Development

The development stage, the researcher will create the learning materials, interactive practice activities for eight basic parts of speech, including nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions, and interjections using the Lumi application. Each topic will be developed using simple with detail explanations, clear examples, and supporting images. The researcher will create the images using AI Gemini to make the materials more interesting. The interactive activities will include multiple choice questions, true or false questions, matching exercises, and a glossary. The learning content will be validated by English teachers at junior high school NU Syamsuddin, the media will be validated by a media expert, and the English language will be reviewed by the researcher's supervisor.

2.2.4. Implementation

The fourth stage of this research will be implementation stage. In this stage, the Lumi-based interactive e- book will be implemented to the students and the teacher in the English learning process at Junior High School NU Syamsuddin. In addition, the researcher will be distributed questionnaires to students and teachers regarding the use of interactive e-book that has been shared.

2.2.5. Evaluation

In this stage, the researcher will evaluate the effectiveness and feasibility of the Lumi-based interactive e-book. The evaluation will be conducted based on the results of the implementation process. The feedback from the teacher and students will be used to identify the strengths and weaknesses of the product.

2.3. Research Setting

The research was conducted at Junior High School NU Syamsuddin Malang, located in Jl. L.A. Sucipto Gg. Pesantren 23, Blimbing, Malang Regency, East Java. The respondents of this study are described as follows: a) The students of grade 8th and 9th of junior high school NU Syamsuddin will be the respondents in the implementation stage; b) The English teacher of junior high school NU Syamsuddin will be the respondents in the analysis and evaluation stages.

2.4. Instrument of Data Collections

To support the data collection in this research, the researcher used several instruments, namely interview guide, observation sheet, and questionnaire. Each instrument was used based on the stages of the research.

2.5. Product Specification

The product produced in this research is a Lumi-based interactive e-book used as an English learning media for teaching parts of speech to 8th and 9th grade students. The e-book consists of eight parts of speech topics that are explained using simple language and clear examples. Each topic is supported by pictures to help students understand the material more easily. The e-book is designed with a main menu so student can choose the topic they want to learn. The images in the e-book are generated using AI Gemini to make the learning process more interesting. After studying each topic there will be interactive exercises or quizzes.

3. FINDINGS AND DISCUSSION

Development Result

Analysis

The first data collection was Interview. The interview was conducted with Mr. Galang, the English teacher, on February, 2, 2026. Based on the interview, it was found that many students considered English a difficult subject. According to Mr. Galang, students were worried about making mistakes. As a result, many students chose to remain silent during the lesson rather than participate in classroom activities. This situation made the learning process less interactive and affected students' confidence in learning English. Secondly, another problem was related the students' understanding of English grammar, especially parts of speech. As results, students experienced difficulties in constructing correct English sentences and understanding how words functioned in different contexts.

The second data collection was classroom observation. Based on the observation results, it was founded that most students remained passive during the learning activities. The students waited for the teachers' explanation instead of actively participating in learning activities. In addition, the learning media used in the classroom were still limited to printed books. These findings suggest that more interactive learning media are needed to encourage students' active participation and support the teaching and learning of parts of speech. Therefore, interactive digital learning media can help create a more interesting learning experience and encourage students to be more involved in the lesson while supporting their understanding of English grammar, especially parts of speech.

Design

Draft	Description
Chapter 1 (Noun)	• Introduction • Function • Types • Interactive quiz (Drag and drop, drag the words, mark the words)
Chapter 2 (Pronoun)	• Introduction • Function • Types • Interactive quiz (Multiple choice, fill in the blanks, true/false)
Chapter 3 (verb)	• Introduction • Function • Types • Interactive quiz (Multiple choice, essay, mark the words, drag the words)
Chapter 4 (adjective)	• Introduction • Function • Types • Interactive quiz (drag the words, fill in the blanks)
Chapter 5 (adverb)	• Introduction • Function • Types • Interactive quiz (multiple choice, drag the words, mark the words)
Chapter 6 (Preposition)	• Introduction • Function • Types • Interactive quiz (Drag and drop, True/false question, Multiple choice)
Chapter 7 (conjunction)	• Introduction • Function • Types • Interactive quiz (Multiple choice, Mark the words, fill in the blanks)
Chapter 8 (Interjection)	• Introduction • Function • Types • Interactive quiz (Drag and drop, multiple choice)

Fig 1. Structured plan before designing the product

After planning the content, the researcher designed the visual appearance of the interactive e-book. The design includes a simple layout, colourful illustrations. Readable fonts, and easy navigation to make the e-book more interesting and easier for junior high school students to use.



Fig 2. Initial Cover Design of the Lumi-Based Interactive e-book

Overall, the visual design of the interactive e-book was planned to be simple, colourful, and easy to use for junior high school students. The design was expected to help students stay focused, increase their interest in learning English, and make it easier for understand parts of speech.

Development

The researcher began by collecting and adapting learning materials from various sources, including the English textbooks, and other relevant references. After that the researcher created the interactive e-book with Lumi by arranging the learning materials and incorporating a range of interactive activities. After the development process was completed, the researcher reviewed the content, layout, navigation, language, and interactive features to ensure that the

e-book functioned properly. Researchers divide the development process into two stages, as follows:

A) Developing Interactive E-Book Using Lumi

The materials were then adapted using simple language, clear explanations, and relevant examples to match the learning needs of Junior high school students. This process helped ensure that the content was easy to understand while maintaining the accuracy of the materials. The completed document was then used as the main reference for developing the interactive e-book using Lumi.



Fig 3. The Process of organizing materials

After the learning materials had been prepared, the researcher organized the materials into Lumi on the structure that had been planned in the design stage. The researcher also added different types in each chapter of activities, fill in the blank, true or false questions, drag and drop, fill in the blanks, and mark the words activities.

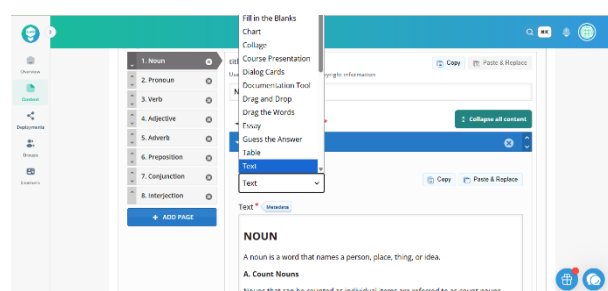


Fig 4. Sample of developing one chapter in Lumi

Supporting illustrations were also added to make the presentation more interesting and relevant to the topic. This introduction page serves as the main material before students continue to the interactive exercises.

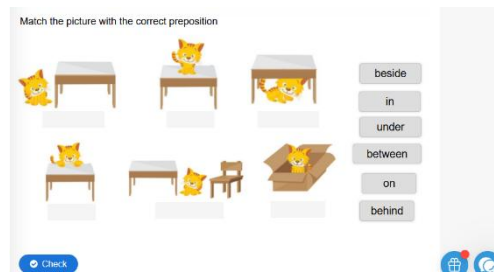


Fig 5. Sample of drag and drop interactive exercise

During this stage, the researcher also prepared several visual materials before developing the e-book in Lumi. Canva was used to design several learning pages and arrange the materials with supporting illustrations.



Fig 6. Sample materials designed at Canva

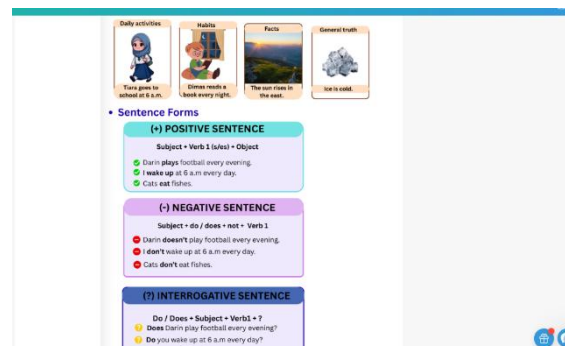


Fig 7. Sample materials designed at Canva



Fig 8. Sample of Generating Illustrations using AI assisted tools

B) Expert Validation

The validators were also given the opportunity to provide comments and suggestions to improve the quality of the interactive e-book. The involved in this research were Ms. Aulia Nourma Putri, S.S., M.Pd., as a language expert validator, Ms. Nafisya Alfiani Aisya, S.Pd., M.Pd. as a media content expert validator.

Table 1. Standart of Validity

Validity Criteria	Level of Validity
81% - 100%	Excellent (can be used)
61% - 80%	Good (can be used)
41% - 60%	Good enough (should be change)
21% - 40%	Bad (should be changed)

i. Language Validation

Based on the language validation results, the interactive e-book obtained a total score of 36 out of 40. The average was 3.6 3.6 out of 4, with a precentage of 90%. Based on the assesment criteria, this result is catogorized as excellent. This indicates that the language used is appropriate for junior high school students. Based on the comment and suggestions from the language expert, several revisions were made to improve the quality of the product.

ii. Media Content Validation

Based on the content validation results, the interactive e-book obtained a total score of 27 out of 32. The average score was 3.4 out of 4 with a precentage of excellent. This means that the learning materials in the interactive e-book are appropriate for junior high school students. Based on the suggestions from the content expert, several revisions were made to improve the quality of the interactive e-book.

Implementation

Through this activity, the students were able to apply what they have learned while becoming familiar with the interactive features available in the learning media. The researcher guided the students throughout the activity to ensure that they could use the e-book properly. After the learning activities were completed, the researcher asked the students to fill out a questionnaire about the interactive e-book. The questionnaire was distributed to gather the students' feedback on the learning media after they had experienced using it. The students completed the questionnaire individually based on their opinions and experiences during the implementation process. Overall, the implementation stage was completed successfully. Both the students and the teacher had the opportunity to use and evaluate the interactive e-book. The students participated in the learning activities and filled out the evaluation questionnaire. Meanwhile, the English teacher reviewed the product and provided an assessment through the teacher evaluation questionnaire. The data collected from both questionnaires were then analysed in the evaluation stage to examine the quality of the developed interactive e-book.

Evaluation

Based on the result, the students gave positive responses to the Interactive e-book. Most of the responses were "agree" and "strongly agree" across all 14 statements. This indicates that the

students found the interactive e-book easy to use and considered the learning materials, examples, and interactive activities helpful in supporting their understanding of Parts of speech. In addition, the students also gave positive responses to the visual appearance of the e-book. Overall, the students were satisfied with the Lumi-Based Interactive e-book and considered it helpful for learning parts of speech. The English teacher also evaluated the interactive e-book by completing the teacher evaluation questionnaire. Based on the results, the teacher selected “strongly agree” for all statements. Based on the evaluation results, the Lumi-Based Interactive e-book received positive feedback from both students and the English teacher. Most students enjoyed using the e-book and found it helpful in understanding the materials. The teacher also gave a positive evaluation of the product and considered it suitable for classroom use.

Discussion

This finding is in line with (Hustiana, 2023), which explains that combining text, images and interactive elements can help students understand learning materials more easily. As mentioned by (Silvih et al., 2025), well designed learning media can improve students' understanding by presenting information through both visual and verbal forms. These findings suggest that interactive learning media can reduce students overcome learning difficulties and create more meaningful learning experience. During the implementation stage, the students participated actively in the learning activities. The students listened to the explanation, completed the interactive exercises, and took turns using the interactive e-book. (Rosmiati, 2019) stated that interactive learning media developed through the ADDIE model can improve students' participation and more engaging learning environment. After the learning session, the students completed an evaluation questionnaire, and most of them gave positive responses. The teacher also give positive feedback and considered the interactive e-book suitable for supporting the teaching parts of speech in the classroom.

4. CONCLUSION

This research successfully developed a Lumi-based interactive e-book for teaching Parts of Speech to junior high school students using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). Developed to address students' difficulties with grammar concepts, the eight-chapter e-book incorporates simplified materials, interactive exercises, quizzes, and immediate feedback. Expert validation confirmed its high quality across content, language, and media design, leading to minor refinements prior to classroom implementation. During trials, students demonstrated active engagement with the interactive features, while post-implementation evaluations revealed highly positive feedback from both students and the English teacher regarding its usability, clarity, and visual appeal. Ultimately, the Lumi-based interactive e-book proves to be an effective, engaging, and suitable supporting learning medium for enhancing junior high school students' understanding of Parts of Speech.

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