Technology-Based Integration to Develop Students' Narrative Text

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Abstract

Improving students' skills in writing English is considered challenging for non-native students because of their lack of knowledge in building ideas, vocabularies, and the organization of the text. Therefore, this article aims to analyze and describe whether technology-based integration can develop students' narrative writing. The method used to analyze the text was an experimental approach with sixty students taking Writing II subject at Nommensen University Pematangsiantar, Indonesia. Thirty students involved in the experimental group were provided with the technology-based environment (HyperStudio), while the other thirty students in the control group were not. The results of the study showed there was a significant improvement in the students' narrative writing in the experimental group. The results of the study are expected to give great insights and knowledge for creative pedagogy in the classroom. However, the researcher suggests that future studies use a larger sample with a diverse range of learning styles, age groupings, and gender. In addition, future researchers should also look into the benefits of using HyperStudio across the curriculum in Indonesia, including science, social studies, history, geography, and other subjects.

I. Introduction

Students must improve their writing skills as knowledge is easily found in text snippets such as newspapers, journals, and even the Internet. It is because writing enables us to "record, transmit and communicate ideas that arise in our minds" (Rodgers, 2005). This suggests that students can improve their writing skills by reading widely, as many academics believe that the more they read, the better their writing skills will be.

Furthermore, the ability to create something useful is correlated with students' outcomes (Geiser and Studley, 2001). Writing, on the other hand, is widely regarded as one of the most difficult abilities for foreign language students. Students, particularly non-native speakers, encounter several challenges, including the inability to develop an idea, a lack of vocabulary, and the inability to organize text (Saputro, 2013). To begin writing, students must first have a concept. It is all about ideas, according to Peha (2002). Students will know what they will write if they have come up with a concept. Teachers' methodologies, learning materials, and media (Lestari, 2008; Ariyanti, 2016; Hidayati, 2018); a lack of vocabularies; mother tongue interference (Megaiab, 2014; Hatmanto, 2012; Ariyanti, 2016; Bouziane, 2005; Mukminin et al, 2015) a lack of vocabularies; teachers' reluctant to implement ICT tools (Machmud, 2011; Raman and Yamat, 2014) are also other factors that affect the students' ability to write.

Although learning to write is difficult, mastery is crucial for students. The importance of teachers' involvement in providing writing learning resources to students cannot be overemphasized. According to Harmer (2001), teachers' media plays an important role in teaching writing. Writing is the ability to express ideas, opinions, and feelings to other parties through written language (Saragih et al, 2020; Rajagukguk et al, 2020). Writing skills are very important to learn because writing skills are very important in supporting student success (Kristyanawati et al, 2019; Pardede and Herman, 2020; Silalahi et al, 2021). He emphasizes the value of media as "various teaching aids that explain the meaning and structure of language engage students in a topic or serve as the basis for an entire activity" (Harmer, 2001). The more students interact with the media, the better they understand the material.

Most teachers spend most of their teaching time helping students understand specific content standards (Knipper and Duggan, 2006; Herman et al, 2020). Teachers must create student-centered learning environments utilizing technology and rich texts to enhance students' writing skills. Many types of research (Kutlu, 2012; Ghahri et al, 2015; Zhao, 2003; Amaechi, 2016) have explored the advantages of using technology to improve students' writing. When using technology, students use higher-order thinking skills and create meaning for content. After graduating in this type of learning environment, students will be better prepared for college and/or a successful career.

For example, two quantitative longitudinal case studies were conducted in China to evaluate the feasibility of a student-centered teaching approach in English Audio-visual Spoken Classes (EAVSC) in a CALL setting (Lu et al, 2010). According to their data, students' communicative language skills improved under this teaching model. (Chao-Jung et al, 2014). Survey of 569 "digital native" students using technology for English language learning and entertainment. According to the questionnaires they distributed, students used technology resources (Facebook, Skype, and blogs) for entertainment purposes rather than academic purposes. In addition, children appear to use similarly established tools rather than emerging technologies for learning and entertainment. However, they were satisfied with the educational methods used by English teachers.

A study conducted in Indonesia (Cahyono and Mutiaraningrum, 2016) found that Internet-based writing instruction benefited pupils in terms of writing quality and quantity, autonomy, flexibility, and confidence. Komara and Ramdani (2016) claim that using Edmodo can assist students attain affective, cognitive, integrative social interaction, and task achievement by increasing their motivation. Furthermore, according to Effendi and Wirabhakti (2015), implementing the sentence soup game has a favorable impact on teaching writing.

To summarize the earlier statements, the effective use of technology in teaching and learning boosts the benefits of ICT by allowing students to become active learners and build problem-solving, critical thinking, and creativity abilities (Hubbard, 2013; Jung, 2016; Kean et al, 2012; Klimova and Semradova, 2012). For example, Hubbard (2013) asserts that teachers have a critical role in integrating ICT into their teaching and learning since they are the ones who make learning happen. Furthermore, Bell et al (2004) argue that "any digital computing and communication equipment" is included in "ICT." It refers to computers and other digital devices such as cell phones and televisions. Films, radio, and television were among the first types of ICT to enter educational settings (Cuban, 1986; Wang and Reeves, 2003).

HyperStudio as a creative educational tool can also be used to teach writing (Wagner, 1997). Sims (2000) believes that HyperStudio can benefit not only the teaching and learning

of languages and skills like reading, writing, listening, and speaking, but also the teaching and learning of science, social studies, history, geography, political science, anthropology, and sociology. Furthermore, Burgstaller and Cristol (2000) claim that when students interact with computers, employing HyperStudio helps foster collaborative teamwork. HyperStudio enables learners to be manipulators and disseminators of information (Haviland and McCall, 1999). As a result, students transition from passive consumers and users to engaged creators and makers. HyperStudio as a language teaching tool is a very new field of study, with just a little literature on the subject. HyperStudio is practically never used in EFL classes in Indonesian schools. It demonstrates that some traditional instructors may believe that using technology to achieve the purpose of language education is superfluous. Prensky (2001) refers to them as "digital immigrant instructors" who "struggle to teach a population that speaks a whole different language." This means that nowadays, children talk about the Internet and technology in a way that their teachers don't understand. Furthermore, conventional teaching methods are still used in practically all Indonesian schools, particularly when teachers teach writing. By simply memorizing the characteristics of text types, this traditional technique bores and frustrates students. In an academic setting, the use of HyperStudio allows students to create knowledge through social interaction by seeking aid from classmates and teachers to gain a better grasp of projects or ideas (Burgstaller and Cristol, 2000).

As a result, this paper seeks to bridge the gap of using HyperStudio to improve third-year college students' narrative text at the Teacher Training Faculty of Nommensen University Pematangsiantar, North Sumatra, Indonesia.

II. Research Methods

The current study used an experimental research methodology to describe the impact of using HyperStudio on students' narrative writing. To discover the answer to the research question, 60 students enrolled in Writing II were randomly chosen and divided into two groups: the experimental and control groups. The experimental (30 students) and control (30 students) groups were both exposed to a technology-based setting (HyperStudio). A writing exam was conducted to measure the students' performance in writing a narrative text before and after the treatment, referred to as a pre-test and post-test, respectively. The last instrument was a scoring guide for the writing tests proposed by Tribble (1996) as follows:

1. Content (the ability to think creatively and develop thoughts)
2. Organization (the ability to write appropriately)
3. Vocabulary (the ability to use language thoughts)
4. Language use (the ability to write in an appropriate sentence)
5. Mechanics (the ability to use those conventions
6. Peculiar to the written language punctuation and spelling correctly).

The following methods were performed for data collection. First, the students were instructed to compose a narrative text to assess their writing ability, which served as a pre-test. Second, during the treatment session, two alternative writing methods were used. Third, the experimental group was portrayed as a technology-based classroom environment based on technology. On the other hand, the control group was exposed to the traditional method of teaching and learning. Fourth, the students were given a simulated test to read as the strategy in this case. Finally, after each group received the recommended treatments, the students wrote a new piece based on the assigned topic, which served as a post-test. This post-test was given to both groups to assess the efficacy of the treatment that had been discussed in earlier meetings.

Finally, two raters were used to analyze the students' writing tests to reduce subjectivity. The tests' validity and reliability were also assessed.

III. Results and Discussion

3.1 Results

This section discusses both the pre-test and post-test outcomes. Table 1 and Table 2 exhibit an independent sample of t-test results demonstrating the students' ability to write narratives in both groups:

Table 1. Descriptive Pre-test Statistics for Experiment and Control Groups

Group	N	Mean	Std. Deviation	Std. Error
Experimental	30	61.17	4.16	1.12
Control	30	62.14	8.10	1.25

Table 1 shows that the experimental group had a mean score of 61.17 with a standard deviation of 4.16, while the control group received a mean score of 62.14 with a standard deviation of 8.10. As a result of the statistical data in table 1, it is possible to conclude that there is no statistically significant difference between the two means of both groups. As a result, both groups were homogeneous in their writing ability prior to the treatment.

Table 2. Descriptive Post-test Statistics for Experiment and Control Groups

Group	N	Mean	Std. Deviation	Std. Error
Experimental	30	82.82	6.89	1.48
Control	30	68.36	10.42	2.22

Meanwhile, the difference between the two averages of the control and experimental groups was statistically distinct, according to the post-test result presented in Table 2. The post-test results revealed that the experimental group's mean score (82.82) was higher than the control group's (68.36), with a Sig. (2 tailed) of.00. The students' narrative writing skills improved substantially more than those in the control group, who used traditional teaching and learning methods. In other words, the study's findings show that using technology-based (HyperStudio) can help students improve their writing skills.

3.2 Discussion

According to the findings, adopting integrated technology (HyperStudio) substitutionally impacts on teaching and learning methods, particularly writing performance. As a result, the students in the experimental group have benefited from using an integrated technological solution such as HyperStudio. And if a teacher decides to incorporate creative writing, he or she should be able to compose and open to sharing the creative work that follows with students (Sari, 2020). Their writing skills have improved compared to individuals in the control group or those taught using the traditional way. This research suggests that learning to write in English can come from various places, including printed texts and technology tools, such as HyperStudio in this case.

Then, through integrated technology, a good contribution is obtained by creating a situation for writing classes. It makes learning more pleasurable for students because they will have the opportunity to improve their writing skills more quickly than they would

otherwise by reading books, notes, newspaper articles, and so on. This remark also aligns with Martin (2012) who claims that the best results are obtained when multimedia is combined with animation, audio, explanation, and background.

IV. Conclusion

The study aims to see how employing an integrated technology tool (HyperStudio) affects students' narrative writing. The study's findings revealed that integrating with a technology tool in this case, HyperStudio significantly impacts students' writing abilities.

One apparent aspect to consider is that when students engage with computers, HyperStudio can foster collaborative teamwork resulting in a more enjoyable learning environment for the experimental group than the control group. According to Haviland and McCall (1999), HyperStudio can enable learners to be manipulators and disseminators of information," As a result, students shift from being passive consumers and users of knowledge to being very active creators and producers of it. Furthermore, the findings of this study demonstrated that reading from books, journals, and other sources prior to the writing activity did not necessarily yield better results in terms of student writing performance. However, it could be a great idea if the students could do their writing by taking advantage of technology tools like HyperStudio.

Based on the information presented above, the researcher believes that students and teachers require a creative solution in their learning and teaching processes. As a result, the researcher recommends adopting HyperStudio as a training tool for narrative text writing. In addition, the researcher suggests that future studies use a larger sample with a diverse range of learning styles, age groupings, and gender. Finally, future researchers should also look into the benefits of using HyperStudio across the curriculum in Indonesia, including science, social studies, history, geography, and other subjects.

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