Utilizing digital picture series to enhance students’ performance in writing narrative text

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Abstract
The contemporary educational environment requires teachers to embrace innovation and creativity to facilitate learning through the use of technology. Digital picture series, as a technology-based approach, can enhance students’ writing skills in narrative texts. The purpose of this study is to explore the implementation of digital picture series in learning-teaching English and its impact on students’ performance in writing narrative texts. Collaborative classroom action research was used in this study, with 30 respondents consisting of 19 females and 11 males. Data were collected through observation, interviews, and tests. Data were analyzed qualitatively and quantitatively using the Grammarly application. The findings indicate that the implementation of digital picture series was successful, and students’ performance in writing narrative texts improved from 60.55 to 75.00. The implementation process followed a structured approach consisting of need analysis, planning, acting, observing, and reflecting in cycle I, followed by problem-solving and re-planning, action, observation, and reflection in cycle II. Researchers recommend further researchers evaluating the effectiveness of digital picture series and placing greater emphasis on writing components.

Keywords: digital picture series; English writing; learning-teaching; narrative text; students’ performance

INTRODUCTION
Technology nowadays has become a part of human life. It is indeed changing peoples’ way of life. The smartphone is one of the technological development results. Most people bring their phones whenever they go. Smartphone users will reach 191.6 million in Indonesia in 2020 (Hanadian, 2020). In education, smartphones and the internet bring positive and negative impacts. The positive impact is internet provides knowledge from all over the world. Moreover, the internet may bring negative impacts, such as learning from incredible sources (Baron, 2020). Students need teachers’ and parents’ guidance to get valid and accurate information. In Indonesia, “Brainly” is one of the top websites helping students to do their work. Most of the students visited www.brainly.com in search of the answer key to the task given by their teachers. Consequently, Indonesian students “copy-paste” from that website without considering its validity.

Students’ creativity in writing could be higher because they can access the internet easily (Saifudin et al., 2020). With the widespread use of smartphones
and the internet, students easily access information and resources. However, it also exposes them to the risk of plagiarism and copying without properly understanding the subject matter. The students’ behavior of looking for the answer without rephrasing the sentence and citing the sources is plagiarism. In learning-teaching writing, plagiarism will destroy the goals of learning-teaching. Teachers should think differently and creatively as a learning-teaching control to avoid plagiarism. Hidayanti (2018) stated that to improve students’ writing performance; students should understand the characteristics of the text. Students who understand the general structures, language features, and social functions will systematically write the text (Martinet, 1986). The better learning-teaching process utilizing appropriate media, especially in writing performance, help students to create a correct sentence and to build a good paragraph or text (Brown, 2000).

The preliminary research conducted at the school revealed some significant problems in the learning-teaching processes. The researchers found that some students could not write a text systematically, while others were not paying attention to the learning material and were instead playing with their smartphones. These issues were caused by an unconducive learning-teaching environment and improper learning-teaching techniques (Halim et al., 2018). Furthermore, using learning-teaching media could have been more optimal, with teachers relying only on conventional methods and not incorporating any media in the learning-teaching processes. As a result, students’ interest in learning could have been better. They needed help answering the teacher’s questions during the question and answer section, which needed to be more appropriate with learning-teaching goals.

Therefore, this current research aims to achieve two objectives. The first objective is to describe the utilization of digital picture series in learning-teaching narrative text writing. The second objective is to evaluate the student’s performance in writing narrative text using digital picture series as a learning media. By utilizing digital picture series, the researchers hope to create a more engaging and interactive learning environment, which can motivate students to learn and improve their writing skills. The findings of this research can be beneficial for teachers, educators, and policymakers in developing effective teaching strategies and learning media to improve students’ writing skills and academic performance. Furthermore, this research can contribute to advancing the field of education by exploring the potential of digital technology in enhancing teaching and learning outcomes. The findings can also provide insights into the best practices and techniques for utilizing digital media in learning-teaching writing and other subjects.

**METHOD**

**Research Design**

This research design is collaborative classroom action research using qualitative and quantitative data. Collaborative classroom action research occurs in the classroom, where teachers and researchers research to solve the problem of learning-teaching together (Bruce, 2000). Classroom action research uses qualitative, interpretive modes of inquiry and data collection by teachers or...
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academic partners (Kemmis & McTaggart, 2014). Classroom action research usually needs several components in class: students, teacher, learning material, learning media, learning result (cognitive, affective, psychomotor), learning environment, and process (Thompson, 2021). In doing this research, the researchers use the classroom action research model introduced by Kemmis and McTaggart.

The present research uses classroom action research since it is a practical and collaborative approach that allows researchers and teachers to work together to solve learning-teaching problems. Furthermore, it involves collecting and using data in real-time to improve the learning-teaching processes. This approach is particularly useful for exploring complex issues and developing innovative solutions in the classroom. Furthermore, using qualitative and quantitative data collection methods can provide a comprehensive understanding of the research problem. Using both allows the researchers to triangulate data sources and reduce bias. Kemmis and McTaggart’s (2014) model in this research provides a structured framework for conducting the research, ensuring the process is systematic and rigorous. In summary, using collaborative classroom action research with qualitative and quantitative data collection methods is an effective way to explore and address learning-teaching problems in the classroom.

Respondents
The respondents of this research are a specific group of students in the first grade of SMA Negeri 1 Jetis Bantul, namely one class of grade ten (MIPA 1). The reason for selecting only one class as the respondents is likely due to the scope of the research question and the available resources. By focusing on one class, the researchers can closely observe and analyze the interactions between the teacher and students and the learning outcomes in that particular class. The total number of respondents in the class is 30, with a breakdown of 19 females and 11 males.

Instruments
The researchers used multiple methods to collect data for this current study. Qualitative data were collected through observations and interviews. Observation involves observing and documenting behaviors or qualities, which provides researchers with insights into the physical, human, interactional, and program settings (Morrison, 1993). The researchers prepared an observation checklist to collect qualitative data on teacher performance and learning-teaching activities during a collaborative classroom action research in narrative text English material with digital picture series. In contrast, the only quantitative data collected in this study was students’ test scores. This type of data gathers numerical rather than verbal data (Creswell, 1994). The test was used to measure students’ performance and improvement using digital picture series media. The researchers conducted a pre-test before implementing the digital picture series, post-test I after implementing the digital picture series in cycle I, and post-test II after implementing the digital picture series in cycle II to evaluate the effectiveness of the digital picture series. Overall, the researchers
used a combination of qualitative and quantitative data collection methods to provide a comprehensive understanding of the research question. Qualitative data were gathered through observations and interviews, while quantitative data was collected through testing.

**Procedures**

The researchers created a lesson plan implemented in cycle I based on the need analysis. This cycle has four stages: planning, acting, observing, and reflecting. Planning was designed to prepare, solve, increase, improve, or change behavior and attitude as a solution. In this stage, the researchers prepared all documents and plans implemented in the research. The acting was what the researchers conducted to solve, increase, improve, or change their goals. Every acting stage has three meetings. At the first meeting, the teacher taught students about the generic structure and language features of narrative text using PowerPoint to remind students about the material and to increase students' understanding. In the second meeting, the teacher used digital picture series in the learning-teaching process of narrative text writing.

Meanwhile, in the third meeting, the students were given post-test I in 45 (forty-five) minutes. In this stage, the researchers observed students' post-test I result as the consideration to conduct the next cycle. Observation showed that students still found it hard to write narrative text; thus, the researchers and the teacher conducted cycle II to solve the problems. From that observation, researchers reflected on the acting stage in the first cycle and decided to change their planning. After the reflecting stage, the researchers conducted creativity and innovations.

The researchers considered changing the role of the teacher in the creativity and innovation stage. The learning-teaching strategy and class participation were also considered in the next cycle. The researchers thought again about implementing digital picture series, whether it was better to be pair-work or individual work. At the same time, the story in the narrative text changed during the research. Cycle II of this research began with replanning, acting, observing, and reflecting. The researchers revised the lesson plan from pre-activity, main-activity, and post-activity in the replanning stage. In the first meeting during cycle II, the teacher applied controlled-writing tasks that facilitated students to write from the orientation, complication, and reorientation parts. The teacher applied freewriting tasks in the second meeting during cycle II. Freewriting tasks asked students to write more freely but still provided advice and support from the teacher, as Nunan (1989) and Nunan (2004) stated. Meanwhile, in the third meeting of cycle II, the freewriting task implied measuring students' performance in post-test II. Based on the observation and reflection during cycle II, the researchers and the teacher were satisfied with the result of post-test II; all problems were already solved, and no new problems occurred; thus, there were no more cycles in this research.
Data analysis
To analyze the qualitative data, the researchers described the observation checklist used during the learning-teaching process. Based on the prepared lesson plan, the observation checklist was used to assess whether the learning-teaching objectives were achieved. The researchers scored teachers' performance and students' activities in the observation checklist, where each visible indicator was scored one point. The score ranged from 0 (no visible indicators) to 4 (all indicators visible) (Morrison, 1993). The analysis of teacher performance and students' activities were conducted to evaluate the implementation of learning-teaching of narrative text using digital picture series. Meanwhile, to analyze the quantitative data, the researchers used the Grammarly application to measure students' performance in writing narrative text. The application calculated scores based on improper formatting, faulty subject-verb agreement, and clarity (Paivio, 1991). The score was automatically calculated from 1-100, and the researchers used the total score and each writing component score to analyze students' performance improvement. The researchers created charts and figures to visualize the improvement of each writing component from the pre-test, post-test I, and post-test II. Additionally, the researchers used the mean formula to calculate the improvement score of students on each test.

RESULTS AND DISCUSSION
Utilizing Digital Picture Series to Enhance Narrative Text Writing
Need Analysis
The observation in the need analysis stage showed that students needed more motivation in learning-teaching because the teacher needed to maximize the learning media suitable for students nowadays. After observing, the researchers asked the teacher to conduct a pre-test to measure students' understanding of preliminary research. The result showed that students have low scores in writing. Therefore, the teacher and researchers considered the media to help students write text: digital picture series. The following quotation is one of the teachers' explanations in the need analysis interview:

Researchers : “In your experience teaching English, what is the students' performance that needed most to change and improve?” [Free Translation]

Teacher : “Well, students find it hard to write the texts in English, whatever text it is. Technology nowadays makes students look for the example of the text and copy-paste it into their work. Students also write with wrong grammar.” [Free Translation]

Interview with teacher: Tuesday, January 2nd, 2022

Cycle I
Planning
In this stage, the researchers asked the teacher about the common problem in writing English text. The interview with the teacher concluded that students needed more skills to write English text. Students usually wrote copy-paste from the internet or other students' work if asked to write English text. The researchers and the teacher wrote a lesson plan from the planning stage. Then,
the researchers selected the appropriate material, media, and approach based on the English syllabus of tenth-grade students at SMA Negeri 1 Jetis Bantul. The researchers created a lesson plan that the teacher would teach. The researchers used narrative text as the appropriate material, digital picture series as the media to teach, and scientific learning as an approach. The researchers also prepared digital picture series based on creating digital picture series. After all lesson plans, the researchers prepared an observation checklist for classroom action research (Knapp et al., 2005).

**Acting**

The researchers conducted the first meeting on January 6th, 2022. The teacher teaches students about the narrative text’s definition, language features, and generic structure. The teacher started the lesson by asking students to remember the types of narrative texts. Students were asked to watch a short video on YouTube about the main activity. This video was “The Legend of Tangkuban Perahu.” Students paid attention to the narrative text shown on YouTube. The characters in the video helped students to increase their vocabulary. The teacher asked students to identify as much as possible the question about the narrative text in the video as a critical thinking skill. The teacher asked students to discuss in pairs with their teammates. Students were asked to classify which sentences include declarative, interrogative, imperative, and exclamation. Students and teachers communicate about social functions, language features, and general structures of narrative text. After the students understood the generic structure, the teacher introduced the digital picture series. The teacher showed the digital picture series in front of the class. The teacher and students discussed understanding the story’s plot through digital picture series.

The researchers January 10th, 2022, conducted the second meeting. The teacher taught students how to write narrative text through digital picture series. The researchers took note of the class situation, learning material, teacher’s explanation, student activities, time management, and advice on the observation sheet. The teacher asked students to open “The Legend of Tangkuban Perahu” digital picture series on their phones or laptop. The teacher explained the differences between simple present tense, simple past tense, and simple continuous tense (Martinet et al., 1986). In pairs, students discussed writing narrative text. The teacher helped students write narrative text in this meeting as a guide. The teacher moved from one side to the other to help students analyze generic structure if necessary. Students in group work decided on the general form of “The Legend of Tangkuban Perahu” story. The digital picture series helped students determine the general layout because it provided expression in pictures. After analyzing the generic structure, the teacher asked students to find simple past tense in the narration. Students collected the new verb and translated the word to increase their vocabulary to write. A teacher asked students to write narrative text in digital picture series in group work. The teacher asked students to role-play the characters in the story in group work.
The researchers conducted the third meeting on January 13th, 2022. After implementing the digital picture series, the teacher asked students to do post-test I. Before conducting post-test I, the teacher asked students to pray together. The teacher mentioned the minimum scores that students should pass the test while preparing their phones or laptops and an internet connection to use the digital picture series. Furthermore, the teacher asked students to write narrative text through digital picture series. Some pictures guide students in writing narrative text. The story students should write in the post-test was “The Legend of Malin Kundang.” The time allocation for students to complete the test was 45 (fifty-five) minutes. The teacher was not allowing students to use google translate, but the teacher allowed students to use a digital dictionary. The students’ honesty in doing the post-test showed that students had confidence in writing English, text-primarily narrative text. Ultimately, the teacher informed the students about the next meeting material.

**Observing**

Based on the researchers’ observation in the observing stage, learning-teaching in the first cycle ran well. Implementing a digital picture series could help students write narrative text because they have the imagination to explore the story (Juita, 2014). Even though students could write with digital picture series, the researchers still needed to be satisfied with the result. Based on the observation of the post-test I result, some students need help classifying the generic structure of a narrative text. Some students write a sentence without a verb or subject, missing prepositions, incorrect verbs, improper formatting, faulty subject-verb agreement, et cetera. It proves that digital picture series can improve students’ participation in class, but some students need to submit their work on time. Some students have not thoroughly enjoyed smartphone learning (Nasri, 2020). The students also felt hesitant to ask the teacher if there was any question in their minds. That was why researchers thought of other ways to fix this problem.

**Reflecting**

The result in cycle I showed that the students’ understanding was increased. The students could write narrative text because they knew the story’s plot. Digital picture series could improve students’ writing performance to make students understand the story’s plot. It was in line with Cambourne (1988) that picture series helped students generate and develop ideas in writing narrative text. Based on the reflecting stage analysis, the digital picture series improved students’ writing performance in the creativity aspect. However, researchers wanted students to obey the correct grammar in the writing components. The research is successful if students write narrative text systemically and academically accurately. Therefore, the researchers need to revise the planning to be more creative and innovative to understand better, result, and participate in the next cycle.
**Problem-Solving: Creativity and Innovation**

As a result of the test and observation that the researchers got, some revisions were needed related to the planning and acting for the next cycle. The researchers realized that the role of a teacher had a significant impact on students. To fix the new problem after implementing process I, the researchers decided to change the part of the teacher from a guide to a guide and evaluator. This change was designed to fix the non-grammatically sentence conducted by students. In this design, the teacher as evaluator was responsible for correcting students' works if necessary. The learning strategy also changed from cooperative learning to inquiry learning. Students who worked in a group increased their performance but needed more focus when the test was conducted for individual work and had low consequences. Therefore, it differed from Finnocchiaro (1974), which stated that cooperative learning involved positive interdependence and individual accountability. The researchers changed this learning strategy, as Gilster (2017) stated, that the inquiry learning approach facilitated students to be more active by collecting, observing, and analyzing the data related to the narrative text. The researchers also realized that background knowledge had writing improvement. Students who knew or were familiar with the text wrote easier than the story they never knew (Mahbub, 2020). However, the story was already the same: folktales from Indonesian students were not friendly yet to other regions' stories. The researchers then changed the story from “The Legend of Malin Kundang” to “The Legend of the Prambanan Temple.” Those modified above were designed to get better performance in this research.

**Cycle II**

**Replanning**

In replanning the implementation, the researchers and teacher discussed what should be changed during cycle II. As reflected above, the researchers and teachers changed the performance based on creativity and innovation. The researchers changed teachers' roles, learning-teaching approaches, and stories based on the region. This replanning was used to resolve the problem that occurred in cycle one. Researchers changed teachers' roles to help students write sentences. Meanwhile, the learning strategy changed because cooperative learning was unsuitable for senior high school students with different needs. Then, the story changed based on the region because the students were easier to write the story from their hometown. Nevertheless, before conducting the acting stage, the researchers revised the lesson plan to get a better result and engage students more.

**Acting**

The researchers conducted the fourth meeting on January 17th, 2022, from 07.00 to 08.30. In this meeting, the teacher gave students feedback about post-test I. The feedback aims to provide students with accurate corrections, and they know their errors. The learning-teaching strategy also changed from cooperative learning, which requires students to work in a group, to inquiry
learning which requires students to be responsible for their education. In the main activity, the teacher asked students to search on the internet about the material they still needed to understand. Students were also allowed to use google translate if they did not know the meaning of English or simply by asking the teacher. Students were asked to observe, find, and analyze based on their knowledge and research in implementing digital picture series. Teachers as guides and evaluators helped students keep the correct example in writing narrative text, found the data they did not know, and analyzed incorrect sentences they made.

The researchers conducted the fifth meeting on January 20th, 2022. The class began from 09.30 – 11.00 WIB in the X MIPA I class. The focus of today's material was to rewrite narrative text with guidance and evaluation from the teacher. In conducting the main activity, the teacher asked students to open digital picture series, the story “The Legend of Malin Kundang.” As the evaluator walked into the class, the teacher saw the students' work as Utami et al. (2018) conducted the research. If the teacher found incorrect sentences in writing narrative text, the teacher asked them to correct them. The teacher also asked students who kept quiet. The teacher asked students to save their work in digital picture series. After that, the teacher moved on to another story, “The Legend of Prambanan Temple.” The teacher and students watched a short video on YouTube. Students were asked to guess the video's generic structures and language features of narrative text. Students answered the teachers’ questions. The students’ participation shows that students get a better understanding of writing narrative text.

Researchers, on January 24th, 2022, conducted the sixth meeting. This meeting began at 07.00 – 08.30 WIB. The teacher asked students to be honest and do their best for this test. The teacher asked students to set the chair one step farther from their friends than when class was usually held in the learning process. The teacher directed students to write narrative text in “The Legend of Prambanan Temple.” The teacher reminds the students to focus on the text organization, sentence structure, and the writing process. The teacher also asked them to place their previous incorrect sentence in writing and not do the same. The teacher asked students to carry out the teacher’s instruction to get a better result. Students were asked to write narrative text in digital picture series and write the moral value of the text given by the teacher. The teacher asked students to submit the post-test II through digital picture series for 45 (forty-five) minutes long.

Observing

The researchers observed cycle II and found that creativity and innovation significantly impacted the students' participation in class. When conducting post-test II, the teacher saw that students needed clarification about the narrative text's generic structure and language features. The students could operate digital picture series easily and actively participate in the learning-teaching. Even though the story in post-test II was longer than in post-test I, the students could submit the work earlier. Implementing digital picture series
with the changing learning strategy and teacher roles improved the students' performance.

**Reflecting**

The observation showed that the performance and students' motivation were better than in the previous cycle. Students should have written correct tenses and could place the subject and verb in the correct sentence. The students also felt confident to ask the teacher questions they did not know. The changing role of the teacher helped students a lot. The role teacher as an evaluator and guide increases students' understanding of writing narrative text. It was in line with Aziz (2019), who stated that teachers who stimulated students made students not bored and idle in the classroom. In cycle II, the researchers conducted inquiry learning for the learning strategy. It made students active participants in the class because they observed, found, and analyzed the text. Through this inquiry learning, students understood well about the narrative text. Last, the story's change also made it easier for students to write narrative text because it developed critical thinking (Rodríguez, 2018). It can happen because most students come from Yogyakarta and have background knowledge of “The Legend of Prambanan Temple.” It was in line with Brown (2000); there were better results for students who wrote with background knowledge than without. After conducting cycle II, the researchers concluded that no new problems occurred in cycle II, or all problems were solved by creativity and innovation with satisfactory improvement.

**Students’ Performance in Writing Narrative Text Using Digital Picture Series**

**Students’ Performance in Pre-Test**

The students were asked to write “The Legend of Tangkuban Perahu” without digital picture series in this pre-test. The researchers conducted a pre-test for 45 minutes in the classroom with 30 students as the research respondents. Pie Chart 1 showed that misspelled words had a high percentage of 47%. Students should have written more carefully and remembered the right words. For example, students write “dos” instead of “does.” Students needed to write correctly or were in a hurry to write the correct words because of the test time, as Argawati (2017) and Nejmaoui (2018) explained. Then another example of a misspelled word was the use of the apostrophe. In most cases, students needed to remember to add an apostrophe in the writing subject and to be. For example, “im” instead of “I’m or I am.” Capitalization is also essential in misspelled and confused words case. Some students did not write the subject “I” without capitalization. That was why misspelled and confusing words got the highest percentage in this pre-test, as in table 1.
Table 1. Pre-Test: Students’ Incorrect Sentences Percentages in Writing Narrative Text

<table>
<thead>
<tr>
<th>Type of Incorrect Sentences</th>
<th>IF</th>
<th>MP</th>
<th>FSVA</th>
<th>D</th>
<th>MW</th>
<th>IV</th>
<th>C</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>38</td>
<td>50</td>
<td>49</td>
<td>90</td>
<td>332</td>
<td>72</td>
<td>29</td>
<td>46</td>
</tr>
</tbody>
</table>

Notation:
IF : Improper Formatting
MP : Missing Preposition
FSVA : Faulty in Subject-Verb Agreement
D : Determiner
MW : Misspelled Word
IV : Incorrect Verb
C : Clarity
M : Modal

Students’ Performance in Post-Test I

In this test, students had to write the narrative text “The Legend of Malin Kundang” story. Students were given 45 minutes to do this test. The researchers asked students to pay attention to apostrophes and capitalization, which is the highest incorrect writing by students. The writing components in correcting this test were the same as the previous test. In this test, students made 7% faulty in subject-verb agreement. It was shown on the students' report that students forgot to use “be” instead of “was.” Students also made incorrect sentences when they wrote, “He says he was don't had mother.” The correct subject-verb agreement students should use is “does not.” Another case of the faulty subject-verb agreement was using “s/es” in the simple present tense. The number 7% faulty in the subject-verb agreement done by students when they wrote “The Legend of Malin Kundang” was they wrote incorrect sentence when they wrote the verb “kick,” even if the subject was “he/she/it.” The correct subject-verb agreement, in this case, was “he kicks,” not “he kick.” Using “had/had” also became students' lost focus in writing narrative text. Students sometimes needed to consider the subject as in table 2.

Table 2. Post-Test I: Students’ Incorrect Sentences Percentages in Writing Narrative Text

<table>
<thead>
<tr>
<th>Type of Incorrect Sentences</th>
<th>IF</th>
<th>MP</th>
<th>FSVA</th>
<th>D</th>
<th>MW</th>
<th>IV</th>
<th>C</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>11</td>
<td>10</td>
<td>7</td>
<td>13</td>
<td>47</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Notation:
IF : Improper Formatting
MP : Missing Preposition
FSVA : Faulty in Subject-Verb Agreement
D : Determiner
MW : Misspelled Word
IV : Incorrect Verb
C : Clarity
M : Modal

Students’ Performance in Post-Test II

In this test, students were asked to write “The Legend of Prambanan Temple” using digital picture series. The students had 45 minutes to take the score on this test. Students’ other writing components needed to be fixed in subject-verb agreement 8%, incorrect verb 14%, modal 6%, missing prepositions 9%, improper formatting 5%, the determiner 12%, and clarity 1%. Although some writing components were fixed during the implementation of the digital picture series, students still needed help selecting the correct preposition, modal, and verb. Strauber et al. (2020) explained that the bare verb infinitive should follow a modal. It should be “He only can send you.” Incorrect verb below, students
should use “had” instead of “were” because considering the situation in the text required students to use the simple present perfect tense. Corrected the text using prepositions; the correct verb was “You had cheated on me.” The following table 3 is students’ incorrect sentence percentages in writing the narrative text of English.

<table>
<thead>
<tr>
<th>Type of Incorrect Sentences</th>
<th>IF</th>
<th>MP</th>
<th>FSVA</th>
<th>D</th>
<th>MW</th>
<th>IV</th>
<th>C</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>5</td>
<td>9</td>
<td>8</td>
<td>12</td>
<td>45</td>
<td>14</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

Notation:
- IF: Improper Formatting
- MP: Missing Preposition
- FSVA: Faulty in Subject-Verb Agreement
- D: Determiner
- MW: Misspelled Word
- IV: Incorrect Verb
- C: Clarity
- M: Modal

The Improvement of Students’ Performance in Pre-Test, Post-Test I, and Post-Test II

Figure 1 shows the improvement of the pre-test, post-test I, and post-test II. These three tests decreased the writing components such as improper formatting, missing prepositions, faulty subject-verb agreement, determiner, misspelled words, incorrect verbs, clarity, and modal. In line with Shalihah (2015), the digital picture series improved students’ writing performance from pre-test, post-test I, and post-test II. The improper formatting accumulated by all students was less than 50 in the pre-test, more than 50 in post-test I, and decreased again in post-test II. Students’ missing prepositions were 50 in the pre-test, more than 50 in post-test I, and again reduced in post-test II became less than 50. The accumulation of faulty subject-verb agreement was 50 in the pre-test, 50 in post-test I, and decreased post-test II to become less than 50. All students’ accumulation of determiner faulty was 50 in the pre-test, 50 in post-test I, and decreased again in post-test II became less than 50. The proliferation of misspelled and confused words by all students was less than 350 in the pre-test, 350 in post-test I, and decreased again in post-test II become 225. All students’ accumulation of incorrect verbs was 75 in the pre-test, more than 50 in post-test I, and increased post-test II became more than 75. All students’ accumulated clarity sentences were less than 50 in pre-test and post-test I and decreased in post-test II became less than 10. All students’ proliferation of incorrect modal was 50 in the pre-test, 10 in post-test I, and post-test II became 25. For the detail, the graphic can be seen in the following figure 1.
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Figure 1. The Improvement of Students’ Performance based on Faulty Percentage of Writing Components

To clarify the students’ performance, figure 1 shows the students’ writing performance increased from these three tests. It showed five students had very good performance in the pre-test, two students in post-test I, and 13 students in post-test II. Sixteen students performed well in a pre-test, then 14 in post-test I, and 12 in a post-test II. Six students had fair performance in the pre-test, seven in post-test I, and five in post-test II, for the last poor gift was only three students in the pre-test, five students in post-test I, and no one who got poor performance in post-test II. It proves that digital picture series improved students’ writing performance in narrative text. The result was in line with Khoiruddin (2016); the students had good writing performance after implementing the digital picture series. The following figure 2 shows the improvement of students’ performance categories.

Figure 2. The Improvement of Students’ Performance Categories

Accordingly, data pertains to students’ performance in writing a narrative text using digital picture series. The data compare the results of three tests; Pre-Test, Post-Test I, and Post-Test II. In the Pre-Test, students were asked to write “The Legend of Tangkuban Perahu” without digital picture series. The researchers conducted this test in 45 minutes with 30 students as the research respondents. The results showed that misspelled words had the highest
percentage of 47%. Students also needed help with capitalization and the use of apostrophes. In Post-Test I, students were given 45 minutes to write the narrative text “The Legend of Malin Kundang” story. The researchers asked students to pay attention to apostrophes and capitalization. Students made 7% faults in subject-verb agreement, and there were issues with the use of ‘be,’ ‘does not,’ and ‘had’ in sentences.

In Post-Test II, students were asked to write “The Legend of Prambanan Temple” using digital picture series. Students had 45 minutes to complete the test, and the test evaluated their writing components. Students had difficulty choosing the correct preposition, modal, and verb. The writing components where students had made errors were improper formatting, missing prepositions, faulty subject-verb agreement, determiner, misspelled words, incorrect verbs, clarity, and modal. Furthermore, figure 1 shows the improvement of writing components in the pre-test, post-test I, and post-test II. The researchers found that the digital picture series improved students’ writing performance in all three tests. The figure showed decreased errors in the writing components of improper formatting, missing prepositions, faulty subject-verb agreement, determiner, misspelled words, incorrect verb, clarity, and modal in all three tests. Figure 2 shows that students’ writing performance had improved from the Pre-Test to Post-Test I and Post-Test II. Five students performed very well in the Pre-Test, two in Post-Test I, and 13 in Post-Test II.

CONCLUSION
Implementing digital picture series in the learning-teaching processes improved the writing performance of tenth-grade students in the narrative and transactional text. The interactive and attractive nature of the digital picture series engaged students, increased their interest in learning, and reduced the problem of students becoming passive in the classroom. Using digital picture series led to a significant improvement in writing test scores, and students made fewer errors in their writing. Teachers should use digital picture series as a teaching aid for writing transactional text, but focusing on maintaining discipline and avoiding the misuse of smartphones in the classroom. Students should be encouraged to explore digital picture series at home and develop their ideas in writing transactional text. Although this study has limitations, it can serve as a reference for further research on the effectiveness of digital picture series in teaching narrative text.

AUTHOR STATEMENT
All authors contributed to the conceptualization and design of the study, analysis and interpretation of the data, and writing and revising of the manuscript. Clarita: Conceptualization, collecting data, writing the manuscript, and compiling references; Ashadi: Supervision, providing advice, and analyzing data; Amalia: Assisting the design of the study, assisting manuscript editing, providing related references, and assisting data interpretation and mendeley usage; Juhansar: Supervision, providing advice, proofreading, overseeing the project, providing critical feedback throughout the study, organizing and leading the writing of the article, and completing the revision process.
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REFERENCES


**Conflict of Interest Statement**: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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