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# The Implementation of Telegram as A Pedagogical Tool to Enhance Student Motivation and Interaction

## Kershnee Sevnarayan<sup>1\*</sup>

<sup>1</sup> Department of English Studies, University of South Africa, Pretoria, South Africa

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#### ABSTRAK

Terlepas dari upaya untuk memahami bagaimana platform media sosial mendorong interaksi siswa, peneliti telah mencatat bahwa ada kurangnya penelitian yang berfokus pada penggunaan messenger Telegram sebagai sarana untuk mendorong motivasi dan interaksi siswa. dalam penulisan akademik. Tujuan dari penelitian ini adalah untuk memahami bagaimana grup Telegram, yang dibuat untuk mahasiswa tahun pertama di universitas ODeL, meningkatkan motivasi dan interaksi mahasiswa dalam modul Penulisan Akademik. Jenis penelitian ini yaitu kualitatif. Penelitian ini menggunakan pendekatan kualitatif interpretative. Teknik pengumpulan data menggunakan wawancara dan observasi. Subjek penelitian ini 4 dosen dan 9 mahasiswa. Teknik analisis data yang digunakan adalah analisis deskriptif kualitatif. Hasil penelitian yaitu menemukan bahwa dosen menganggap Telegram sebagai alat pedagogis yang berguna untuk meningkatkan motivasi dan interaksi mahasiswa. Temuan lebih lanjut mengungkapkan bahwa Telegram memotivasi siswa untuk berinteraksi dalam kelompok dan dengan modul. Disarankan agar pemangku kepentingan mempertimbangkan kembali pedagogi mereka dan mendorong penggunaan Telegram untuk membantu pembelajaran siswa tentang penulisan akademik.

## ABSTRACT

Despite efforts to understand how social media platforms encourage student interaction, researchers have noted that there needs to be more research that focuses on using Telegram messenger as a means to encourage student motivation and interaction in academic writing. This study aimed to understand how Telegram groups, created for first-year students at ODeL universities, increase student motivation and interaction in the Academic Writing module. This type of research is qualitative. This study uses a qualitative interpretative approach. Data collection techniques using interviews and observation. The subjects of this study were 4 lecturers and 9 students. The data analysis technique used is descriptive qualitative analysis. The study results found that lecturers considered Telegram a useful pedagogical tool to increase student motivation and interaction. Further findings reveal that Telegram motivates students to interact in groups and with modules. It is suggested that stakeholders reconsider their pedagogy and encourage using Telegram to assist students' learning of academic writing.

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## 1. INTRODUCTION

Mobile technologies and social media applications have become an indispensable part of our lives, especially during the Coronavirus (COVID-19) pandemic. With the increasing popularity of tablets, smart phones and computers as learning tools for distance learning (Kivunja, 2013; Kombe & Mtonga, 2021; Sevnarayan, 2022). Research shows that social media applications are now valuable for educational purposes (Aladsani, 2021; Azmi & Widiaty, 2021; Dollah et al., 2021). Research has pointed towards integrating educational technology and social media applications into academic writing skills (Sevnarayan, 2022; Sevnarayan & Mohale, 2022; K. S. Singh et al., 2022; Wong et al., 2022). Mobile learning or m-learning is a modern trend in education which allows students access to learning and information anywhere in the world, without the need of a physical classroom (Lestari et al., 2019; Romero-Rodríguez et al., 2020). One of the downsides of distance education is that it can become more teacher-centred than learner-centred (Devkota, 2021; Krishnan et al., 2021). The students who benefit are those who have better access to digital equipment and internet compared to their rural peers (Devkota, 2021). However, Telegram, through its affordability and flexibility, is such a social media application that makes the world smaller, it gives students a chance to communicate and interact with other students across geographical barriers (Aghajani & Adloo, 2018; Aladsani, 2021; Swartz et al., 2022).

Founded by Pavel and Nikolai Durov, an entrepreneur, and a computer programmer, respectively, Telegram is a cloud-based application, which allows users to exchange videos, pictures, audio, or any file stored in a server without occupying space in their mobile device (Abu-Ayfah, 2019; Gregorio et al., 2017). Although e-Learning technologies and m-learning awareness are ever-increasing (Sevnarayan, 2022; Sevnarayan & Mohale, 2022), lecturers' competences and skills are "challenged when faced with a new reality where digital teaching becomes the primary, if not the only, mode of instruction" (Machaba & Bedada, 2022). Lecturers are opposed to the use of Telegram and other social media applications, as they are unaware of its benefits (Dollah et al., 2021). This notion, paired with the researcher's observation that lecturers lacked m-learning knowledge and skills, set in motion the study's investigation into the participatory action research study regarding the use of Telegram to enhance interaction and motivation in an academic writing module during the COVID-19-time. Technological advances are here to stay, and crises such as the current pandemic only come to highlight the digital deficit, not just in terms of supporting technology, or student skills, but also and perhaps most importantly as regards teacher perceptions, attitudes, and actual preparedness (Machaba & Bedada, 2022).

Technology should be used to assist lecturers in distance education to meet the educational needs of all students (Han & Sa, 2021; Kgabo, 2021; Palloff & Pratt, 2010; Pi & Majid, 2020). University lecturers are compelled to use technology integrated teaching and learning during and post the Covid-19 pandemic (Abuhassna et al., 2022; Mishra et al., 2020). It must be noted that there is a scarcity of research on lecturers' perceptions towards teaching with Telegram. Most of the limited articles available on Telegram focus on students' perceptions of the application (Abu-Ayfah, 2019; Aghajani & Adloo, 2018; Dollah et al., 2021; Iqbal et al., 2020). This paper hopes to fill in this gap in the literature by including lecturers' perceptions in addition to adding to the perceptions of students when it comes to their motivation and interaction. An investigation was conducted into Ethiopian lecturers' perceptions of using technology in their teaching and revealed that the lecturers were generally able and interested in integrating technology into the teaching process but that barriers, primarily at the institutional level, hindered them from doing so (Machaba & Bedada, 2022). Other research investigated English lecturers' preferences, in a Malaysian ODL university, on learning management systems (LMSs) and social media applications that could be used for effective language teaching (Yusof et al., 2021). The study revealed that 73.3% of 30 lecturers used Telegram for discussions with students as well as sharing notes and resources (Yusof et al., 2021). Multiple advantages of Telegram, including easy access to educational resources, the ability to add unlimited members, as well as files in all formats and sizes. "It is important for teachers to embrace and keep abreast with the latest development in technology as to modernize teaching methods for English language" (Iqbal et al., 2020; K. S. Singh et al., 2022). With this in mind, this study set out to determine if the Telegram app can be successfully used as a tool to enhance student interaction and motivation.

A survey conducted revealed that most students who speak English as an additional language perceived Telegram as a useful tool for English language learning (Abu-Ayfah, 2019). However, it is argued that "when teachers resort to technology to teach English, the students are believed to be more motivated and would try to participate and connect with the teacher as much as possible" (Bailey et al., 2022; K. S. Singh et al., 2022). It can be concluded that the teaching and learning of language through mobile phones beyond the classroom walls and using instant messaging applications is indeed doable and research has shown that it could result in positive impacts. Another similar study investigated students' perceptions of mobile device application in EAL instructional practices (Chen & Lin, 2018). The study revealed that students considered the mobile application-based assignment helpful, as they were distant from other students and their teacher. Scholars investigated how instructors perceived the mobile application Kahoot! showed how effective it was as an instructional medium to improve 78 third year South Korean students' vocabularies (Reynolds & Taylor, 2020). Although the study concluded that, there was no significant impact of Kahoot! on students' vocabulary acquisition, the qualitative data revealed that it did possess the potential to promote an students' motivation by stimulating their kinaesthetic, visual-spatial, and musical aptitudes (Iqbal et al., 2020).

A South African study noted that their Telegram group, which was created for university of technology students, was initially formed because of its cost-effectiveness (Swartz et al., 2022). However, it was revealed that the app promotes interaction between peers at the same level and gave students an opportunity to express themselves without having to fear potential negative repercussions. This reveals that Telegram can be a powerful pedagogical tool as it allows students to feel 'represented' and included in the learning process (Aisyah et al., 2021; Mishra et al., 2020; Singh et al., 2020; Sutikno et al., 2016). Similarly, in Spain, there was a practical comparison made between students' participation on the Moodle LMS and Telegram (Pereira, 2018). The data shows that students are much more interactive when using the Telegram group, "showing their satisfaction especially for the immediacy of the answers, the degree of help between peers and the simplicity of access" (Pereira, 2018)

Lecturers in higher education institutions can benefit from understanding how the Telegram application can extend beyond the confines of their pedagogies. Based on this background, the researcher was interested in

exploring how Telegram enhances EFAL student interaction and motivation in an academic writing context. This study is conducted in one of the largest mega universities in South Africa (University X) with an enrolment of over 350 000 students per year. University X is an open distance and e-Learning (ODeL) institution; this means that classes are not conducted face-to-face but rather, online or from a distance. ENG321, an Academic Writing module in the College of Human Sciences, is a compulsory English home language module caters for students who undertakes various degrees. The purpose of this study is to understand how a Telegram group, which was created for first year students in an ODeL university, enhances student motivation and interaction in an Academic Writing module. This article's significance extends beyond the technical details of Telegram's implementation to the actualization and, ultimately, to the shared meaning-making and webs of significance for both global institutions and its staff, as well as for the communities the students originate from and will ultimately serve.

## 2. METHOD

This study used an interpretive qualitative approach to understand experiences (Creswell & Poth, 2018; Holloway & Galvin, 2016) in using Telegram as a pedagogical tool in an Academic Writing module to understand if it enhances student motivation and interaction. Using participatory action research (PAR) as a research design, this study used one-on-one interviews, focus group interviews, and observation to investigate EFAL students' interaction and motivation on the ENG321 Telegram group. In semester 1 of 2022, the ENG321 modules consisted of 16,000 students and ten lecturers. Data was collected in July 2022, at the end of the first semester. To answer the first research question, all ten lecturers were invited to participate in a one-on-one Microsoft Teams meeting with the lecturer. One-on-one interviews with the lecturers were held over a 1-hour Microsoft Teams meeting. All ten lecturers were invited to be part of the study; however, only four were available and took part in the study. They are named lecturer 1, 2, 3, and 4.

To answer the second research question, students were invited on the Telegram group to be part of a Microsoft Teams focus group interview with the lecturer. 20 students were invited to be interviewed in a focus group to ensure the trustworthiness of data. Only nine (six females and three males) out of twenty students attended the 1 hour, 30 minutes Microsoft Teams session to answer the focus group questions. The students are named student 1, 2, 3 and so on. PAR requires a great willingness on the part of both students and lecturers to disclose their personal views of their module interaction, their own opinions, and experiences. To answer the third research question, an observation of the Telegram group, which consisted of approximately 7,900 ENG321 students, was conducted. Thematic analysis, which aligned with the research questions, was used to analyse the data. In line with the research questions, the following themes emerged: first, Lecturers' perceptions of using Telegram to enhance student motivation and interaction. Second, how Telegram encourages student motivation; and, third, how telegram encourages student interaction. The data analysis technique used is descriptive qualitative analysis.

## 3. RESULT AND DISCUSSION

## Result

The results of the study can extend the existing knowledge of online learning experiences, interaction and motivation, and can inform the design and implementation of online pedagogy with sustained learner motivation and learning experiences in the post-pandemic era. This section is structured to answer each of the three research questions posed in this paper. First, lecturers' perceptions of using Telegram to enhance student motivation and interaction. To understand lecturers' perceptions of using Telegram to enhance student motivation and interaction, two questions were asked in the one-on-one interviews with lecturers. Two of the respondents were a part of the Telegram group (including the researcher). The other two lecturers chose not to be part of the Telegram group from the beginning of the semester. To understand how the Telegram group has enhanced student motivation in the module, lecturers expressed their opinions in the one-on-one interviews.

Lecturer 1 stated that by telegram students were active and motivated in answering questions and sending assignments. Teachers also post short Tiktok videos in the group to motivate students and are very helpful. Lecturer 2 stated that students were unprepared and therefore unmotivated and the application could not help students who were less prepared. Lecturer 3 stated that Telegram increased student satisfaction because all the emails were positive and uplifting. Lecturer 3 also wants to start his own special telegram group, but needs to learn how to use it. Lecturer 4 stated that during teaching with modules students were not motivated. Telegram gives hope to these students. They start the semester expecting the worst from the module but end very satisfied with the level of support from their peers. The findings above revealed that most lecturers in the ENG321 module agreed (three out of four) that Telegram did increase student interaction and student motivation in the

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module. This finding supports arguments by researchers (Pereira, 2018) (Swartz et al., 2022) who argue that the Telegram app does promote interaction between students and between lecturers and students. In terms of social presence, lecturer participants highlighted the increase of learner presence in the module have never been as active as they are now with Telegram, queries have decreased on the Moodle LMS and students felt free to express themselves on the group.

The second question sought to understand lecturers' perceptions of student interaction on Telegram: 'Do you think that the Telegram group enhanced student interaction in the module? Explain.' The verbatim responses of lecturers' perceptions of student interaction on Telegram; Lecturer 1 stated that the telegram did increase student-student interaction and student-lecturer interaction. The students seem very excited in the Telegram group. They're not shy, and groups give them the opportunity to express themselves in ways I knew they wouldn't in Moodle. Lecturer 2 expressed objections to Telegram. LMS is the main teaching communication and social media applications can cause distractions between students so that the lecturer has not joined the group and the lecturer cannot comment on the interaction (Lecturer 2). Lecturer 3 stated that he was not yet in the Telegram group because he had commitments regarding other modules but the students sent us an email to express their satisfaction about the Telegram group. Lecturer 3 sees fewer questions on the LMS because the lecturer believes they are using the Telegram group to discuss their questions (Lecturer 3). Lecturer 4 stated that In distance education, we don't know our students, so the lecturer is involved and interacts with them personally. For example, everyone grieved with Zolani when his older brother died of Covid. Lecturers see students helping each other. With Telegram, our students help each other (Lecturer 4).

Three of the responses above indicate that Telegram did increase student interaction in the module. Lecturer 1 noted that students felt free to express themselves in a group and did not feel excluded, as would have been the case on the Moodle LMS. According to Lecturer 1, the ENG321 students have never been this active due to the creation of the Telegram group. Lecturer 4 similarly noted that Telegram did increase student interaction in the module, as lecturers were able to engage with students on a personal level, get to know their names, sympathise with them and communicate on a casual space that is not restricted to content alone. Lecturer 3 mentioned that even though he opted not to be part of the Telegram group, he noticed that the limited queries on the LMS meant that students were more active on the Telegram group, which increased their interaction. Like Lecturer 3, Lecturer 2 opted not to be part of the group, however, he is against using Telegram as a pedagogical tool as it causes 'distractions' amongst students and it is not the official university LMS.

Second, how Telegram encourages student motivation. To answer the second research question in this paper, the researcher asked students how the Telegram group enhanced their motivation, the following are some of the responses of the students: Student 3 stated that he liked the Telegram group because it kept him up to date with everything. Students like all the encouraging Tiktok videos and all the motivation from the lecturers. This module is very motivating because of the activeness of the lecturers and students. Students do not feel afraid or embarrassed to ask questions because the students are very kind, and the lecturer responds immediately (Student 3). Student 8 stated that he had never met such a good lecturer. The support we get is unmatched. Students are highly inspired and motivated because of the constant support we receive throughout the semester. It's rare to get a lecturer who really cares. Student 9 claims to work full time and students view the telegram group once a day at night. If it weren't for the embedded messages, students would be lost because there are thousands of messages for me to go through. The embedded message keeps students on top of things and the fact that faculty and students respond immediately if they have questions is also a bonus. The research results above represent the responses of all nine students in the focus group. Motivation plays a critical role in the success of online students. All the presences of a CoI appeared to have made a positive impact on the motivation of the students. The strong teacher and social presence of the lecturer in addition to the inclusion of Tiktok videos seemed to motivate students to participate on Telegram.

Third, How Telegram encourages student interaction. An observation of the 2022 ENG321 semester 1 lecturer-student Telegram group was administered to ascertain (1) how Telegram fosters interaction between students and to (2) discuss the lecturer-student interaction on the group. Evidence is provided in this section by means of screenshots from the Telegram group. On observing the Telegram group for student interaction, the researcher found that students interacted with each other to confirm information, as seen in Figure 1. This may be difficult to do on the LMS as responses may not be as quick as Telegram.

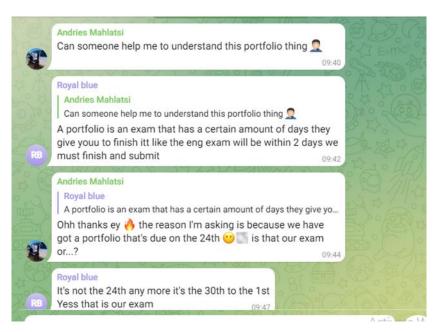


Figure 1. Observation of students confirming information

Another observation made was that students interact on the group by helping each other with the content of the module. Figure 2 is an example of a student helping other students how to construct an introduction in an academic essay. The students can be seen interacting with the student by reacting to the student's message by liking it.

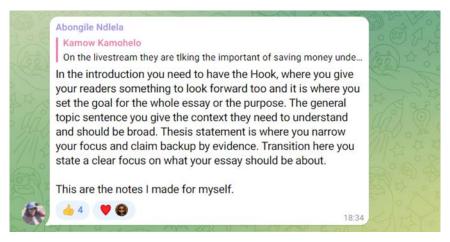


Figure 2. Students explaining content on Telegram

The idea of creating a Telegram group for pedagogical purposes may seem daunting as the dynamic of the group can get out of hand; however, on observation, the researcher found that there were many instances where students kept each other in check. When students repeat the same questions several times and the answers are available on the group, students direct the students who don't read pinned messages and previous posted messages to the right place. There were many instances where students interacted to motivate each other before and after the submission of assessments. The above section sough to understand how Telegram creates interaction between students. This next subsection seeks to understand how lecturers interacted with students and vice versa. Polling was a large part of how the researcher interacted with students. Figure 3 shows an example of the researcher asking students what they are still struggling with after resources have been posted and livestreams have been held to explain how to write an academic essay. 19 % of students struggled with citations and 18% of students had challenges with developing a thesis statement the most. This then prompted the researcher and her team to focus more on these content areas. The likes at the bottom of the figure show students' interactions to the researcher's poll.



Figure 3. The creation of polls to create lecturer-student interaction

Although the ENG321 module was an Academic Writing module, the researcher made use of casual language "just joking guys" and "that was fun". The students also responded informally to their lecturer and responded with memes. The casual language and memes that are associated with popular culture, seems to have facilitated and eased communication between lecturers and students. Students were able to relate to the researcher and researcher felt like one of the students in the group, as is expected from participatory action research. The likes and emotions of the students show the lecturer-student interaction.

In addition to the use of casual language, memes and emoticons, the researcher was consistent in answering student queries every day during the semester, including weekends. The researcher was aware that since this is an ODeL university, most students work during the day and are active at night. The researcher participated with students at night on the group and immersed herself with the students. From the responses, it seems as though other lecturers in other modules did not answer students' queries as much as it was done on this Telegram group. The students seemed to appreciate the social presence and support of the lecturer. The researcher facilitated interaction by directing students to specific resources on the ENG321 LMS and the pinned message to understand what is required in the module. Similarly, the lecturer communicates and repeats similar information to students. Another way the researcher facilitated interaction between herself, and students is by being understanding towards students' needs. The lecturer can be observed to be empathetic towards students who were unable to submit and offered an assurance that they would not be affected adversely. More than 200 students can be seen reacting to this message positively.

At the end of the module, the researcher found that the student-student and lecturer-student interaction on the Telegram group increased student motivation in the module. Many of the students' responses and confirmed that Telegram is a useful pedagogical tool to enhance student interaction and motivation. The research findings in this section indicated that the students used Telegram amongst themselves for confirmation of information about the module, to explain content, to keep each other in check, motivating themselves and each other. In terms of a CoI, Telegram was useful between students to create a social and cognitive presence. Social presence provided support to the Telegram group by making learning more enjoyable, inclusive, and accessible. The creation of the group enabled the lecturer to create a space which led to the increase of their social presence through social collaboration. The results also emphasize the importance of social presence on promoting reflective inquiry since it has the greatest direct effect on cognitive presence. Cognitive presence occurs when students in a CoI build and apply knowledge through a collaborative and constructivist approach to teaching and learning (Garrison & Vaughan, 2008). All the ENG321 teaching was done on the LMS, however, receiving instruction from the students themselves through Telegram assisted them opportunities for more collaboration, more time for reflection, being more careful, and were thus able think more critically.

#### **Discussion**

To address the first research question which was based on understanding lecturers' perceptions on how Telegram creates student interaction and motivation, it is clear that Telegram encouraged open communication between students as students as lecturers were socially present and actively participated in the online discussions with each other. The findings showed that the more interaction that took place on the Telegram group, the less queries there were on the LMS. This resulted in active participation and high engagement between lecturers and

students on the Telegram group. It is noted that with the presence of social presence and cognitive presence, cognitive presence is activated (Aisyah et al., 2021; Garrison & Vaughan, 2008). Teaching presence is a significant predictor of social, learner and cognitive presences (Ferreira et al., 2018; Sepulveda-Escobar & Morrison, 2020). When lecturers encouraged student interaction by facilitating discussion, and motivation by posting Tiktok videos and encouraging words, which are teaching presence indicators, students became more interactive and motivated in the module, thus becoming more cognitively present. The findings further indicate that there are still lecturers who are opposed to using Telegram as a pedagogical tool. Interestingly, most of the literature points us to arguments which note that lecturers are digitally deficit when confronted with new technologies (Dollah et al., 2021; Machaba & Bedada, 2022; Sevnarayan, 2022; Sevnarayan & Mohale, 2022).

The second research question sought to understand how Telegram encourages student motivation. It was noted that the incorporation of a technology such as Tiktok videos into the Telegram group allowed students to achieve their learning goals by enhancing their kinaesthetic, visual-spatial, and musical aptitudes (Iqbal et al., 2020; Melda et al., 2021; Nurhayati et al., 2022; Reynolds & Taylor, 2020). The responsiveness of other students further motivated the students to interact within the module. In addition to a social presence, the lecturers exhibited an emotional presence with their kindness, constant support and care. These qualities enabled students to be more open on the Telegram group and in turn, had a positive effect on their motivation in the module. The researchers agree with this finding as they argue that when technology is used to mediate teaching and learning, students are motivated as they interact and connect with the teacher as much as possible (Febliza & Okatariani, 2020; Koderi et al., 2019; Singh et al., 2022). Once students are engaged in dialogue, teaching and social presence through Telegram may have a positive influence on facilitating and directing student motivation (Dollah et al., 2021; Garrison & Vaughan, 2008). It can be deduced then that teaching, social, and emotional presences of the lecturer have a positive effect on student motivation.

The observation schedule revealed how lecturers used the ENG321 Telegram group to create interact with students. It was found that lecturers used polls to understand students' needs, they use causal language, emoticons and memes to get onto the level of the students. Lecturers further used Telegram to refer students to the LMS. The lecturer was also observed to communicate with students on a personal level which in turn enhanced their satisfaction in the module. Teaching presence refers to the extent the instruction of the teacher and learning process is mediated and facilitated (Aghajani & Adloo, 2018; Swartz et al., 2022; Wong et al., 2022). As shown in the findings in this section, the students received online communicative tools from the lecturer for teaching perceived greater teaching presence than the learners who were not part of the group. Consistent with the research findings, argued that their Telegram group proved to be a powerful pedagogical tool as it allows students to feel 'represented' and included in the learning process (Abu-Ayfah, 2019; Swartz et al., 2022). The practical significance of this research question was that students' identities had no significant effect on social, teaching, or cognitive presence of the respondents in the group under study.

Although the CoI approach informs the deductions and inferences made in this paper, there are limitations to this study. Firstly, because this study was conducted in a module with over 16,000 students, a quantitative analysis might have enriched the data obtained; however, to overcome this limitation, thick descriptions from lecturers and students were provided. Secondly, an observation of one lecturer is provided on Telegram; this is because other lecturers opted not to be part of the group. This would have corroborated (or not) some of the thick descriptions made by students, adding to the validity of the deductions. Before conducting the research, ethical clearance was applied and granted by the university's ethics committee.

## 4. CONCLUSION

The study's findings reveal that teaching, social, and emotional presences of the lecturer and the students have a positive effect on student interaction and motivation. The creation of the Telegram enhanced social presence in the module by fostering social collaboration in various ways. This study was critical because the results influenced the lecturers' perceptions of Telegram as a mobile technology tool for academic writing in the aspect interaction and motivation. Thus, it may serve as a guide for lecturers in online learning interested in adopting and integrating Telegram's as a pedagogical tool into their online teaching and learning sessions for improved interaction and motivation. Policymakers and lecturers in ODeL education contexts can benefit from this study to understand how students and lecturers perceive Telegram as a pedagogical tool in educational settings.

## 5. REFERENCES

Abu-Ayfah, Z. (2019). Telegram App in Learning English: EFL Students' Perceptions. *English Language Teaching*, 13(1). https://doi.org/10.5539/elt.v13n1p51.

- Abuhassna, H., Awae, F., Bayoumi, K., Alzitawi, D. U., Alsharif, A. H., & Yahaya, N. (2022). Understanding Online Learning Readiness among University Students: A Bibliometric Analysis. *International Journal of Interactive Mobile Technologies*, *16*(13), 81–94. https://doi.org/10.3991/ijim.v16i13.30605.
- Aghajani, M., & Adloo, M. (2018). The Effect of Online Cooperative Learning on Students' Writing Skills and Attitudes through Telegram Application. *International Journal of Instruction*, 11(3). https://doi.org/10.12973/iji.2018.11330a.
- Aisyah, R. N., Istiqomah, D. M., & Muchlisin, M. (2021). Rising English Students' Motivation in Online Learning Platform: Telegram Apps Support. *Journal of Ultimate Research and Trends in Education*, 3(2). https://doi.org/10.31849/utamax.v3i2.6464.
- Aladsani, H. K. (2021). University Students' Use and Perceptions of Telegram to Promote Effective Educational Interactions: A Qualitative Study. *International Journal of Emerging Technologies in Learning (IJET)*, 16(9). https://doi.org/10.3991/ijet.v16i09.19281.
- Azmi, C., & Widiaty, I. (2021). ICT-based e-learning implementation. *IOP Conference Series: Materials Science and Engineering*, 1098(2), 022109. https://doi.org/10.1088/1757-899x/1098/2/022109.
- Bailey, D. R., Almusharraf, N., & Almusharraf, A. (2022). Video conferencing in the e-learning context: explaining learning outcome with the technology acceptance model. *Education and Information Technologies*, 0123456789. https://doi.org/10.1007/s10639-022-10949-1.
- Chen, T.-H., & Lin, C.-C. (2018). Enhancing L2 English Learning through Mobile-Assisted TBLT: EFL Learners' Perspectives. *The Journal of AsiaTEFL*, 15(2). https://doi.org/10.18823/asiatefl.2018.15.2.13.453.
- Creswell, J. W., & Poth, C. N. (2018). Qualitative Inquiry & Research Design: Choosing Among Five Approaches (4th ed.). SAGE.
- Devkota, K. R. (2021). Inequalities reinforced through online and distance education in the age of COVID-19: The case of higher education in Nepal. *International Review of Education*, 67. https://doi.org/10.1007/s11159-021-09886-x.
- Dollah, M. H., M., B., Nair, S. M., & Wider, W. (2021). The Effects of Utilizing Telegram App to Enhance Students' ESL Writing Skills. *International Journal of Educational Studies*, 4(1). https://doi.org/10.53935/2641-533x.v4i1.55.
- Febliza, A., & Okatariani, O. (2020). The Development of Online Learning Media by Using Moodle for General Chemistry Subject. *Journal of Educational Science and Technology (EST)*, 6(1), 40. https://doi.org/10.26858/est.v6i1.12339.
- Ferreira, J., Behrens, M., Torres, P., & Marriott, R. (2018). The necessary knowledge for online education: Teaching and learning to produce knowledge. *Eurasia Journal of Mathematics, Science and Technology Education*, 14(6). https://doi.org/10.29333/ejmste/86463.
- Garrison, D. R., & Vaughan, N. D. (2008). Blended learning in higher education: Framework, principles, and guidelines. Jossey-Bass.
- Gregorio, J., Gardel, A., & Alarcos, B. (2017). Forensic analysis of Telegram Messenger for Windows Phone. *Digital Investigation*, 22. https://doi.org/10.1016/j.diin.2017.07.004.
- Han, J. H., & Sa, H. J. (2021). Acceptance of and satisfaction with online educational classes through the technology acceptance model (TAM): the COVID-19 situation in Korea. *Asia Pacific Education Review*, 0123456789. https://doi.org/10.1007/s12564-021-09716-7.
- Holloway, I., & Galvin, K. (2016). Qualitative research in nursing and healthcare (4th ed.). Wiley-Blackwell.
- Iqbal, M., Alradhi, H., Alhumaidi, A., Alshaikh, K., AlObaid, A., Alhashim, M., & AlSheikh, M. (2020). Telegram as a Tool to Supplement Online Medical Education During COVID-19 Crisis. *Acta Informatica Medica*, 28(2). https://doi.org/10.5455/aim.2020.28.94-97.
- Kgabo, M. V. (2021). Challenges Experienced by Lecturers in Supporting Students at an Open Distance e-Learning Institution. *Bulgarian Comparative Education Society*, 19.
- Kivunja, C. (2013). Embedding Digital Pedagogy in Pre-Service Higher Education to Better Prepare Teachers for the Digital Generation. *International Journal of Higher Education*, 2(4), 131–142. https://doi.org/10.5430/ijhe.v2n4p131.
- Koderi, Maulana, A., Hijriyah, U., Prasetyo, D., & Rukimin. (2019). Developing mobile learning media for arabic language instruction at islamic senior high school in lampung Indonesia. *International Journal of Recent Technology and Engineering*, 8(2 Special Issue 9), 107–112. https://doi.org/10.35940/ijrte.B1024.0982S919.
- Kombe, C. L. M., & Mtonga, D. E. (2021). Challenges and interventions of E-learning for underresourced students amid Covid-19 lockdown: A case of a Zambian public university. *Journal of Students Affairs in Africa*, 9(1), 23–39. https://doi.org/10.24085/jsaa.v9i1.1426.
- Krishnan, A. G., Devikrishna, S., & Aich, S. C. (2021). Online Education amidst Pernicious Covid Scourge: Altering Traditional Educational System and Implementation of Arts-Friendly Distance Education

- Strategies. Annals of the Romanian Society for Cell Biology, 25(4).
- Lestari, I., Maksum, A., & Kustandi, C. (2019). Mobile learning design models for State University of Jakarta, Indonesia. *International Journal of Interactive Mobile Technologies*, 13(9). https://doi.org/10.3991/ijim.v13i09.10987.
- Machaba, F., & Bedada, T. (2022). University lecturers' preparedness to use technology in teacher training of mathematics during COVID-19: The case of Ethiopia. *South African Journal of Higher Education*, *36*. https://doi.org/10.20853/36-1-4560No.
- Melda, F., Hilda Putri, D., & Hamka Air Tawar Barat, J. (2021). Development of microbiology learning animation videos for biology students at padang state university. *International Journal of Progressive Sciences and Technologies (IJPSAT*, 26(1), 46–53. https://doi.org/10.52155/ijpsat.v26.1.2938.
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *Int J Educ Res.* https://doi.org/10.1016/j.ijedro.2020.100012.
- Nurhayati, N., Lasmawan, I. W., Arnyana, I. B. P., & Candiasa, I. M. (2022). effectiveness of animated videos to improve science process skills and creativity in science learning during COVID-19 pandemic. *International journal of health sciences*, 6(2), 942–955. https://doi.org/10.53730/ijhs.v6n2.8971.
- Palloff, R. M., & Pratt, K. (2010). Beyond the looking glass. (K. E. Rudestam & J. Schoenholtz-Read, Eds.) (Sage publi).
- Pereira, J. (2018). Motivating users to online participation. A practice-based comparison between Moodle forums and telegram groups. *International Journal of Engineering Education*, 35.
- Pi, S. N. M. S., & Majid, M. A. (2020). Components of Smart Chatbot Academic Model for a University Website Siti. *Emerging Technology in Computing, Communication and Electronics (ETCCE)*, 1–6. https://doi.org/10.1109/ETCCE51779.2020.9350903.
- Reynolds, E. D., & Taylor, B. (2020). Kahoot!: EFL instructors' implementation experiences and impacts on students' vocabulary knowledge. *Computer-Assisted Language Learning Electronic Journal*, 21(2).
- Romero-Rodríguez, J. M., Aznar-Díaz, I., Hinojo-Lucena, F. J., & Cáceres-Reche, M. P. (2020). Models of good teaching practices for mobile learning in higher education. *Palgrave Communications*, 6(1). https://doi.org/10.1057/s41599-020-0468-6.
- Sepulveda-Escobar, P., & Morrison, A. (2020). Online teaching placement during the COVID-19 pandemic in Chile: challenges and opportunities. *European Journal of Teacher Education*, 43(4). https://doi.org/10.1080/02619768.2020.1820981.
- Sevnarayan, K. (2022). Reimaging eLearning technologies to support students: On reducing transactional distance at an open and distance eLearning institution. *E-Learning and Digital Media*, 19(4). https://doi.org/10.1177/20427530221096535.
- Sevnarayan, K., & Mohale, N. E. (2022). Overcoming Transactional Distance through Implementing Podcasts and Vodcasts: Perceptions from an Open Distance and e-Learning University. *International Journal of Pedagogy and Teacher Education*, 6(2). https://doi.org/10.20961/ijpte.v6i2.66813.
- Singh, C. K. S., Singh, T. S. M., Abdullah, N. Y., Moneyam, S., Ismail, M. R., Tek, E., Karupayah, T., Chenderan, K., Singh, M. K. R., & Singh, J. K. S. (2020). Rethinking English language teaching through Telegram, Whatsapp, Google classroom and Zoom. *Systematic Reviews in Pharmacy*, *11*(11), 45–54. https://doi.org/10.31838/srp.2020.11.9.
- Singh, K. S., Noor, A. M., Ong, T. E., Gopal, R., Muhammad, M. M., Shukor, S. S., Mostafa, A., Singh, T. S. M., & Maniam, M. (2022). Using Synchronous vs. Asynchronous Methods during the COVID-19 Pandemic in Malaysia: Preservice and In-Service Teachers' Perspectives. *IntechOpen*. https://doi.org/10.5772/intechopen.100219.
- Sutikno, T., Handayani, L., Stiawan, D., Riyadi, M. ., & Subroto, I. M. I. (2016). WhatsApp, Viber and Telegram: which is the Best for Instant Messaging? *International Journal of Electrical and Computer Engineering*, 6(3), 909–914. https://doi.org/10.11591/ijece.v6i3.pp909-914.
- Swartz, B. C., Valentine, L. Z., & Jaftha, D. V. (2022). Participatory parity through teaching with Telegram. *Perspectives in Education*, 40(1). https://doi.org/10.18820/2519593X/pie.v40.i1.6.
- Wong, W. L., Muhammad, M. M., Chuah, K. P., Saimi, N., Ma'arop, A. H., & Elias, R. (2022). Did you Run the Telegram? Use of Mobile Spelling Checker on Academic Writing. *Multilingual Academic Journal of Education and Social Sciences*, 10(1). https://doi.org/10.46886/MAJESS/v10-i1/7379.
- Yusof, M. F. H. binti, Bakar, A., Binti, S. Z. S., Amat, D. W. binti, Othman, D. binti, Sumery, Z. binti, Sarijari, H. binti, & Qomariyah, A. (2021). ESL Teaching: Preferences on The Use of E-Learning Apps in Maximising Effective Teaching and Learning Experiences for Open and Distance Learning (ODL). International Journal of Academic Research in Business and Social Sciences, 11(6). https://doi.org/10.6007/IJARBSS/v11-i6/10025.