Discourse Analysis in Developing Multimodal E-Book Teaching Materials using Book Creators in Psycholinguistics Lessons

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ABSTRACT

This study aims to conduct discourse analysis for the development of multimodal ebook teaching materials using book creators in psycholinguistics lessons at Universitas Negeri Medan. Engaging with over a hundred students from the Indonesian Language and Literature Education Study Program, the research embarks on an exploratory journey. Through meticulous discourse analysis, the inquiry seeks to comprehend student engagement and preferences within the domain of psycholinguistics. Employing a thorough methodology involving observations, interviews, and questionnaires, the study unveils prevalent pedagogical trends and identifies avenues for progress. While conventional textbooks and journals remain prominent, students demonstrate a distinct inclination towards digital resources, signaling a burgeoning demand for immersive learning experiences. Introducing multimodal ebooks, poised to revolutionize education with dynamic and interactive content, the study endeavors to leverage state-of-the-art book creation technology. By tailoring teaching materials to the nuances of psycholinguistic pedagogy, the study aims to foster enthusiasm among learners and empower them with engaging educational tools.

1. Introduction

Psycholinguistics is a linguistic science which is classified as new compared to other linguistic sciences. However, this does not mean that it is not interesting to study. Psycholinguistics is a combination of two sciences, they are psychology and linguistics (Pamuji & Thobroni, 2019a). The existence of psycholinguistics was due to psychologists’ interest in psycholinguistics and vice versa. Despite being distinct scientific fields, these two sciences share a common object of study—language, (Barus et al., 2020). In a simple mean, psycholinguistics can be interpreted as the science of language which studies how the language process occurs. Moreover, it can be said to be a science which studies the structure of language, how language structure is obtained, its usage in speaking, and the understanding of these utterances
Psycholinguistics is one of the mandatory lessons that must be taken by fourth semester students at the Indonesian Language and Literature Education Study Program, Universitas Negeri Medan. This subject is 2 credits (100 minutes) and is carried out in one meeting every week. It is held in 16 meetings. The achievement of this subject is that the students can understand and criticize psycholinguistic concepts which include language learning, language acquisition, language development, language disorders, and second language learning. The materials are carried out with theory, discussion, and assignments from the KKN (Indonesian National Curriculum Framework) including six assignments consisting of routine assignments, simple research, book reviews, critical journal reviews, idea engineering, and projects.

The learning process is a complex activity. Many things are involved to support the success of a learning process which include: the teachers, students, teaching materials, learning models, and others. All of these aspects must be considered in order to achieve the learning objectives. (Nurlaila, 2020) states that there are four factors that influence the success of language learning: student, teacher, environmental, and social factors. Teaching materials is one of the things to support the learning. Teaching materials are everything that the teachers use in the learning process and the purpose is to facilitate the learning achievement. Teaching materials usage in learning improves the memory and can last a long time, especially varied teaching materials (Kosasih, 2021). Teaching materials have many advantages, including 1) providing direct (concrete) learning experiences, 2) being able to represent things that cannot be presented in class, 3) broadening the horizons of thinking, and 4) helping to solve educational problems and increasing creativity and fostering new skills (Kosasih, 2021).

Based on the previous observations, the teaching materials used in the psycholinguistics lessons in the Indonesian Language and Literature Education Study Program have not varied yet. From the observations conducted, the teaching materials used during the learning process are books, journals and worksheets. Apart from that, based on the unstructured interviews with the students, they confirmed that the use of teaching materials in this subject was less interesting. Using less teaching materials also impacts the achievement of lesson outcomes. This is supported by previous research (Ritonga, 2022) that states in a needs analysis that: 1) textbooks are needed as a reference in the learning process, and 2) students expect psycholinguistic textbooks which are not different from everyday life. This is in line with a research conducted by (Pamuji & Thobroni, 2019) which states that so far the problem with Psycholinguistics lessons is the learning process which only takes the form of discussions and presentations that make the students feel bored. The teaching materials used are only based on books and literature from the internet and that is not optimal, said the students.

Much research has been carried out on teaching materials, including (Cahyadi, 2019) with the title "Development of Teaching Materials Based on the ADDIE Model". His research revealed that the role of educational technology in developing quality learning that leads to solving student learning problems can be designed using learning resources, including teaching materials. The development of teaching materials needs to refer to the development model to ensure the quality of teaching materials in supporting effective learning. One design for developing teaching materials that is often used is the ADDIE Model which 5 stages: Analysis, Design, Development, Implementation, and Evaluation. In a further development, the development of the ADDIE Model is often used in the development of teaching materials such as modules, worksheets, and textbooks.

The development of teaching materials can be done using discourse analysis. Discourse is a language unit based on words used to communicate in a social context. The unit can be a series of words or utterances. Discourse is divided into two, namely oral and written discourse. Meanwhile, discourse analysis is the analysis of language in its use (Rohana, 2015). In other words, it can be said that discourse analysis is an in-depth understanding of the text and its context. Teaching materials are a complex discourse. In the context of developing psycholinguistic teaching materials, discourse analysis can help design materials that are based on fundamental concepts in psycholinguistic studies, such as human language processes and language acquisition.

Digital book or often called e-book is one of the teaching materials that can be used by teachers. It is one of the popular and widely used teaching materials recently. They usually consist of text, images, video and sound which are available in digital form and can be read on a computer, android or tablet. The e-books can be said to be a development of printed books so that they are more practical to use (Mentari
et al., 2018). E-books can be studied by the students independently due to their systematic and complete preparation like physical books (Wilyanti et al., 2021).

E-books can also improve learning outcomes. This is in line with what was found by (Mentari et al., 2018) in a research which showed that the use of e-books can increase students' critical thinking skills. A similar opinion was expressed by (Hayati & Azizah, 2021) that e-books need to be developed to make them easier for students to understand the material well. Furthermore, (Lestari, 2022) suggested that teaching materials are packaged in e-book creators; 2) integrating the multimedia in teaching materials; and 3) integrating the digital storytelling in teaching materials; and 4); providing the materials based on the learning plan. This study has implications for digital-based teaching as a means of transmitting innovative and diverse knowledge.

One of the e-book types that can be used is multimodal e-book. It provides images, text, sound, and video. The use of multimodal e-books has advantages compared to other e-books because they are considered more interesting and more interactive (Wahyuni, 2023). Other research which states that multimodal e-books have advantages (Wahyuni, 2023) stated that the developed e-book can convey multi-representation in an integrated manner and is based on validation results and practicality with a valid category. Nowadays, there are many applications that can be used to create e-books. One of them is a book creator. It is an application that helps in creating e-books. Using this application is very easy and interactive. Using a book creator can improve the students' learning outcomes in argumentative writing. Apart from that, the students are also very enthusiastic using it. In line with this research, (Maharani, Anak Agung Putri Santos, 2019). In line with this research is (Mardiana et al., 2022) stated that culture-based writing projects using book creators are easier for students to develop ideas. This is shown by the percentage of the respondents' answers from 12 students or 82% of students really liked the teaching materials. The purpose of this research is to examine discourse analysis for the development of psycholinguistic teaching materials in the form of multimodal e-books using a book creator application.

2. Method

This qualitative descriptive research aims to elucidate the process of discourse analysis for the development of psycholinguistic teaching materials, specifically multimodal e-books created using book creators. Conducted between April and May 2023, the study was carried out within the Indonesian Language and Literature Education Study Program at Universitas Negeri Medan. The research involved 102 students enrolled in the Psycholinguistics course. Data collection commenced with a comprehensive approach, including observation, interviews, and the distribution of questionnaires via Google Form. The initial stage of data analysis involved data reduction, wherein observations, interview transcripts, and questionnaire responses were systematically compiled and organized. Subsequently, the gathered data were subjected to meticulous examination to identify recurring themes, patterns, and emerging insights. The presentation of findings was structured based on the outcomes of the observation sessions, insights gleaned from interviews, and the responses obtained from the questionnaires. Following the data presentation phase, the research proceeded to draw conclusions utilizing the triangulation method. Triangulation involved cross-referencing and comparing data from multiple sources to validate findings and enhance the credibility of conclusions drawn. By triangulating data obtained through observation, interviews, and questionnaires, the study ensured a comprehensive and robust analysis of the discourse surrounding the development of psycholinguistic teaching materials.

3. Result

Focus on discourse analysis to identify the needs and preferences of students in psycholinguistics learning, and how the use of multimodal teaching materials can affect their understanding of psycholinguistic concepts. Discourse analysis was conducted through observation, interviews, and giving questionnaires to all the students who take the Psycholinguistics lessons. The observations results in the learning process are as follows: 1) The learning process was conducted by using group discussions, after the students completed the group discussion, the teacher will provide reinforcement related to the material that has been discussed together, 2) The students are not enthusiastic about the lessons, This can be seen from some students did not pay attention to their friends during the discussion activities, 3) The teaching materials used are books and journals, and 4) The interaction in the learning process is not interactive because only a few people are active in discussion activities.
Based on the interview results on the lessons, the following results were obtained as follows 1) Psycholinguistic learning is less popular for students because the teaching materials are not yet varied, 2) The students have difficulty in obtaining the psycholinguistic teaching materials that are easily accessible, 3) The teaching materials used are only books and journals, and 4) the students need learning videos to support the learning process in the classroom. The questionnaire was given via Google Form. The purpose of the questions asked was to determine the need level Psycholinguistics teaching materials. Based on the questionnaire, some results were obtained as follows.

Table 1. Need for Psycholinguistic Teaching Materials

<table>
<thead>
<tr>
<th>Questions</th>
<th>Results</th>
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<tbody>
<tr>
<td>The use of Psycholinguistics teaching materials</td>
<td>73.5% books, 20.6% journals</td>
</tr>
<tr>
<td>The influence of the teaching materials usage on enthusiasm for learning</td>
<td>93.1% influenced, 6.9% not influenced</td>
</tr>
<tr>
<td>The students’ introduction to ebooks</td>
<td>99% know, 1% don’t know</td>
</tr>
<tr>
<td>The importance of explanation in videos</td>
<td>96.1% important, 3.9% unimportant</td>
</tr>
<tr>
<td>The students’ understanding of multi-dimensional ebooks</td>
<td>47.1% know, 52.9% do not know</td>
</tr>
</tbody>
</table>

4. Discussion

Based on the results of observations, it can be seen that in general, learning activities are carried out with discussion activities. This is good for the lecture process. Each group will present the material they are responsible for. The lecture process begins with a presentation of material from the group, followed by a discussion (question and answer). It’s just that in the observations made it appears that students are not enthusiastic about attending lectures. The discussion process looks monotonous. Only a few students gave questions and attention. Research (Ali & Mulu, 2020) states that not all students are active in participating in discussion activities and students lack responsibility for studying in depth (studying) the material provided. The use of references in discussion activities is also very limited, this can be seen from the papers presented and references in answering questions from discussion participants. A similar thing was also conveyed by (Febrian et al., 2023) that many students take invalid references due to difficulty finding adequate references. Apart from that, problems also arise from students’ lack of skill in finding learning resources from journals (Malahayati & Zunaidah, 2021).

The interview results also showed that only a few students were active in class. This is because psycholinguistics learning for some students is boring. After all, it is mostly theoretical. Apart from that, there are many new terms for fourth-semester students, especially those related to psychology. Based on the observations results, interviews and questionnaires that have been filled out by the students, so far the psycholinguistics lesson mostly used teaching materials in the form of books, as in the percentage in the graph below.

![Image of a graph showing the percentage of types of psycholinguistic teaching materials]

The above graph shows that the most widely teaching materials used were books (73.5%) followed by journals (20.6%). From these results it can be seen that the teaching materials used do not vary. The interviews with the teachers also stated that the most common teaching materials used in this course were books. The students are required to have a psycholinguistics book (at least two) and much of the discussion
material is taken from the book. On the contrary, the percentage for ebooks and learning videos was still low. The teaching materials usage that do not vary is one of the factors in having no achieving lessons outcomes. This is also supported by the interviews with the students who stated that they really expected the use of varied teaching materials in this course. The psycholinguistics lesson is one of the lessons that requires high concentration because it is a hybrid course. The students of the Indonesian Language Education Study Program surely must understand the science of psychology generally to understand this subject.

A similar thing was also stated by (Harahap & Abidin, 2021) who stated that the use of teaching materials that are interesting to students can improve student learning outcomes. This can be seen from the learning outcomes which have experienced significant changes. In addition, research (FH et al., 2021) shows that increasing learning outcomes from the use of digital teaching materials can improve student learning outcomes. The teaching materials usage also influences the students’ enthusiasm for taking this subject. This can be seen from the questionnaire results obtained that 93.1% of respondents stated that the teaching materials usage influenced their enthusiasm for lectures. Based on this, it shows that the use of varied teaching materials is very necessary in psycholinguistics lessons. This is because the students quickly feel bored or fed up if the teaching materials provided are not interesting. Using a variety of teaching materials will make the learning process more colorful and not monotonous.

Research (Nuryasana & Desiningrum, 2020) also states that the use of learning influences student learning motivation with motivation levels reaching 89.2% by administering questionnaires to students. This is also in line with research conducted by (Setyawati et al., 2022) that the resulting teaching materials increase student motivation. There is a significant difference between the pre-test and post-test results where the pre-test average is 66% in the Fairly Good category, and post-test 85% in the Very Good category. (Simamora et al., 2022) also said that the use of project-based e-books can motivate and make it easier for students to learn. The era of the Industrial Revolution really requires lecturers to be more creative and innovative in utilizing information technology which is always developing rapidly (Yuniartika, 2022). Technology cannot be separated from the world of education. Technological developments also influence the world of education (Munawar, 2020). Variations in teaching materials that use technology are very necessary in psycholinguistic teaching materials. The use of technology in preparing teaching materials has a good impact on learning outcomes. Research (FH et al., 2021) states that digital teaching materials can improve student learning outcomes. This is based on the average pretest score of 52.73 and the average posttest score of 91.59. It can be concluded that there is an increase in learning outcomes of 38.86 and N gain of 0.82 in the high category. Thus it can be said that the use of interactive digital teaching materials has a potential effect on student understanding and learning outcomes. Furthermore, research conducted by (Trinaldi et al., 2022) stated that technology-based teaching materials can improve students’ abilities and creativity. Digital-based teaching materials can also increase student motivation for learning. Using this teaching material has the advantage that it can be used anytime and anywhere.

![Pie chart showing the percentage of influence of teaching materials usage on enthusiasm for learning.](attachment:pie_chart.png)

**Picture 2.** The Percentage of the influence of teaching materials usage on enthusiasm for learning

Totally 99% of respondents were familiar with ebook teaching materials. Nowadays, out of printed books, digital books are one of the teaching materials that are popular with students since it is easy to use and can be accessed anytime and anywhere. They can also access these teaching materials via their devices so their use is very practical and efficient. The interview results also showed that the students liked using ebooks because of the practicality. The students can access it anywhere and anytime. Besides that, the teachers also provide ebooks as additional references in this subject that almost all students are familiar with ebooks. Based on theory, it is revealed that classes use ebooks increase the students’ interest more than
those who only use printed books. This is in line with a research (Rachmadyanti & Gunansyah, 2020) which revealed that the students' responses on the development of ebooks in the Advanced Social Sciences Basic Concepts for UNESA PGSD students obtained 80% for practicality and 83% for attractiveness of the ebook. Moreover, (Wilyanti et al., 2021) revealed that the drama ebooks produced were valid, practical and effective to use. This is proven by the results of the ebook validity test which obtained an average score of 83.85 and the results of the effectiveness and practicality test were 83.25.

The questionnaire results also show that the teaching materials usage in explanatory videos is highly expected in this subject. Totally 96.1% of the students need an explanatory video in this subject. Psycholinguistics is a subject that requires the students' seriousness to achieve their learning goals. This means that an explanatory video is needed to support the understanding that has been received in class. A research (Juanda, 2022) reveals that the video tutorials usage can help the students carry out the practice both in groups and personally. This also shows that explanatory videos can help the students' understand in learning.

Psycholinguistics is one of the theoretical lessons in the Indonesian Language and Literature Education Study Program. In addition to classroom learning, this subject also requires explanatory videos, either made by the teacher himself or from other sources, to support students' understanding of achieving course achievements. From the interviews it was seen that explanatory videos were needed to increase the understanding of the material discussed in the class. According to the students, by studying for two credits, the material will not be achieved optimally. Therefore, an explanatory video is needed to make the students understand the learning material more easily. On the contrary, since psycholinguistics is also linked to psychology (in general), there are terms in psychology which are also discussed in this subject, so an explanatory video is needed to facilitate students' understanding on the material presented. Multimodal ebook is one of the teaching materials that can be used. This ebook type is a combination of writing, images, video and audio. This combination will create the designed teaching materials to facilitate all the students' learning needs so that learning will be more interesting and have an impact on subject achievement. Totally 44.1% of students in the Indonesian Language and Literature Education Study Program (taking psycholinguistics lessons) were familiar with this type of ebook. From the questionnaire results, it is certainly necessary to introduce and use multimodal ebooks in the learning process.
The development of teaching materials using multimodal ebooks (Munawwarah et al., 2022) reveals that teaching materials are linked to real life so that they are interesting to readers. This e-book also combines the three chemical representations in a complex way. These aspects are symbolic, macroscopic and sub-microscopic. A small part of the teaching materials also displays videos with symbolic representations in the reaction equations, element symbols, ions and electrons.

**Picture 5.** The percentage of the students who are familiar with multimodal ebooks

Ebook creator is one of the applications for creating multimodal ebooks. This application can be used to make ebooks more interesting. This is because it provides various features that make it easier to create multimodal ebooks. From the questionnaire results, it was found that only 47.1% of the students were familiar with this application. This shows that this application needs to be introduced to the students because 52.9% are not familiar with the ebook creator.

**Picture 6.** The percentage of the students who are familiar with the book creator

Furthermore, regarding to the development need of psycholinguistic teaching materials, from the questionnaire it was obtained that 93.1% asked for the development need of psycholinguistic teaching materials using book creator. This data show that the students need a variety of teaching materials to support the learning process.

**Picture 7.** The development need of psycholinguistic teaching materials (Multimodal Ebooks) using book creators

The research on book creators in the learning process shows a significant increase in the students’ abilities. A research conducted by (Maharani, Anak Agung Putri Santosa, 2019) revealed that the use of book
creator-based modules can improve the students' ability in writing the argumentative texts. Then, (Puspitasari et al., 2020) stated that the students' responses to the learning implementation showed a positive response to the differentiation model using book creators. This is shown by the percentage of respondents' answers from 12 students that 82% of students who really liked the teaching materials used. Based on the interviews results, observations and questionnaires, it can be seen that psycholinguistic teaching materials are needed in the Indonesian Language and Literature Education Study Program. The expected teaching materials are teaching materials in ebooks which can increase the students' enthusiasm in this subject. Therefore, it is necessary to develop psycholinguistic teaching materials (multimodal ebooks) using book creators. With this teaching material, it is expected that it can help the students to achieve their learning target. The resulting teaching materials will be different from previous research. This is because the teaching materials that will be produced are more comprehensive by using multimodal (text, images, videos) so that the teaching materials that will be developed cover all the students' learning styles.

5. Conclusion
Based on the comprehensive analysis of observations, interviews, and questionnaire responses, it becomes evident that there exists a pressing need for diversification in teaching materials within the realm of psycholinguistics. The current landscape of teaching materials offered within the Indonesian Language and Literature Education Study Program lacks the desired variety and innovation required to engage and inspire students effectively. The findings underscore the imperative for the integration of digital teaching resources, particularly multimodal ebooks enriched with diverse multimedia elements such as text, images, and videos, facilitated by book creator tools. Such dynamic and interactive teaching materials hold the promise of enhancing student engagement and enthusiasm throughout the learning process. By catering to diverse learning styles and preferences, these digital resources have the potential to invigorate the psycholinguistics curriculum, fostering deeper understanding and retention of key concepts. Moreover, the development of innovative teaching materials is anticipated to yield tangible benefits beyond mere engagement, extending to improved academic performance and subject achievement. Enhanced enthusiasm among students is poised to translate into heightened motivation and diligence in mastering psycholinguistic concepts, ultimately contributing to more meaningful and impactful learning outcomes. Moving forward, future research endeavors may explore the efficacy and effectiveness of employing e-books and Book Creators as pedagogical tools in enhancing students' comprehension and retention of psycholinguistic principles. By conducting empirical studies and rigorous assessments, educators and researchers can further elucidate the transformative potential of digital teaching resources in optimizing the teaching and learning experience within the domain of psycholinguistics.

Declaration of Conflicting Interest
The authors declare that there are no conflicting interests regarding the publication of this research article.

References
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