7417

by User student 2 month

The Impact of Digital Comic-based Modules on Students' Achievement in English Proficiency Test

Abstract

This study aimed to investigate the impact of digital comic-based modules on students' English Proficiency Test (EPT) achievement. The modules were used during the EPT preparation class which was held for 16 meetings. This was pre-experimental research with one group pretest-posttest design. One hundred fifty-seven (157) undergraduate students from two different majors, Nursing and Computer Engineering participated in this study. The data were collected by administering the pretest and posttest EPT which consisted of 140 questions in total. Then, the scores were analyzed statistically using paired-sample t-test and effect size. Based on the statistical analysis, the results showed an increase in students' EPT scores after learning EPT materials using digital comic-based modules. The increase in students' EPT scores indicated an improvement in students' understanding of the materials. Combining texts and images in digital comics provided students with contextual and meaningful learning. The existence of attractive features of digital comics also stimulated other factors including enthusiasm and interest. The transformation of conventional EPT modules to digital comics has made students feel more convenient and thus affected students' comprehension. From this research, instructors, and students are recommended to use digital comic-based modules in EPT preparation classes. Future research could investigate a comparison between the two groups and be conducted in a different setting.

Keywords: digital comics; digital comic-based modules; English proficiency test; English preparation class.

INTRODUCTION

Test of English as a Foreign Language (TOEFL) is one of the most accepted proficiency tests to register for schools, scholarships, or jobs in other countries. In American universities, TOEFL has been acknowledged as a requirement for enrolling universities either undergraduate or postgraduate degrees (Utomo & Damayanti, 2019; Vu & Vu, 2013). On the other hand, the Language Center of Universitas Muhammadiyah Lamongan has developed a TOEFL-like test called English Proficiency Test (EPT) since 2020. EPT score certificate becomes one of the requirements for students' graduation. Students' initial responses regarding this test were varied. Most students did not support the policy because they thought that it was a burden. However, some of the students perceived that the certificate would be important for their future careers.

Furthermore, data on the Language Center of Universitas Muhammadiyah Lamongan indicated that in 2020 only 36 out of 538 students (6.7%) achieved a score ≥ 450 in their first EPT, and 28 out of 436 (6.4%) in 2021. Out of those numbers, the rest achieved 350 to < 450. The results of EPT within two years (2020-2022) also showed that students were experiencing difficulties in facing the test. Similar problems happened to other universities which used TOEFL or TOEFL-like scores as one of their graduation requirements. In IAIN Langsa, students' ability in mastering TOEFL materials was still low as it was indicated by the number of correct answers (Manan et al., 2020). In Universitas Negeri Jakarta, 82% of the respondents claimed that they lacked ability in English especially sentence structures (Masfufah, 2018). Students of UIN Syarif Hidayatullah Jakarta experienced difficulties in listening and reading sections due to unfamiliar topics (Alek et al., 2019).

Regarding the above-mentioned issues, many studies suggested a preparation class as an ideal solution to deal with the problems (Akmal et al., 2020; Alek et al., 2019; Ismail & Wahyuni, 2018; Manan et al., 2020; Masfufah, 2018; Mousavi et al., 2014; Roza, 2019; Simanjuntak, 2018; Sudrajat & Astuti, 2018; Suryani, 2021). There are at least three primary

reasons why a preparation class can increase students' scores including improving students' understanding of the materials, reducing students' stress and anxiety levels, and providing effective strategies in answering each section. During the preparation class, the most common media to use are textbooks or modules which are specially designed for teaching English proficiency tests (Maharani & Miftachudin, 2021). A previous study by Roza (2019) suggested a productive and fun learning environment to overcome students' limitations such as lack of effort and limited time to study. To arouse students' interest and create a motivating learning environment, instructors can make use of digital comics in teaching.

According to Jacobs (2013), comics are media that combine texts and pictures to build meaningful contexts called multimodal literacy. The term "digital comics" refers to any comics which are only published digitally (Aggleton, 2018). In the educational field, comics have been widely used and proven to be effective in teaching various materials and grades. Castillo & Quinonez (2022) who explored the use of digital comics during the Covid-19 pandemic revealed an improvement in students' vocabulary performance in English. Students also gave enthusiastic responses to the use of digital comics by saying they were authentic and practical. Furthermore, they approved that digital comics were appropriate to use as an innovative strategy to boost students' learning during the pandemic.

Regarding teaching innovation, Fatimah et al., (2019) who studied the utilization of ToonDoo digital comic for teaching English short stories mentioned some potential benefits. For students, the digital comic could enhance their language skills, especially speaking. For teachers, it could promote their professional development in terms of creativity and also reduce teaching anxiety. In teaching writing, Deligianni & Pouroutidi (2016) discovered many positive effects of utilizing digital comics such as learners' enthusiasm about creating digital comics as part of their writing lesson and students' participation in group work which created positive feelings. Besides writing, digital comics are advantageous for language learners as online reading materials and for improving their knowledge of English grammar and vocabulary (Robbani & Khoirotunnisa, 2021).

In recent years, instead of using digital comics as learning media, some educators/ researchers have transformed digital comics into learning modules. Moreover, Anggraini et al., (2019) developed mathematical modules with comic illustrations to enhance students' higher-order thinking skills (HOTS). Comic illustrations in the modules attracted students to learn mathematics and generated students' motivation and literacy. Annisa et al., (2020) and Badeo & Koc (2021) share similar views about employing digital comic-based modules in teaching Physics. Annisa et al., (2020) mentioned that their "comic-based modules andro-web" product was valid to use in teaching Physics materials in senior high schools. They also argued that their modules could increase students' problem-solving skills in Physics. Badeo & Koc (2021) revealed that after the integration of digital comic-based modules, students understood science materials better and felt more motivated in learning Physics.

Furthermore, studies conducted by Dwiputra et al., (2020) and Randi et al., (2022) have proven that digital comic-based modules can also be part of social studies. Dwiputra et al., (2020) utilized webtoon to create KOBUT IPS which resulted in plenty of benefits for students, especially during online learning due to the Covid-19 pandemic. They mentioned that KOBUT IPS was interactive, simple in form, limitless (students could read it anywhere anytime), and had many attractive illustrations. Similarly, due to the pandemic, Randi et al., (2022) developed comic-based modules for teaching Islamic religious education during

distance learning. The modules gained positive responses from the students and could increase students' learning outcomes simultaneously.

In light of the previously mentioned studies, it has been obvious that digital comics are commonly utilized by educators for teaching English. However, the use of modules based on digital comics especially for teaching English proficiency test materials, and whether it could increase students' proficiency scores have not been discovered. Therefore, this research aims to measure the impact of digital comic-based modules on students' English proficiency test scores, especially for university students.

METHOD

This current research applied a pre-experimental design, in which the researchers only studied a single group to receive intervention and there was no control group to compare with the experimental group (Creswell, 2014). The participants were third-year students of Universitas Muhammadiyah Lamongan, Indonesia who were attending EPT preparation classes for four months from March to June 2022 of 157 students (118 females, 42 males). The participants were selected to be the samples of the study because the researchers taught them in the EPT preparation classes. They were ranging from 20-24 years and majoring in Nursing (139 students) and Computer Engineering (18 students). The majority of the participants (124 students) had never had any proficiency tests and all the participants never attended test preparation classes before. Attending EPT preparation classes was obligatory for all third-year students at Universitas Muhammadiyah Lamongan. At the end of the classes, they had to achieve a minimum score EPT of 450 to meet the graduation requirement.

There were three phases in conducting this research. Phase 1 was when all participants completed a pretest before EPT preparation classes. Phase 2 or the implementation of the EPT preparation class using digital comic-based modules was held the following week after the pretest. The class was held once a week for four months or was equal to 16 meetings in total. Each meeting lasted for two hours and was conducted online synchronously through Zoom. Administering post-test was the last phase of this research (Phase 3). The impact of digital comic-based modules on students' EPT scores was investigated using the results of pretest and posttest scores in EPT. The results of the pretest and posttest were then analyzed by using SPSS 22.0 to obtain descriptive statistics. The descriptive statistics include minimum and maximum scores, means, and standard deviations of both pretest and posttest scores. To examine the impact of digital comic-based modules on students' EPT scores, paired-sample t-test, and effect size test was conducted and analyzed. The sequence of data collection and analysis can be perceived in Figure 1.
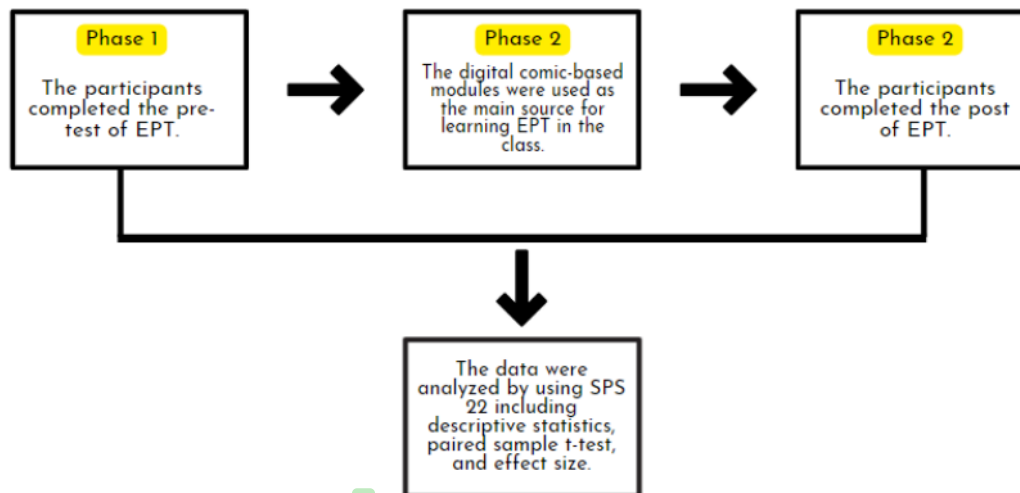
Figure 1. The Sequence of Data Collection and Analysis

FINDING AND DISCUSSION

To reveal the impact of digital-comic-based modules on students' EPT scores, paired-sample t-tests, and the effect size was conducted. Table 1 shows the results of pre-test and post-test EPT scores of listening comprehension, Table 2 shows the results of structure and written expression, and Table 3 shows the results of reading comprehension. The overall results of EPT scores can be perceived in Table 4.

Table 1. The Results of Pre-test and Posttest of Listening Comprehension

Pretest Mean	Pretest SD	Posttest Mean	Posttest SD	t-stat	ρ-value	Effect size
14.17	4.630	19.54	4.380	14.293	0.000	1.191

n=157, highest score = 50, ρ=<0.05

Table 2. The Results of Pre-test and Posttest of Structure and Written Expressions

Pretest Mean	Pretest SD	Posttest Mean	Posttest SD	t-stat	ρ-value	Effect size
11.32	2.853	23.66	3.768	32.362	0.000	3.692

n=157, highest score = 40, ρ=<0.05

Table 3. The Results of Pre-test and Posttest of Reading Comprehension

Pretest Mean	Pretest SD	Posttest Mean	Posttest SD	t-stat	ρ-value	Effect size
15.81	5.138	32.61	6.100	22.815	0.000	2.978

n=157, highest score = 50, ρ=<0.05

Table 4. The Overall Results of EPT Scores

Pretest Mean	Pretest SD	Posttest Mean	Posttest SD	t-stat	ρ-value	Effect size
360	37.117	432	44.927	16.590	.000	1.324

n=157, highest score = 677, ρ=<0.05

After using digital comic-based modules in a four-month preparation class, a significant increase in students' EPT scores is revealed as shown by the difference between pretest scores (M = 360, SD = 37.117) and posttest scores (M = 432, SD = 44.927). It also obtains a ρ-value result of 0.000 (ρ<0.05), indicating that there is a significant influence after the use of digital comic-based modules on students' EPT scores. The significant results of the t-test are supported by the results of Cohen's d effect size which is equal to 1.324 (> 0.8), indicating that the use of digital comic-based modules has a large effect. Regarding each section, the digital comic-based modules present the most effective structure and written expressions section, followed by the reading comprehension section, and the last is listening comprehension section.

Fundamentally, many students failed English proficiency tests because they encountered some difficulties such as a lack of vocabulary and grammar mastery in the structure and written expression part, and were unfamiliar with the topics in the listening and reading comprehension sessions (Alek et al., 2019). Roza (2019) also revealed that many test takers were under great stress because they had high expectations for their scores but had little knowledge of the materials. In the current study, a significant increase in students' EPT scores as shown by the difference between pretest and posttest scores has indicated an improvement in students' understanding of the materials. The results are in agreement with Badeo & Koc (2021) and Annisa et al., (2020) who mentioned that the use of comic-based learning modules in the classroom enhanced students' understanding.

The improvement of students' understanding of the materials was highly affected by the nature of comics as multimodal texts. According to Jacobs (2013), meaning in comics is presented through texts, images, and a combination between texts and images. Therefore, many studies mentioned that multimodality in comics could lead to contextual learning. In digital comic-based modules for EPT, examples of sentences were also illustrated. For instance, in Appendix 1, the examples of possessive adjectives and possessive pronouns were illustrated by a set of digital comics. The digital comics contextualized different use between possessive adjectives and possessive pronouns. Tiara (one of the characters) said, "...I put it in my bag last night," while Ron replied, "...you can use mine". Digital comics can visualize the examples of the possessive adjective "my" and the possessive pronoun "mine" in the school context.

Castillo & Quinonez (2022) assert that comic is a great visual communication tool for learning vocabulary since it combines visual and verbal elements. Information presented through comics from both visual and verbal elements opens more opportunities for students to recognize or recall the materials (Deligianni & Pouroutidi, 2016). Furthermore, the selection of visual elements including appearance, design, and characters can affect students' comprehension of the learning goals (Saputri et al., 2021). The presence of visual features along with texts in the EPT modules has enabled students to effortlessly understand the materials through the context rather than understanding the texts alone.

The findings are parallel to a study performed by Castillo & Quinonez (2022) which revealed that Pixton digital comics had provided students with opportunities to learn vocabulary in context through a combination between words and illustrations. In Joneyd & Deris (2019), students who learned Shakespearean drama through webcomics as a visual

aid showed a better understanding of the characters and plot. They also disclosed more detailed information about the drama and were able to interpret the main theme. In terms of using digital comics during distance learning, İlhan et al., (2021) found that visual elements in digital comics could transform abstract objects into concrete ones and simplify complex materials.

Besides an improvement in the level of understanding, students' enthusiasm and interest also increased. Akmal et al., (2020) highlighted that one of the major challenges experienced by senior high school students who attended TOEFL preparation classes was a lack of enthusiasm. Students who felt tired and bored tended to keep silent during the class. In this research, the existence of digital comics has played an important role in attracting students to learn EPT materials. Students were presented with a set of digital comics whose story contained general knowledge along with an introduction to the target materials. Before entering the main discussion about passive voice, a set of digital comics entitled "The Olympic Games" was displayed (Appendix 2). Two characters in the comics, James and Marry, were talking about the Olympic games facts using passive sentences. At the end of the comics, students were asked to identify examples of passive sentences. Through this section, students did not solely learn target grammar but also participated in discovering the meaning and the form of words such as held (hold), built (build), and flown (fly).

According to Cabrera et al., (2018), Pixton comics facilitated students to learn vocabulary and grammar through their amusing and engaging backgrounds and characters. In her study, Ambani (2019) revealed that teaching English vocabulary using digital comics was not only attractive but also compelling for the students. It is also no doubt that comic provides a simpler method to grow students' interests (Annisa et al., 2020). Specifically, in reading, Suryani (2021) mentioned that digital comic-based educational media was effectively applied to enhance reading interest among EFL students. Indeed, unlike other preparation modules which were dominated by written explanations, digital comic-based modules provided students with full-color illustrations in elaborating the materials so that students enthusiastically learned the materials.

The results are in line with a study conducted by Mirosunnaily & Pramudiani, (2021) who concluded that digital comics affected students' learning motivation. Moreover, Juliana (2021) approved that web-based comics could increase students' motivation in mastering English vocabulary because they could lighten the classroom atmosphere and arouse students' curiosity. In their research, Kılıçkaya & Krajka (2012) approved that the use of electronic comics gained positive feedback from the participants and made students more motivated in completing grammar items and tasks. İlhan et al., (2021) also mentioned that the digital comics gripped the students with the use of humor. Similarly, the transformation of conventional EPT modules to digital comics has made students feel more convenient.

CONCLUSION

The minimum score set by the university along with students' absence from having experience attending preparation classes has put them under pressure. Rather than the ordinary module of EPT, digital comic-based modules have comforted students with their captivating content. The illustrations in the digital comics have created students' jovial mood

which contributes to students' participation during the class and their outcomes as well. However, there are several limitations of the present study. Since the study uses a pre-experimental design, it does not include any comparison or control group, and thus it is quite demanding to assess and elaborate on the observed change. Furthermore, the preparation classes are held online so that they may not be generalized to face-to-face meetings. Therefore, there are two suggestions for further research. It is worth investigating the impact of digital comic-based modules on two different groups to increase the validity of the results. Moreover, it is also important to observe the difference between online preparation classes and face-to-face classrooms.

ACKNOWLEDGMENTS

REFERENCES

7417

8	tigerprints.clemson.edu	<1%
	Internet Source	

9	theses.gla.ac.uk	<1%
	Internet Source	

Exclude quotes	Off		Exclude matches	Off
Exclude bibliography	Off			