

## **THE EFFECTS OF DIGITAL COMIC ON STUDENT'S READING COMPREHENSION OF VOCATIONAL SCHOOL STUDENTS**

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### **Abstrak**

Penelitian ini bertujuan untuk menyelidiki pengaruh penggunaan komik digital terhadap pemahaman membaca siswa di sekolah menengah kejuruan. Penelitian ini dilakukan di dua kelas penelitian sekolah menengah kejuruan. Penelitian ini menggunakan desain Quasi Experimental Study, yang berakar pada prinsip-prinsip penelitian eksperimental, untuk menguji dampak dari kemampuan membaca siswa terhadap kegiatan belajar mereka. Hasil penelitian menunjukkan bahwa komik digital efektif dalam meningkatkan salah satu aspek membaca yaitu mengidentifikasi makna kata, hal ini terlihat dari perbedaan yang signifikan antara skor rata-rata sebelum dan sesudah perlakuan dengan hasil uji-t yang memiliki nilai Sig. Disarankan bahwa penerapan kegiatan komik digital yang lebih sering, bersama dengan pengulangan dalam pengajaran di kelas, dapat memberikan hasil yang positif dan meningkatkan berbagai aspek pemahaman membaca. Peneliti menyarankan agar penelitian selanjutnya mengenai komik digital dapat dilakukan dengan eksplorasi yang lebih mendalam terhadap genre yang berbeda.

Kata Kunci: digital komik, kemampuan membaca, sekolah kejuruan

### **Abstract**

This study aims to investigate the effect of using digital comics on students' reading comprehension in vocational school. The study was conducted in two vocational high school research classes. This study uses a Quasi Experimental Study design, rooted in the principles of experimental research, to examine the impact of a student's reading ability on their learning activities. The results show that digital comics was effective in increasing one of the reading aspects, namely, identifying word meaning, it had significant differences by the mean score of before and after the treatment with t-test result has a greater value by Sig. It is suggested that more frequent implementation of digital comic activities, along with repetition in classroom instruction, can yield positive results and improve various aspects of reading comprehension. The researcher suggests that future research on digital comics should be conducted with a deeper exploration of different genres.

Keywords: digital comic, reading comprehension, vocational high school

### **INTRODUCTION**

Reading comprehension plays a crucial role in every student's academic development. To ensure effective learning outcomes, it is imperative to deepen this skill among junior and senior high school students. However, numerous factors can influence students' reading comprehension abilities, including learner-related factors such as prior knowledge, understanding, and motivation. In a study by Rossana C. Torres (2019), it was found that these learner-related factors hindered students' reading comprehension abilities. Furthermore, home-related factors, like lack of reading at home or school, also had a significant impact. One pressing issue faced by students today is their lack of motivation in learning English. Many students struggle to express their thoughts and ideas due to a limited vocabulary, especially when encountering unfamiliar words. Consequently, they perceive English as

a complex subject, leading them to refrain from engaging in English-based communication.

Motivating students to read is influenced by various factors. Studies by Camosa (1987) in De Leon (2009) and Torres (2019) emphasize that exposing children to reading materials significantly impacts their reading habits and interests. The effectiveness of teaching reading is heavily dependent on the appropriateness of instructional media used by teachers, as it greatly influences students' motivation to learn. One engaging medium that can promote students' motivation to read is comic books. Comics present stories that are easy to understand and incorporate visuals that appeal to teenagers. As cited by Karl Koenke (2001), comics can lead students towards disciplined learning and increase their understanding of unfamiliar vocabularies. However, in this era of globalization, digital versions of comics have become increasingly popular due to their accessibility and affordability.

Previous research has explored the impact of various media on reading comprehension, including digital comics such as webtoons. However, limited studies have specifically investigated the use of digital comics on platforms like MangaFox to enhance students' reading comprehension, particularly in vocational schools.

This research aims to examine whether using digital comics on MangaFox influences students' reading comprehension in vocational schools. We will compare the reading comprehension of students taught using digital comics with those taught through traditional media, such as narrative text. Through quantitative analysis, the researcher aims to shed light on the potential benefits of integrating digital comics into English teaching.

To address the research gap from previous study, our study aims to examine the following research question:

1. Is there a significant difference in reading comprehension between students taught using digital comics and those taught using traditional media (such as narrative text) in vocational schools?

## **METHODS**

This study utilizes a Quasi Experimental Study design, rooted in the principles of experimental research, to examine the impact of students' reading ability on their learning activities. Quasi experimental studies closely resemble true experiments but lack random assignment to treatment groups. According to Campbell and Stanley (1963), the Quasi Experimental Study design allows researchers to compare naturally exposed groups and explore causal relationships between variables. In this study, a pre-test, treatment, and post-test approach will be employed to assess any significant changes in students' reading ability before and after the intervention.

The population of this research is The Research Population is 10th Grade of Vocational High School with a total of 22 classes. For the participant, the researcher used two groups on this research which are X TEK 2 for the experimental group and X TEK 3 for the control group. Two test instruments were used - pre-test and post-test - to assess reading comprehension. The pre-test gauged students' abilities before the treatment, while the post-test evaluated the treatment's impact. The instruments were validated, and their reliability was confirmed using the Cronbach formula (reliability: 0.160).

The treatment was conducted in collaboration with teachers during regular learning activities. Pre-test was distributed before the class started, and narrative powerpoint material was used to teach before the treatment. Students were given digital comics to read as part of the treatment. Post-test was conducted, and students' feedback on the treatment was sought.

Data was analyzed using sample paired t-tests to compare pre-test and post-test scores. Independent and paired sample t-tests were employed due to the two-group nature of the study. The analysis process involved organizing, selecting appropriate tests, conducting analysis, interpreting results, and drawing conclusions.

## **DISCUSSION**

### **The Implementation of Digital Comic**

This research was conducted in three main steps: a pre-test, treatments, and a post-test, to investigate the influence of using Digital Comic in improving reading comprehension among 10th-grade students at SMK Negeri 5 Surabaya for the 2022/2023 academic year. The study aimed to examine various outcomes, such as students' scores before and after the treatments, differences in scores between pre-test and post-test, and variations between the students themselves. The treatments were given to both the control and experimental classes, with the experimental class exposed to Digital Comic and Power Point presentations for teaching narrative text, while the control class solely relied on Power Point presentations. The researcher provided digital comics comprising about 20 episodes, each containing one chapter, and accompanied by one question related to the reading indicator. The researcher served as an observer while the teacher conducted the classes.

### **Experimental Class:**

During the first meeting, the researcher and the English teacher introduced themselves to the students and explained the research study. A pre-test was conducted, followed by a brief discussion on narrative text. In the second meeting, the students were directed to install the "Manga Fox" application to access the assigned comic, "Dr. Stone." PowerPoint presentations were used to provide a foundation of understanding for the students regarding narrative structure and elements before delving into digital comic reading. After reading one story chapter, the students completed a quiz related to the comic, evaluating their reading comprehension. The third meeting involved feedback from the students about their experience with Digital Comic, and a post-test was administered to assess the effect of the treatment.

### **Control Class:**

The control class underwent similar pre-test and post-test sessions, but instead of Digital Comic, they were taught using Power Point presentations solely. The researcher provided a concise overview of the content and materials for each meeting.

### Results of Normality Test:

The normality test results showed that both control and experimental class data had normally distributed residual values, allowing for the application of parametric tests, including paired and independent t-tests.

### Results of Pre and Post-test

The study aimed to determine the effect of Digital Comics on the reading comprehension ability of 10th-grade students. The pre-test and post-test consisted of 25 multiple-choice questions each. The pre-test was conducted to assess students' reading comprehension ability before treatment, and the post-test was administered after two meetings using animated videos. The post-test aimed to evaluate students' reading comprehension ability after treatment.

In summary, the study examined the impact of using Digital Comics on students' reading comprehension. The experimental class, exposed to Digital Comic and Power Point presentations, showed increased interest and engagement, resulting in improved reading comprehension. The control class, taught solely with Power Point presentations, served as a comparison. Both classes had normally distributed data, enabling further analysis. Overall, the research demonstrated the potential of Digital Comic as an effective learning medium for enhancing students' reading comprehension skills.

### The Result of pre-test and post-test

Table 1. Statistics of Post-test

Group Statistics					
	Kelas	N	Mean	Std. Deviation	Std. Error Mean
Hasil Post-test	X TEK 2	34	70.2353	13.93287	2.38947
	X TEK 3	32	71.0000	7.86991	1.39122

Table 2. Independent Samples Test

Independent Samples Test							
		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Hasil Post-test	Equal variances assumed	4.056	.048	-.272	64	.786	-.76471
	Equal variances not assumed			-.277	52.717	.783	-.76471

Based on the table, the score Sig(2-tailed) is 0,786 which is higher than 0,05. After the independent t-test was carried out by researcher, it can be concluded that there were no significant differences between experimental and control

groups. This data was continued to find any significant difference in each indicator on experimental class data.

### Result of Students' Pre-test and Post-test in Experimental Class

Table 3. Paired Samples Test

Paired Samples Test									
		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Paired Sample 1	Pre-test Identify Word Meanin	-							
	g - Post- test Identify Word Meanin g	2.47059	3.94074	.67583	3.84558	1.09560	-3.656	3.3	

Based on the results of the t-test analysis (paired sample t-test), it can be obtained that count is less than table, namely  $-3.656 < 1,692$  and Sig. (2 tailed) =  $0.001 < 0.05$ . After the paired sample t-test was carried out, the researcher concluded that the alternative hypothesis ( $H_a$ ) which was stated in Indicator 1 was accepted, that there was a significant increase in Word Meaning indicator after using treatment.

The researcher conducted a study comparing the effects of using digital comics as a teaching tool on reading comprehension between an Experimental and Control Class. Overall, there were no significant differences in the pre-test and post-test total scores between the two groups. However, it was found that the use of digital comics had a significant effect on the "Identify Word Meaning" indicator in the experimental group, even though there were no significant differences in the total scores.

Before using digital comics as a teaching tool, students in the experimental class had difficulty understanding texts and lacked interest in reading. However, after introducing digital comics, their interest in reading improved because the visuals in comics captured their attention and made the learning experience more engaging. Various researchers have emphasized the positive influence of comics in attracting students' attention and enhancing their motivation to learn.

In the research, the chosen digital comic "Dr. Stone" was related to the Electronic Communication Engineer major in the Vocational High school. It was observed that digital comics helped students improve their reading comprehension, especially in terms of identifying word meanings and understanding technical terms related to their major.

The study also revealed that the use of digital comics positively impacted the students' literal reading comprehension, with post-test scores being higher than pre-test scores. Furthermore, the "Identify Word Meaning" scores showed improvement between the pre-test and post-test, suggesting that digital comics enhanced students' comprehension in this aspect.

While there were no significant differences observed in other reading comprehension indicators, it was suggested that repeating digital comic activities more frequently in classroom instruction could lead to improvements in those aspects as well.

In conclusion, the research highlighted the positive effects of using digital comics on reading comprehension, particularly in the aspect of identifying word meanings. The engaging and visually appealing nature of digital comics can capture students' interest and create a conducive learning environment. Implementing digital comic activities more frequently and repeating them in classroom instruction could further enhance students' overall reading comprehension.

## CONCLUSION

Based on the Experimental Research on the Effect of Digital Comic in Vocational High School, the researcher found the following conclusions:

There were no significant differences in total scores between the control and experimental classes, but there was a significant difference in mean scores for one of the reading indicators. This highlights the specific impact of digital comics on certain aspects of reading comprehension.

Digital Comics effectively improved the "Identify Word Meaning" aspect of reading. The t-test result indicated a significant difference in mean scores before and after the treatment (Sig. (2 tailed) = 0.001 > 0.05).

Digital Comic positively impacted students' English reading comprehension and narrative text learning. The experimental class showed a significant difference in mean scores for the "Identify Word Meaning" indicator (Sig. (2 tailed) = 0.001 > 0.05). This suggests that digital comics increased students' interest and attention in class, helping them develop important skills for their future careers.

## Suggestions

Teachers should be more flexible in selecting learning mediums for their students, embracing options like digital comics, games, and films. By diversifying materials, teachers can cater to different learning styles and create an engaging learning environment. Students showed increased attention during the treatment with digital comics, indicating the potential of using such media for

effective teaching. Integrating comic-related content into reading comprehension lessons can further enhance students' understanding and interest in the subject.

Further research should explore different approaches in the classroom to enhance the learning experience. Incorporating more interesting and enjoyable methods can improve student engagement. Researchers can consider adding supplementary factors, like multimedia elements and interactive activities, to strengthen the study outcomes. Additionally, deeper exploration of various comic genres and innovative teaching approaches can advance our understanding of digital comics' potential in education.

In conclusion, future research on digital comics should focus on diverse genres and innovative teaching methods, considering additional supporting factors to enhance overall effectiveness and outcomes in education and learning.

## REFERENCES

- Csabay, N. (2006). Using Comic Strips in Language Classes. The Internet ETJJournal.No.1.[http://americanenglish.state.gov/files/ae/resource\\_files/06\\_44-1-f.pdf](http://americanenglish.state.gov/files/ae/resource_files/06_44-1-f.pdf). Accessed on 29 October, 2012
- Gerbing DW. Campbell and Stanley for Undergraduates.Vol29.;1984.  
<https://doi.org/10.1037/022808>
- Grabe, W., & Stoller, F. L. (2013). Teaching and researching reading, second edition. In Teaching and Researching Reading, Second Edition. <https://doi.org/10.4324/9781315833743>
- Grünewald, Dietrich. Comics, Berlin, Boston: De Gruyter, 2000. <https://doi.org/10.1515/9783110930627>
- Khusniyah NL, Lustyantje N. Improving English Reading Comprehension Ability through Survey, Questions, Read, Record, Recite, Review Strategy (SQ4R). English Lang Teach. 2017;10(12):202. doi:10.5539/elt.v10n12p202
- Koenke, Karl. "ERIC/RCS: The Careful Use of Comic Books." The Reading Teacher 34, no. 5 (1981): 592–95. <http://www.jstor.org/stable/20195292>.
- Manik, S., Manurung, L. W., Barus, E., & Padang, I. (2022). The Effect of Using Comic in Teaching Writing Descriptive Text at the Tenth Grade of SMA Methodist Berastagi. Journal on Teacher Education, 3(3), 489–500. <http://journal.universitaspahlawan.ac.id/index.php/jot/article/view/5127>
- Setyorini, W., & Hartono, R. (2017). The Effectiveness of Digital and Printed Comics to Teach Monologue of Visual and Auditory Students: A case of the Tenth

Year Students of State Senior High School 1 Ungaran.  
English Education Journal, 7(1), 73–78.  
<http://journal.unnes.ac.id/sju/index.php/eej%0ATHE>

Torres, R. C. (2021). Factors Affecting the Reading Comprehension of Intermediate Level Learners: Basis for An Intervention Program. International Journal of Academic Management Science Research (IJAMSR), 5(May), 15–22.  
<https://doi.org/10.13140/RG.2.2.25114.77766>

Waluyanto, Heru. (2005). Komik sebagai Media Komunikasi Visual Pembelajaran. Nirmana. 7.