

## TELEGRAM BOT AS DIGITAL LEARNING MEDIUM OF WRITING: THE IMPACT ON STUDENTS' WRITING PERFORMANCE

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### Abstract

The widespread use of mobile device technology and the release of new mobile device applications like Telegram offers a new innovation in integrating technology in language learning. Accordingly, this study intends to evaluate the Telegram BOT's efficacy in enhancing writing abilities at a high school in Palopo, South Sulawesi, Indonesia . It applied pre-experimental with a single group pre- and post-test design as its focal point. The population of this study is 36 first-grade students and took 14 students as the sample randomly. The data was analyzed by using SPSS 22 described statistically and evaluated. The result reveals that the use of telegram bot effective to enhance the students' writing performance. It is proved that the student's mean score in post test (83, 79) was greater than in pre-test (64, 79) and the significance value (Sig. 2-tailed) is  $0.000 < 0.05$ . It indicated that using the Telegram BOT Application as a learning medium improves the writing performance. Students can learn independently via Telegram BOT because the material has been provided all with detailed instructions in one of its features called Bot API.

**Kata Kunci:** Teaching Writing, Telegram BOT, Learning Medium

### Abstrak

Meluasnya penggunaan teknologi perangkat seluler dan munculnya berbagai aplikasi baru seperti Telegram menawarkan inovasi baru dalam mengintegrasikan teknologi dalam pembelajaran bahasa. Oleh karena itu penelitian ini bertujuan untuk menguji BOT Telegram dalam meningkatkan kemampuan menulis di sebuah SMA di Palopo, Indonesia. Penelitian ini menerapkan pra-eksperimental desain kelompok tunggal sebagai titik fokusnya. Populasi penelitian ini adalah 36 siswa kelas I Teknik Jaringan Komputer dan diambil 14 siswa sebagai sampel secara acak. Data dianalisis dengan menggunakan SPSS 22 dideskripsikan secara statistik dan dievaluasi. Hasilnya menunjukkan bahwa penggunaan bot telegram efektif untuk meningkatkan kemampuan menulis siswa. Hal ini dibuktikan dengan nilai rata-rata siswa pada post test (83,79) lebih besar dari pada pre-test (64,79) dan nilai signifikansi (Sig. 2-tailed) adalah  $0,000 < 0,05$ . Temuan ini membuktikan penggunaan Aplikasi Telegram BOT sebagai media pembelajaran meningkatkan kemampuan menulis. Siswa dapat belajar secara mandiri melalui Telegram BOT karena semua materi telah disediakan materi dengan petunjuk rinci dalam salah satu fiturnya yang disebut Bot API.

**Kata Kunci:** Mengajar Menulis, BOT Telegram, Media Pembelajaran

## 1. Introduction

Writing is a complex skills in a second language (L2) because it requires both higher-level skills, like organizing and planning, and lower-level ones, like spelling and grammar. It needs a big challenge and effort to teach it. High school graduates should be able to communicate their ideas through functional texts such recounts, narratives, procedures, descriptions, news, reports, analytical expositions, spoofs, explanations, and discussions. Without using direct instruction, teaching writing might be challenging (Curtis, 2017). The learner must use good grammar and spelling while writing, thinking, and composing (Fitria, 2020). While some pupils succeed as writers, others have difficulty with the written word (Alisha et al., 2019). Thus, Teachers should do everything possible to motivate students to meet their English learning objectives, especially in writing.

Various factors that hinder writing include not being interested in English, lack of vocabulary and ideas, difficulty in constructing grammatical sentences, difficulty in arranging sentences into coherent paragraphs (Derakhshan & Shirejini, 2020). In addition, there is a lack of motivation, monotonous teaching methods, and less varied teaching media (Puspitarini & Hanif, 2019). Based on the results of interviews with a number of students in one high school, teachers generally use books as teaching media. The use of technology is still rarely used even though the school has internet available (Aguilera-hermida, 2020). Almost all students at the school use various chat and social media applications, but these two applications are rarely used as teaching media (Martin et al., 2018).

The current generation is growing up in a digital world. Using mobile devices significantly contributes to their daily lives (Chen et al., 2020). Since a significant portion of social communication takes place online and the language of the internet has a significant impact on the language of users (Ghobadi & Taki, 2021). The use of mobile devices has been swiftly integrated into EFL teaching and learning in all of its dimensions in the mobile environment (Ozer & Kılıç, 2018; Zou et al., 2022). Mobile devices are used by instructors and students for a variety of educational objectives. Moreover, a countless number of English learning apps encourage students to practice different language skills without limitations of time, place, or cost (Ahn, 2018; Eppard et al., 2016). The global tendency towards mobile device learning apps urges the researchers to examine the implementation of mobile apps in English language learning.

Based on the observations and interviews in a high school in Palopo, it was discovered the problems of writing. Almost all of them has difficulties in writing because they are not interested in English, lack of vocabulary, lack of ideas and difficulty in constructing sentences grammatically. The teaching media used so far comes from books and rarely uses technology even though the internet is available in their schools. Almost all students already have social media, especially Telegram, but have never used it as a learning medium.

The launch of Telegram, one of the most well-known social media has made the world smaller (Aghajani & Adloo, 2018). Everyone is given the chance to become independent learners, so the information and knowledge can be accessed easily. Teachers can benefit from this application because it can be used outside of the classroom. It is beneficial to students in terms of flexibility and length of learning. Additionally, students can easily use their smartphones to access the Internet, increase the students' motivation and increase their success in learning English as a foreign language (Aghajani & Adloo, 2018). For instance, using the Telegram app allows students the chance to collaborate with one another or communicate with contacts in other countries. Additionally, it can be used as a technology alternative to boring classroom lectures by involving students in interactive activities and tasks like quizzes, open-ended questions, group projects, and the sharing of topics or resources. The Telegram app also supports massive file transfers and works with Excel, Word, PowerPoint, Audio, and JPEG files. Given this, the researcher intends to examine whether using the Telegram app might improve students' ESL writing abilities.

One of the telegram features that can be used to create content is the Telegram BOT. The Telegram BOT is one of the features of Telegram that can be utilized to produce content. It is a Telegram account run by a computer. This account is only served as the interface of the code that runs

on a server (Manna & Ghosh, 2018). It can interact with other applications, join groups, and respond to messages and comments. It considered adding a feature that would notify the affected group anytime a status changed. The bot offers the teacher the participation rate, the evaluation statistics, and the student's notes / observations that have been written in the free text field (Alcayde et al., 2017). Bot Telegram can be modified to match the individual demands, such as managing smart home devices, generating social services, producing specialized tools, or carrying out any other task. Distantly (Salvi et al., 2019). The bot is capable of a number of extra tasks including teaching, playing, looking for something, broadcasting, reminding (reminder), and sending commands (Modrzyk, 2019).

The researcher wants to develop a learning platform called "Writenglish" using this Telegram BOT feature. A BOT called "Writenglish" is created by the researcher as a platform for uploading written materials. The material has been prepared in accordance with learning objectives in the form of text and videos that can be accessed by students. The majority of narrative text-learning writing materials provide access links to download writing support applications as well as chat, images, videos, and explanations of the topic. Because it can be accessed at any time and from any location, including during a pandemic, this BOT might be an alternative learning medium.

In light of this context, the researchers utilized Telegram BOT in teaching writing. The use of this learning medium is expected to help students learn writing. Additionally, it can assist lecturers or teachers in providing material, so students achieve better grades. It provides students with learning materials that instructors or lecturers can use to make teaching English simpler and more engaging.

## 2. Method

This study is an experimental design adopting a quantitative approach to investigate the impact of Telegram BOT on students writing performance. The research was conducted at the one of the Vocational High School in Palopo, South Sulawesi, Indonesia in first grade of the 2022 academic year. The English Writing class was held in 6 meetings for 2 hours. Writing activities are conducted using class Telegram BOT as the learning medium to access the English writing material which has been prepared by the researcher.

The participants' research is the first grade students in one of Vocational High School in Palopo totalling 14 students which were taken randomly from 42 students in population. The participants agreed to be join in this research and they followed this research since pre-test, treatment, and post-test fully.

This research used writing test as the instrument of the research. The students write a narrative text with the theme "a memorable life experience" for the pre-test and the same theme for the post-test but with a different story. They write for 30 minutes and are asked to write at least one paragraph, a maximum of 3 paragraphs.

The researcher asks the students to download Telegram which can be found on Google Playstore. To enter the @WritEnglish BOT, the researcher shared a link to access the Telegram BOT . The brief material about the narrative text will appear in the form of a chat balloon and a video containing material about the narrative text in different themes such as Fable, Folk Tale, Fairy Tale, Love Story, Legend, Mystery, Science Fiction, Horror, History, and Slice of Life / Personal Experience. Researchers asked that students watch the video and read the text provided in the Telegram BOT. The step of writing is also provided to guide the student write correctly. To ensure the student understood the material, they gave a time to asked and the researcher gave feedback and control them during learning activity. The last, the researcher asks the students to write the narrative text based on the story titles they choose on "Writenglish" Telegram BOT. The same treatments were given in six meeting.

The students writing documents in pre and post-test was analyzed based on the component of JB. Heaton writing assessment. The components were content, organization, vocabulary, grammar and

mechanics. Then, the calculation of the data's mean score, standard deviation, significance tests, and standard value continued by using the SPSS 22 application

### 3. Findings and Discussion

RQ: . *Is there a significant difference between the pre-test and the post-test (after using the Telegram BOT) in terms of students' writing performance?*

Figure 3.1 : The rate of writing aspects in pre-test and post test

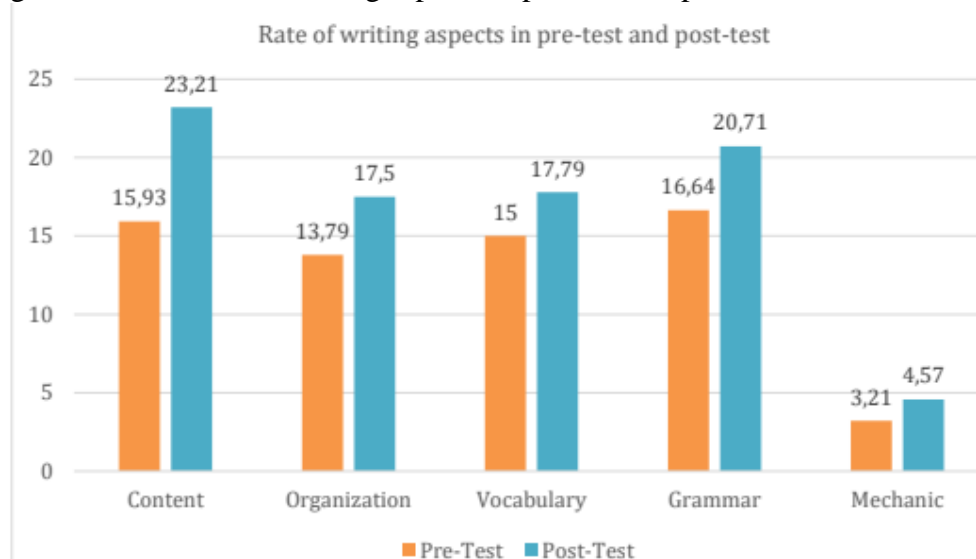


Figure 3.1 displays the rate chart of writing aspects in the pre-test and post-test. All writing aspect (content, organization, vocabulary, grammar and mechanic) increased in the post test. In the pre test , some students were able to adjust their writing but it did not adhere to the writing component. Several students actively asked about the information and instructions on using the Telegram BOT that had been supplied on the second to the sixth day after the treatment with the application of the Telegram BOT while receiving treatment beginning on the first day. After providing treatment for six meetings, the researcher observed progress and development in writing following the post-test.

Table 3.2 Students' performance score of writing performance in utilizing the Telegram BOT

Pair 1	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Pre-test	64,79	14	4,300	1,149
Post Test	83,79	14	4,282	1,144

Table 3.2 indicated that the students' overall mean score for writing performance in the post test (mean = 83.79, SD = 4.28) is higher than their scores in the pre-test (mean = 64.79, SD =4.3). Findings from the paired sample t-test showed that the utilization of Telegram BOT significantly enhanced students in ESL writing skills in the post-test.

Table 3.3 the Paired Sample Test of Pre-Test and Post-Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pair 1 Pre-test Post Test	-21,643	7,386	1,974	-25,907	-17,378	-10,964		13 .000

Table 3.3 displays the results of the paired samples test for the pre-test and post-test ( $t_{test} = 10.964$ ,  $df = 13$ ). It is clearly seen that the significance value was less than 0.05 (Sig:  $0.000 < 0.05$ ). It is indicated that there was a significant improvement on the use Telegram BOT Application to develop the student writing performance. It means that the alternative hypothesis ( $H_1$ ) was approved, while the null hypothesis ( $H_0$ ) was rejected.

These results align with those presented by Ally et al. (2007) and Aghajani and Adloo (2018), who emphasized that mobile learning has enhanced their language learning outcomes. The results validate by Elfeky and Masadeh (2016) statement that mobile learning is more efficient than conventional teaching and learning techniques. The results are also consistent with Jamaldeen et al. (2018), who discovered that students employed mobile learning to advance their language abilities. After giving pre-test, some students had not met the writing aspect. However, after providing the post-test, researchers saw that there were developments in terms of writing aspects after giving treatment during six meetings; where in this treatment, the average student often asked questions and was active in writing activities around the material presented in the Telegram BOT. There is a technique that can be used to teach writing, but the researcher teaches writing using the Telegram application. Additionally, using Telegram for writing instruction improved the students' writing abilities. Students in the pre-test displayed some shortcomings in this process, including content and organization. Nearly all of the students scored poorly on these topics. By looking at the pre-test score across five components, it was proved. The students made numerous grammatical mistakes when expressing their ideas during this test. Their vocabulary was still lacking. Some of them struggled to find their ideas. Additionally, the post-test revealed a decline in the students' weaknesses. The students made an effort to communicate their feelings based on their observations during this final test. Their post-test results showed that nearly all of the students raised their marks for each component.

This findings is supported by the research of Lestari and Wardhono (2019) . According to their study, Telegram Apps will most likely provide a unique and valuable learning outcome in this demanding but fascinating and inspiring learning setting. They seize opportunities in a learner-centered classroom to assume their responsibilities to the learner collaboratively and interactively with their peers and instructors. Supported byvAbu-Ayfah (2020), Telegram apps were utilized by students due to ease of use and flexibility, which aided them in teaching and learning. By using Telegram applications in teaching and learning, it may impact students' academic progress, he stated that seventh-grade students, particularly those at the beginner level, are engaged and enjoy using Telegram as a tool for learning. On the other side, Ismawati & Prasetyo (2020) found the using Telegram procedure can be replicated at another level of language proficiency. Supported by Mana Alahmad (2020) stated that Telegram is viewed as an ELL platform for various reasons, including its

ubiquity, ability to access, ease of exchanging personal ideas and peer input, and input for the teacher to individual students. Furthermore, students may enjoy the convenience of using it, which can be tailored to their specific needs. Many language learning programs require online contact between students and lecturers, an educational policy must make it possible to coordinate a communicative link to complete the task. Broadband internet connections are also available.

The result of this research shows that Telegram BOT "@WritEnglish" in the Telegram Application recommended increasing the student's writing skills since the material suits the student's level. Telegram BOT is also recommended as the teaching medium because most students sometimes spend time with their gadgets and the internet. However, this study has some weaknesses. Some students still use Google Translate to create their version of narrative text in giving post-test until the researcher found terms of grammatical aspects that do not match narrative text material. In addition, there are internet connection problems in accessing the Telegram application.

#### 4. Conclusion

The results from the paired sample t-test clearly indicated that the use of the Telegram BOT considerably improved students' writing performance. As a result, Telegram BOT does aid in students' writing development in terms of new vocabulary and that it increases their passion for learning. The Telegram BOT can be thought of as one of the pedagogical instruments in teaching writing, even though the impact of using it is not immediately apparent. Even though the impact of using it is not immediately appeared, Telegram BOT can be used of as one of the pedagogical tools in teaching writing. Additionally, students are able to express their ideas and emotions using a variety of words, and they can even inspire others to write well. They can learn how to write with the proper English grammatical structure by watching and reading the material provided in Telegram BOT. To sum up, the Telegram BOT can be a use a learning medium for teaching ESL writing. For another researcher, given the material contains four primary English skills can test the effectiveness of using the Telegram BOT in the future.

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