Students' Responses on Using Interactive E-module Based on Multimodal Text as a Self-Study Learning Resource for an English Structure Course

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Abstract
This study aimed to see how English students at one university in Indonesia responded on the use of an interactive e-module based on multimodal text as a self-study learning resource for an English Structure course, this e-module was developed in supporting digital-based learning at one public university in Indonesia. The research followed a systematic Research and Development (R&D) approach and applied the ADDIE model, which encompasses five stages: analyze, design, develop, implement, and evaluate. The e-module was designed to include animated videos and interactive quizzes integrated into a Flipbook maker application. It comprised six chapters, each comprising several sections: video explanations, text descriptions, examples, interactive quizzes, and chapter summaries. After the e-module was assessed as a valid learning medium by both media and content experts, the e-module was piloted to a group of students at the university under investigation. Their feedback demonstrated a very positive response, with the e-module receiving high ratings for its attractiveness (3.63) and convenience (3.58) aspects. Data from qualitative feedback also show that the students found it useful and interesting to use the e-module. Thus, it can be inferred that the e-module exhibits excellent quality, encompassing both content and media elements, rendering it a well-suited digital learning resource for the Intermediate Structure course within the English Department at the university under investigation.

Keywords: Interactive E-module, Multimodal Text, Learning Resource, English Structure

Introduction

In the fast-changing landscape of education, the integration of digital technology has become a paramount driving force in transforming the way we learn and teach. This paradigm shift is evident across the globe, transcending geographical boundaries and making its mark in unexpected corners of the world. This shift is not only triggered by the fast developing nature of technology in every course of life in the last twenty years, but also facilitated by pandemic and life after pandemic itself (Kerres & Buchner, 2022). Digital based learning with a massive integration of technology into learning activities has been inevitable and a positive phenomenon in the education landscape (Susilawati & Budimansyah, 2019).

The integration of technology has been evidenced in many facets of teaching and learning, starting from learning resources, learning strategies, learning media, and learning tools. In the context of learning resources, in particular, many studies show that teachers have developed many e-learning resources which include learning media, video, game, as well as electronic module (Daud et al., 2022; Falloon, 2020; Rahman et al., 2019).

An e-module can be developed using multimodal text as it is evidenced that multimodal text can enhance the quality of communication, including the quality of learning resources such as e-module (Cahyaningati & Lestari, 2018). Multimodal text is a dynamic form of communication and diverse that combines various modes of representation in one text (Bezemer & Jewitt, 2010). This mode includes, however not limited to, written or printed words, images, sounds,symbols, gestures, and even spatial organization (Dicks et al.,2006). The essence of multimodal texts lies in their capacity to convey information, emotions, and messages through the interaction of these various modalities (Macken-Horarik, 2004). Unlike traditional text forms, which rely primarily on words to understand the meaning, multimodal texts make use of the power of various modes, which also create experiences that is richer and deeper for the audience.

This study is situated at on English Education Department oat one state university in Indonesia. It addressed issues of scarcity of digital based learning resources in this particular university. The need for developing e-learning resources is not only triggered by the fast developing of technology, but it is also pushed by the need for self-study learning resources for English students, particularly in the English Structure course. This study unravels a captivating journey into the implementation and impact of an interactive e-module infused with multimodal text elements.

Methodology

The interactive e-module was developed using a systematic Research and Development (R&D) approach, with the guiding principles of the ADDIE model – Analyze, Design, Develop, Implement, and Evaluate. This multimodal based e-module showcases an amalgamation of engaging elements, ranging from animated videos to interactive quizzes, all seamlessly integrated into a Flipbook maker application. It is a comprehensive six-chapter resource, each chapter meticulously structured to encompass video explanations, text descriptions, illustrative examples, interactive quizzes, and chapter summaries.

The e-module developed in this study was tried out and used by students under investigation. This particular study reports one of the ADDIE stages, which is the implementation phase,

and seeks to find out how the students responded to the e-module which has been developed. Their responses were recorded and collected by distributing a set of questionnaires.

The research participants consisted of 42 students from the batch of 2022 who were registered at Faculty of Teachers Training Program, English Department, at one university in Indonesia. Data collection was carried out through a Likert scale questionnaire consisting of statements asking for student responses to the use of the Interactive E-Module, where a score of 1 indicates disagreement and a score of 4 indicates high agreement. For the analysis of the data, the researcher used SPSS 25 and then classified them utilizing the criteria by Sugiyono (2016), as displayed in the table below:

Table 1. Validity Criteria

No	Interval Mean Score	Validity Category
1	$3.25 \leq x < 4$	Very Good
2	$2.5 \leq x < 3.25$	Good
3	$1.75 \leq x < 2.5$	Bad
4	$1 \leq x < 1.75$	Very Bad

Apart from the quantitative data, there is a comments and suggestions column at the end of the questionnaire which is intended to obtain qualitative data as support and enrichment of the quantitative data. This method was chosen to allow the researcher to measure student responses in more detail and to understand their perceptions and experiences of using Interactive E-Modules in the context of independent learning. With this approach, it is hoped that this research can provide deeper insight into the effectiveness and student acceptance of technological innovation in the context of English education.

Findings and Discussion

Quantitative Analysis

There are two aspects of the e-module that students were asked to evaluate. They are aspect of conveniences or user-friendliness and aspect of attractiveness. For each aspect, there are two indicators. For aspect of conveniences, students had to evaluate the ease of use and clarity of language used. Meanwhile, in the aspect of conveniences, there are display of the e-module and presentation of materials and questions.

1. Aspect of Attractiveness

The result of students' responses regarding the attractiveness of the interactive e-module:

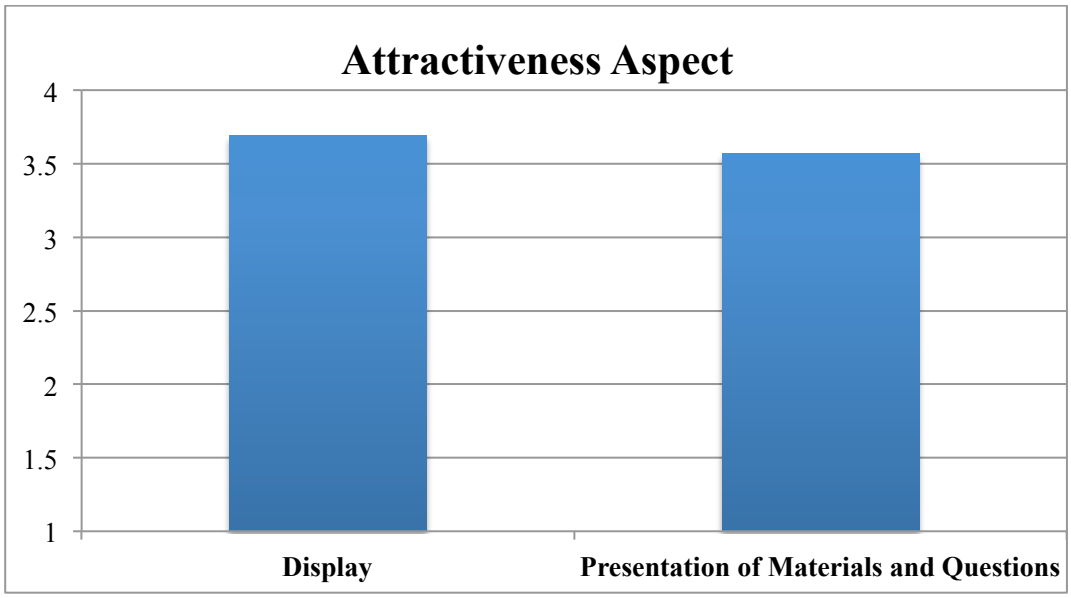

Figure 1. Graphic of Attractiveness Aspect

According to the results of the Likert scale questionnaire, students gave the multimodal text-based Interactive E-Module a *very good* rating for its attractiveness in terms of the appearance of the learning medium (3.69) and the presentation of the content and questions in the learning medium (3.57). These scores are quite close to 4, showing that the E-Module's appealing look and the manner in which the information and questions are delivered have been well-received by students as a whole. An enticing display may include the use of attractive graphics, images, and colors, as well as a neat arrangement that effectively attracts students' attention. Presenting interesting material and questions may also include the use of interesting language, variations in question structure, and the use of relevant examples and illustrations.

The results suggest that multimodal text-based interactive e-modules have a lot of potential as engaging teaching resources for students. Success in achieving high scores indicates that students responded positively to the use of technology in education, especially when the display and presentation of the material is well designed and attractive. In light of this positive development, educational institutions and curriculum designers can concentrate more on creating engaging and interesting learning materials and using a variety of multimodal texts to pique students' interest in learning English and enhance the standard of instruction.

2. Aspect of Convenience

The result of students' responses regarding the convenience of the interactive e-module:

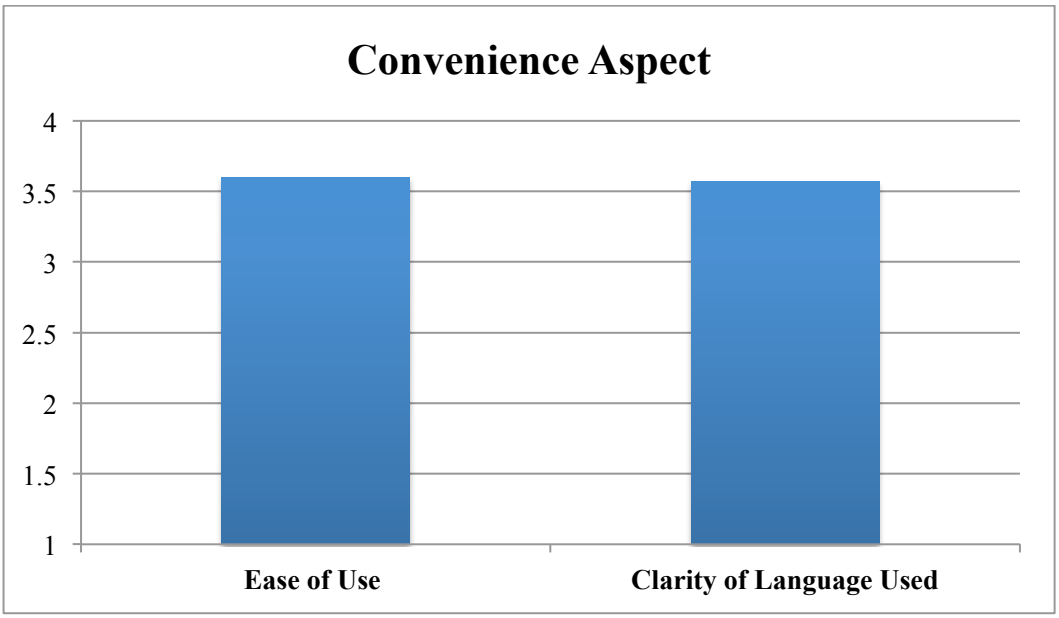

Figure 2. Graphic of Convenience Aspect

Figure 2 shows that students also responded favorably to the aspect of ease of use of the multimodal text-based Interactive E-Module. Of the two examined indicators, clarity of language used in the module obtained an average score of 3.57 (*very good*), while ease of use received an average score of 3.6 (*very good*). This suggests that students find the Interactive E-Module to be a useful learning tool and that they find the language used in the module to be simple and straightforward. The Interactive E-Module's display and navigation need to be properly planned so that students can easily access and understand the material. Increasing ease of access and clarity of language in this module can help upgrade the effectiveness and efficiency of students' independent learning, which in turn can produce better learning outcomes in their English Structure course.

As a whole, the result of students' responses on using interactive e-module based on multimodal text as a self-study learning resource for an English structure course is as follows:

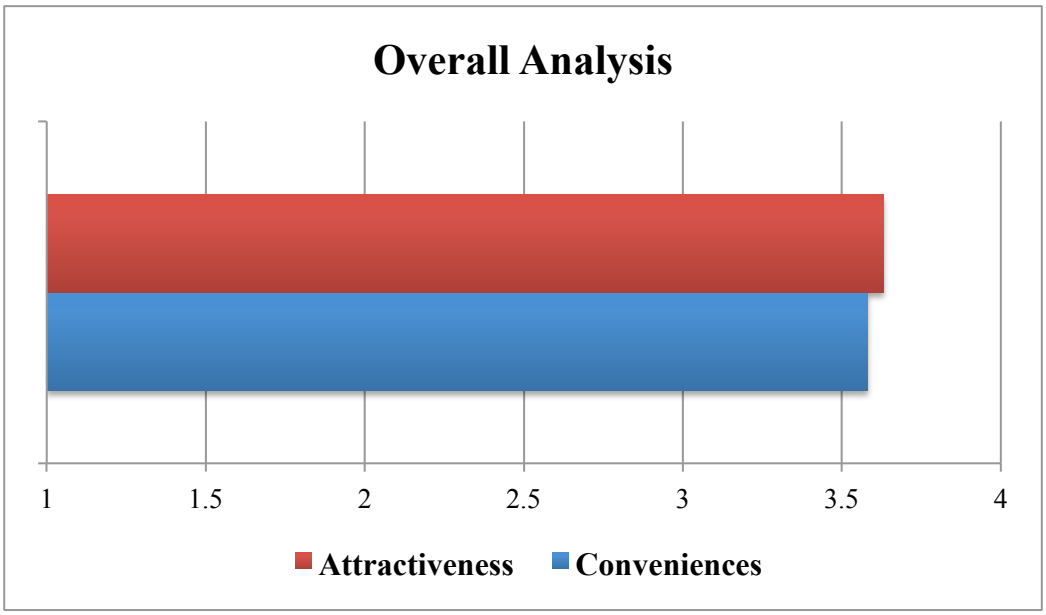

Figure 3. Students Assessment of the E-Module

Based on these findings, using a multimodal text-based Interactive E-Module as a stand-alone learning resource in the English Structure course received favorable feedback from students. Particularly, the average convenience aspect scored 3.58 (*very good*), while the average attractiveness aspect earned a score of 3.63 (*very good*). These findings demonstrate that most students find the Interactive E-Module to be interesting and simple to use. These two characteristics complement one another and have about equal weight, proving that appeal and usability are important determinants of student adoption of digital learning material.

Qualitative Analysis

For qualitative analysis, the data came from students' opinions after using the Interactive E-Module. As a whole, students' comments about the e-module can be grouped as follows:

Table 2. Categorization of students' comments

No	Themes	Frequency
Reasons for Positive Responses		
1	Enhance students' understanding	10
2	Increase students' learning interest	6
3	Facilitate students' self-directed learning	1
Favorite Features		
1	Interactivity	9
2	Flexibility for the students' learning speed	1
3	Accessibility	2
4	Visualization	4
5	Language	1
6	Simplicity	1
7	Contents	1

As can be seen from the table above, many students agreed that the e-module can improve their understanding of the subject matter. Ten comments from students underlined its effectiveness as an interactive learning medium that makes the material more interesting and simple to comprehend.

> "*I feel that this e-module is easily accessible to everyone, and the materials provided are concise and clear, making them easy to understand."*
>
> *"In my opinion, the development of this interactive e-module will have a very positive impact, especially in increasing students' understanding."*

In addition, they complemented the high positive interactions in the learning process, including interactive media features such as video and audio. Students also stated that they appreciated the ease of access and convenience, which makes it easier for them to direct their own learning.

“Because it actively engages students, this interactive learning medium is, for me, very suitable for encouraging us to take an active role in our own learning. As students, using engaging media like audios and videos really improves our understanding."

Then six students commented how this e-module helps improve their interest to learn. They emphasized how this cutting-edge medium successfully held their interest throughout the learning process.

"Really help us broaden our perspectives and enhance reading interests."

"I think this innovative interactive E-Module is highly effective in generating interest in the learning process, especially in the English Structure course. The interactive learning style makes the study materials easier to understand and fun."

The interactive nature of the learning media has sparked enthusiasm among students, providing a unique and compelling learning experience that fosters a deeper interest in the subject matter.

Seven essential elements of the E-Module have been recognized by the students as having made a major contribution to their successful learning process. First off, nine students made a comment about the module's interactivity. This makes learning more dynamic and interactive by getting them actively involved in the process.

“Very interactive. It's like a mood booster for students, making the learning experience more enjoyable.

Secondly, because of its adaptability to various learning styles, a student commented about how the e-module lets students learn at their own pace. This ensures that everyone has a thorough comprehension on their own.

"The module gives flexibility for us, students, to study at our own pace. And I feel more engaged in the learning process."

Thirdly, because it is easily accessible, a couple of students appreciated that they could learn without interruption at any time or location.

"I love that this e-module is easily accessible to everyone."

Fourthly, several students praised the incorporation of visual components because it facilitates the clear and understandable presentation of difficult concepts, which in result improves the subject matter's overall comprehension.

"The images provided really help us understand the topics and keep our interest."

In addition, a student complimented the English used in the e-module for its conciseness, so that students with different skill levels can easily learn from it.

"The language used in interactive learning media aids in understanding the conveyed materials."

Also, the interface and design of the module are straightforward, which makes it simpler for students to use and ensures that they can easily navigate through the content.

> *"In my opinion, this e-module is a very interesting innovation because it has a simple, informative, and interactive design, utilizing digital technology."*

Finally, the module's extensive and diverse content covers a wide range of topics giving students a comprehensive understanding of the subject.

Discussion

In the quickly changing environment of 21st-century education, there is a growing understanding of the necessity for creative and dynamic learning tools (Henrikson et al., 2016; Cummings & Blatherwick, 2017). Evans (2001) noted that traditional teaching methods, which were largely centered on textbooks and lectures, are rapidly giving way to more interactive and technologically oriented ways (Alismail & McGuire, 2015). The dynamic requirements of 21st-century learning are demonstrated by the interactive e-module. It can enable students to interact with the content in ways that are in line with current learning trends by providing a variety of multimedia components (Nabayra, 2020; Sanova et al., 2022; Mahmudah et al., 2022).

The responses from the students show how user-friendly and engaging the e-module is. The reason is probably because lessons in multimodal media like this go right to the point most of the time (Purwaningsih et al., 2022) and maintain students' attention and interest longer than traditional learning methods do (Saryadi & Sulisworo, 2023). According to Kustandi and Darmawan (2020), if the medium being used is able to effectively and succinctly convey the lessons, the learning and teaching process will be successful. In order to capture and hold the students' interest, the e-module was also created to be straightforward and pleasing to the eye. This was in line with the premise that instructional materials needed to be compelling—for example, they needed to have appealing designs and layouts—in order to inspire students to study them (Midoro, 1993; Sari, 2021).

One of a multimodal e-module's major benefits for students is the capacity to cater to the various learning needs and preferences (Sankey et al., 2011; Campoy-Cubillo, 2019). Loo (2004) emphasized that students are not uniform. When it comes to learning, they each have particular aptitudes and manners (Cabual, 2021). Some individuals may learn best visually, taking advantage of pictures and diagrams, while others learn best audibly (Zhen, 2016). The multifarious character of the e-module in this case expands learning beyond customary text-based formats (Bouchey et al., 2021).

Although text is still crucial, adding visual, aural, and interactive features improves the learning process altogether (Mayer, 2017). In particular, visual learners benefit from visual aids like graphics, photos, and diagrams since they help improve concept comprehension and memorization (Vanichvasin, 2021; Al Said & Al Said, 2022). Audio elements, such as narration and instructional direction, additionally boost accessibility for auditory learners (Coombs, 2010). On top of that, interactive components like quizzes turn passive learning into active learning, encouraging critical thinking and problem-solving abilities (Mwalongo, 2014; Nurhasanah & Fauzan, 2021).

Besides fitting various styles of learning, the multimodal e-module provides other advantages. For instance, it raises motivation by increasing the enjoyment and engagement of learning (Girón-Garca & Gargallo-Camarillas, 2020). According to Sanmugam (2017) and Alsawaier (2018), adding interactive components, gamification features, and multimedia elements captures students' interest and boosts their intrinsic drive to learn. This makes this e-module an invaluable educational resource since it develops a deeper degree of involvement in addition to helping to improve comprehension (El-Sabagh, 2021; Logan et al., 2021). Also, quizzes and other interactive components in the e-module provide students with instant feedback. This feedback can be critical and beneficial when it comes to assisting students in identifying their strengths and limitations (Harvey, 2003; Mandouit, 2018). Feedback is crucial for learners since it clarifies what has been mastered and what still needs work. As a result, students can identify particular ideas that need more explanation and return to them as necessary.

Conclusion

To sum up, the adoption of the Interactive E-Module Based on Multimodal Text as a Self-Study Learning Resource for an English Structure Course has received favorable responses from the students, demonstrating its effectiveness in accommodating a variety of learning preferences and styles. This innovative technology has not only piqued students' interest but also fostered a deeper comprehension of difficult ideas through its dynamic and engaging approach by adding interactive and aesthetically pleasing aspects. In addition, the availability of immediate feedback has allowed students to pinpoint their areas of strength and development, resulting in a more individualized and successful learning experience. As evidenced by the overwhelmingly positive student feedback and supported by the scholarly literature, the integration of multimodal e-modules represents a crucial advancement in educational technology, marking a significant step towards creating an inclusive and effective learning environment for students in the 21st century.

As this study unravels, it becomes increasingly evident that this e-module is more than just a digital resource; it is a beacon of quality that extends its reach to both content and media elements. With these compelling findings, it is apparent that this innovative learning resource has the potential to redefine the landscape of education within the English Department at the university under investigation and holds the promise of becoming a model for digital learning resources in the region.

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