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## Analysis of High School Students, Needs for E-Comics Assisted by Figma and Flipbook on Reading Material of Malay Figure Biography Texts

Risky Yanti Ulfa\*, Hermandra, Mangatur Sinaga

Master of Indonesia language education, Faculty of teacher training and education, Universitas Riau, Pekanbaru, 28293, \ Indonesia

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#### \* Corresponding author:

E-mail: rizkyantiulfa@gmail.com

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### ABSTRACT

This study is a stage in the development of e-comics assisted by figma and flipbooks on the material of reading biographical texts for high school students. This study aims to describe the analysis of student needs for learning to read biographical texts. The survey method in the research method used in this study. The data collection instrument in this study is a needs analysis questionnaire. This study uses a Likert scale to measure students' views and perceptions of the e-comics developed. This study uses a questionnaire sheet made in the form of a closed statement with a scoring range of 1 to 5. The questionnaires compiled were addressed to students in two high schools in Pekanbaru City. This sampling technique is based on the sampling quota determined by the researcher. The data analysis technique is carried out by changing the category value into an assessment score and analyzing the score. The results showed that 87.70% of students had difficulty in learning to read biographical texts and 88.74% of students wanted learning to read biographical texts to be presented with interesting and innovative media. This shows the need to compile e-comics assisted by figma and flipbooks for the material of writing argumentative texts.

## 1. Introduction

Education plays a very important role in the development process of Indonesia. Government efforts to overcome educational barriers have a positive impact, but in reality, the application of learning media is still limited. This is due to the lack of understanding of teachers in creating the right media for teaching. The development of technology and information in the field of education has caused a transformation in the interaction process, especially after the development of the internet. The internet plays a very important role in the field of education, especially as a communication tool and collaborative media to obtain learning media or information related to learning activities (Bawamenewi, 2019).

Learning media plays a crucial role in learning situations because it can enrich the learning experience and provide opportunities for more effective teaching. The definition of learning media includes various elements used to convey learning materials with the aim of attracting students' attention, interest, thoughts, and emotions during the learning process. Through learning media, educators can create interesting and innovative learning activities, and can stimulate the enthusiasm and interest of students, helping them to improve their understanding of the material. Therefore, learning media that are in accordance with the teaching materials must be chosen carefully, because the learning motivation and interest of students in the learning process are signs of the success of the transmission of information and curriculum objectives in the learning process (Hidayat Harefa et al., 2023).

The benefits of media in the learning process are to facilitate interaction between teachers and students, so that learning activities will be more effective and efficient. Media is essentially one of the components of the learning system (Kioumourtzoglou et al., 2022). As a component, media must be in accordance with the learning process as a whole. So, the selection of media needs to be done so that we can determine the best, right and appropriate media according to the needs, conditions of the target students and the goals to be achieved.

Learning media plays an important role in transmitting information from the sender to the recipient, with the aim of arousing the thoughts, feelings, attention, interests, and motivation of students so that teaching and learning activities can take place effectively and achieve the learning objectives that have been set (Sukiman, 2012). The selection of media must be adjusted to the learning objectives and characteristics of students to achieve optimal learning outcomes. One form of relevant learning media is digital media. Digital learning media operates using digital data, producing digital images that can be processed, accessed, and distributed via digital devices. One form of digital media that is currently popular is e-comics.

Entering the industrial revolution 4.0, the use of digital media for the teaching and learning process has developed significantly, with the emergence of digital media providing a number of educational innovations that change traditional learning that is monotonous and rigid (Anam et al., 2021). The learning process using digital media is considered more practical, flexible, and not limited by space and time. The digital era has integrated with the conditions of society, especially in the world of education, at this time the world of education can get information very easily and quickly in developing various forms of learning methods. The learning activity itself is basically a communication process, where this process will run well if the educational message conveyed by a teacher can be received well by a student. Therefore, an educator can use learning media as a communication tool (Muthmainnah, 2015).

One form of digital learning media that is currently developing is comics. Comics are graphic media that present sequential illustrated stories with various characters that are deliberately designed to provide information and entertainment to readers

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(Kristanto, 2016). Comics as one of the educational media have an important meaning because they combine images and text to tell stories or convey messages. Testing of digital comics has provided positive evidence of increasing student learning achievement and interest in learning (Agustin, 2023). E-comics have many advantages, including easy accessibility, high levels of interactivity, and the ability to combine multimedia elements. E-comics have become an alternative learning because students can learn at various times and places.

The media developed in principle must refer to the material being studied by students. Thus, students' understanding of the material given will be complete, and will be able to eliminate behavior that is considered negative in the learning process. Media in the teaching and learning process is a tool used to help students gain knowledge and skills (Nurmadiyah, 2016). While other definitions state that learning media is a tool that can make the learning process more effective and efficient (Nurrita, 2018).

In the era of the Independent Curriculum, e-comics have an important role in supporting a more flexible educational approach and oriented towards students with the character of the Pancasila Student Profile. In accordance with the Decree of the Head of the Education Standards, Curriculum, and Assessment Agency of the Ministry of Education, Culture, Research, and Technology Number 009/H/KR/2022 concerning the Dimensions, Elements, and Sub-elements of the Pancasila Student Profile in the Independent Curriculum, the dimensions of the Pancasila Student Profile include Believing and Devoting to God Almighty and Having Noble Morals, Global Diversity, Mutual Cooperation, Independent, Critical Thinking, and Creative. Through the use of e-comics and project-based learning, education in Indonesia continues to innovate and meet the demands of the times, creating a relevant learning environment that is oriented towards learning outcomes.

Part of the learning objectives is the students' complete learning outcomes. In order to achieve these learning outcomes, of course, a high interest in learning is needed (Florayu et al., 2017). However, when observing the current learning process, the majority of schools still apply conventional learning methods. This affects students' interest in learning, which tends to make students feel bored during the learning process. As a result, learning objectives are not achieved. Research conducted by Suparman et al. (2020) on the presentation of comic learning media to improve learning outcomes and research that develops comic media by Khasanah et al. (2021) and Siskawati & Ramadan (2022) illustrate the differences with this study. Therefore, the development of appropriate learning media, such as e-comics assisted by Figma and Flipbook, needs to be done to improve students' understanding of biographical material, especially in the era of the Independent Curriculum which emphasizes technology-based learning.

E-comics assisted by Figma and Flipbook are expected to be an innovative solution in facing this challenge. Figma as a graphic design tool allows the creation of interactive and attractive comic designs, while Flipbook offers the convenience of presenting comics in digital form that can be easily accessed by

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students. Research by Nasution (2019) shows that the use of technology in creating learning materials such as digital comics can improve students' understanding and involvement in learning, because it allows them to be more active in the learning process.

## 2. Methodology

This study serves as an initial step towards determining the role of e-comics assisted by Figma and Flipbook in high school students' learning of biographical text reading materials. The research employs a survey method, a commonly used technique for collecting data through questionnaires or interviews to describe various aspects of a population (Maidiana, 2021). In this study, the survey method was used to describe the students' material needs and challenges in learning biographical texts.

The data collection instrument for this study was a questionnaire designed to assess students' views and perceptions of the e-comics assisted by Figma and Flipbook that were being developed. The questionnaire used a Likert scale, a commonly applied tool in survey research to measure respondents' attitudes or opinions. This scale consists of five levels: strongly disagree, disagree, undecided, agree, and strongly agree. The survey was administered to students from SMAN 4 Pekanbaru and SMAN 15 Pekanbaru in Pekanbaru City, Indonesia.

The questionnaire included 10 statements that aimed to capture students' difficulties in understanding biographical texts, as well as the types of learning media they felt would support their comprehension. These responses were converted into assessment scores for easier interpretation. The categories used to measure the validity level of responses are based on Riduan and Sunarto's model, as shown in Table 1.

Table 1 Categories of Need Levels by Percentage

Percentage (%)	Validity Level
0% - 20%	Totally Unnecessary
20,1% - 40%	Less Necessary
40,1% - 60%	Just Need
60,1% - 80%	Need
80,1% - 100%	Very Necessary

## 3. Results and Discussion

Before presenting the results in detail, it is important to provide context regarding the purpose of this study. The primary objective was to explore students' perceptions and needs in relation to the use of e-comics, specifically developed with Figma and Flipbook, as a learning tool for improving comprehension of biographical texts. Biographical texts, particularly those related to historical figures, can often be challenging for students due to their complex language and sometimes dry presentation. To better understand how technology can address

these issues, a questionnaire was administered to high school students in order to gauge their difficulties with reading biographical texts and their preferences for innovative learning media.

The questionnaire aimed to capture key insights into the challenges students face with the current methods of studying biographical materials. In particular, it focused on whether students believe traditional formats are insufficient, and whether they see value in more interactive and visually engaging methods such as e-comics. By evaluating students' responses to various statements, the study sought to identify the specific areas where technology could enhance learning, particularly in simplifying difficult texts and fostering greater engagement. The following tables summarize these responses, offering a comprehensive look at how students perceive the use of e-comics in their studies.

The results, as reflected in Tables 2 and 3, provide important insights into the students' perceived need for innovative learning tools, as well as the specific difficulties they face when engaging with biographical texts. A significant portion of the students expressed that they struggle with understanding the material, which directly impacts their ability to organize and write coherent paragraphs about the figures they study. Furthermore, a substantial number of students indicated a strong preference for learning media that is interactive, innovative, and tailored to their comprehension levels. This suggests a clear demand for e-comics as a medium to bridge the gap in understanding and make learning more engaging and accessible.

Table 2. Recapitulation of Student Responses to the Need for Learning Media for Reading Biographical Texts

N o	Statemen t	Don' t agre e	Less Agre e	Doubtful	Agre e	Strongl y agree	Amoun t	Averag e	Percen t
1	P1	0	2	4	44	31	347	4,28	85,68
2	P2	0	2	5	45	29	344	4,25	84,94
3	P3	0	1	3	49	28	347	4,28	85,68
4	P4	0	1	3	27	50	369	4,56	91,11
5	P5	1	0	1	30	49	369	4,56	91,11
6	P6	0	1	2	30	48	368	4,54	90,86
7	P7	0	0	3	34	44	365	4,51	90,12
8	P8	0	0	5	43	33	352	4,35	86,91
9	P9	0	0	3	45	33	354	4,37	87,41
10	P10	1	0	3	37	40	358	4,42	88,40

## Discussion

Before delving into the data analysis, it is important to understand the context and significance of the findings regarding students' difficulties in comprehending biographical texts. As revealed in the survey, a substantial number of students expressed challenges when engaging with such materials. The responses suggest that the difficulty is largely due to the traditional, monotonous presentation of biographical texts, which fail to capture students' interest or cater to their diverse

learning needs. These difficulties highlight a gap in the current teaching approach, one that fails to offer engaging and interactive resources to enhance students' comprehension.

Building on this context, the data presented in the following tables provides a deeper insight into the specific areas where students struggle and the kinds of resources they believe would improve their learning experience. The results underline the importance of integrating more dynamic learning tools, such as e-comics, that are supported by modern technologies like Figma and Flipbook. Such tools are seen as potential solutions to the challenges students face, particularly when dealing with complex historical texts. In the next section, we will explore the detailed results and discuss how these findings can inform future instructional strategies. The results of further research on difficulties in reading biographical texts can be seen in table 3.

Table 3. Recapitulation of the results of the questionnaire on students' difficulties in understanding biographical text material

Total Respondents	Statement					Average
	P1	P2	P3	P4	P5	
81 Respondents	85,68%	84,94%	85,68%	91,11%	91,11%	87,70%

Based on the table above, 85.68% of students have difficulty understanding the material for reading biographical texts. Because it is difficult for students to understand reading biographical texts, students will have difficulty composing paragraphs of biographical texts according to language rules. This is evidenced by the percentage of 84.94% in the statement that students have difficulty composing paragraphs of biographical texts according to language rules. Next, 85.68% of students are not faced with examples that they can observe closely as a guide for reading biographical texts. Therefore, 91.11% of students want the material for reading biographical texts to be delivered with interesting, interactive, and innovative learning media and 91.11% of students also want the material for reading biographical texts to be adjusted to the level of student understanding by simplifying complex historical terms without reducing the core meaning of the biography of the figure.

This means that students have difficulty in reading biographical texts. This difficulty causes students to have difficulty composing paragraphs of biographical texts according to linguistic rules, not being faced with examples of biographical texts, and wanting the material for reading biographical texts to be delivered with interesting, interactive, and innovative learning media. Based on the findings above, there needs to be additional learning resources that act as learning media. Therefore, statements that support the need for learning media in reading biographical texts can be seen in table 4.

Table 4. Recapitulation of questionnaire results regarding students' needs for learning media to help them understand biographical texts.

Total Respondents	Statement					Average
	P6	P7	P8	P9	P10	
81 Respondents	90,86%	90,12%	86,91%	87,41%	88,40%	88,74%

Further research results on the need for learning media in reading biographical texts can. Based on the table above, 90.86% of students want learning media to read biographical texts that make it easier for them to learn independently. 90.12% of students also agree that learning to read biographical texts uses media that is integrated with technology, so that it can make it easier for students to use it. Based on the characteristics above, 86.91% of students want the material to read biographical texts to be taught using special media such as e-comics. In addition, 87.41% of students want the material to read biographical texts to have local wisdom content of Riau Malay culture. In the end, 88.40% of students expect that the material to read biographical texts is developed in the form of e-comics assisted by figma and flipbooks. The average obtained from the statement regarding the need for learning media is 88.74%.

Based on the statement above, it can be concluded that students want a learning media that can improve reading comprehension of biographical texts. The learning media needed needs technological support, so that students can learn independently. To make it more interesting, students want learning media to be developed in the form of e-comics assisted by figma and flipbooks and have local content of Riau Malay cultural wisdom.

#### 4. Conclusion

Based on the survey results, it can be concluded that students encounter difficulties when reading and understanding biographical texts. These difficulties arise due to the monotonous nature of the material, which is not engaging enough for students. The traditional presentation of such texts, often involving dense paragraphs and complex historical language, does not capture the attention of students, leading to a lack of motivation and focus. As a result, students express a strong need for innovative learning media that can make reading biographical texts more interactive and accessible. Many students report feeling overwhelmed by the lengthy texts, struggling to retain the key information, and often becoming disengaged before fully understanding the content.

The results of this study emphasize the potential of using e-comics, particularly those developed with Figma and Flipbook, to address these challenges. These e-comics provide dynamic and visually engaging content that can simplify complex information and help students better understand the subject matter. The visual elements and interactive features offered by e-comics can transform the reading experience, making it more enjoyable and engaging. Furthermore, e-comics can break down complex historical events and biographical information into digestible, easily understandable portions, which helps students process the

material at their own pace. The high demand for such learning media, which is integrated with technology, suggests that students would greatly benefit from the use of e-comics as a supplement to traditional teaching methods, as it aligns with the digital-savvy preferences of today's learners.

In conclusion, e-comics assisted by Figma and Flipbook represent a viable and innovative solution to enhance the learning of biographical texts, particularly those related to Malay figures. These digital tools can foster greater student engagement, facilitate independent learning, and improve comprehension of complex historical content. By leveraging technology, e-comics can cater to different learning styles, making the study of biographical texts more engaging and effective. In this digital age, incorporating such media into educational practices can significantly enhance students' learning experiences and outcomes.

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