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## The Usage Frequency and User-Friendliness of Online Platforms among Pre-University Students during Covid-19 Pandemic

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### Abstract

The purpose of this study is to investigate the effects of two online platforms (Telegram and Google Classroom) on the usage frequency and user-friendliness among pre-university students during a Covid-19 pandemic. The primary objective is to compare the usage frequency of pre-university students using either online platform for online learning. Additionally, another purpose is to determine the user-friendliness of both online platforms based on the experiences of pre-university students. The researchers conducted the study using a quantitative research design. To begin, a random sample of 100 pre-university pupils was taken. Quantitative data on usage frequency and user-friendliness were collected via a survey questionnaire distributed to 100 research participants. The findings shed insight into the frequency of usage frequency and user-friendliness of Telegram and Google Classroom as online platforms for teaching and learning interactions during the Covid-19 outbreak. Regarding the usage frequency and user-friendliness, Google Classroom and Telegram are approachable online platforms for pre-university students. Finally, the study reveals that both online platforms may stimulate pre-university students to get more involved in learning during the Covid-19 pandemic.

**Keywords:** Covid-19, Google Classroom, Telegram, Usage Frequency, User-Friendliness

### Introduction

The Covid-19 outbreak has wreaked havoc on every facet of human existence, including academia. Consequently, authorities in Malaysia's education system have implemented a strategy of learning from home to combat its spread. Due to the sudden nature of this decision, all parties concerned were forced to adapt to the use of technology such as

computers and mobile phones in their everyday operations, whether they were prepared or not. As a result of this new phenomenon, teachers from all over the globe see an unprecedented mass migration away from conventional in-class and face-to-face education toward online education (Chung et al., 2020; Wong & Muhammad, 2020). University and school closures have been announced in 61 countries throughout Africa, Asia, Europe, the Middle East, North America, and South America (UNESCO, 2020). Covid-19's rise was unanticipated, and most instructors are dealing with problems such as a lack of experience in online teaching, inadequate preparation, and educational technology support. Recent research performed during the Covid-19 pandemic bolster the argument that students from low-digital-readiness nations may experience extra technology-related challenges. According to Basuony et al (2020), only around 13.9 per cent of students in Egypt's capital city experienced internet connectivity difficulties. This sudden transition is challenging for every primary pupil and secondary student, who often lack previous experience with online learning in Malaysia. Students' online learning experiences during the Covid-19 pandemic revealed significant challenges, including internet connectivity issues (Basuony et al., 2020), technology equipment issues, limited collaborative learning opportunities, decreased motivation to learn, and increased learning loads (Niemi & Kousa, 2020). Numerous programmes have been developed specifically to assist online teaching and learning activities and are accessible across various platforms (Singh et al., 2021).

Some are just communication mediums, while others are integrated learning management systems, most often referred to as an LMS. Due to the difficulties of using LMS, many academics opt for more traditional modes of communication, such as Telegram and Google Classroom (Dhahir, 2020; Wong et al., 2020). Telegram is a social networking application that enables users to communicate with one another and send and receive messages, images, files, and videos via a data network. It enables users to provide live text, documents, images, audio, videos, links, and installable apps such as instructions, course materials, announcements, and comments. Furthermore, it has the Telegram Groups feature, which enables users to segment their communication audiences. These features enable teachers and students to simply exchange and receive information, works, and learning materials. It is a web-based Instant Messaging application that is gaining popularity. This increase is followed by extensive use and a rapid understanding of the product's capabilities and features. This enables anybody, even academics, to conduct various online and multimedia-based virtual courses regardless of their physical location or available time. It conforms to the user's social culture, including communication etiquette, while maintaining a high communication quantity, quality, and modernity.

Google Classroom is one of the most widely utilised e-learning platforms. Google Classroom was created for academic reasons and as a platform for blended learning (Syakur, 2020). This programme is elementary to use, takes up little space on the smartphone's memory, and assists both teachers and students stay on track with the lesson. Users can design a virtual class that performs the same functions as a traditional class but consumes less time, money, and space (Chung et al., 2020). Google Classroom enables teachers to spend more time with students and less time on administrative tasks, and it has just gotten even better (Octoberlina & Muslimin, 2020). As a result of Google's recent announcement, Google Classroom now has new capabilities. The option to add multiple teachers and prepare for classes in advance are all included in the new capability (Ng et al., 2021). As mentioned before, Google Classroom's design purposely simplifies the instructional interface and choices for

delivering and tracking tasks; communication with the entire course or with specific students is also simplified via announcements, email, and push notifications (Bueno, 2020).

Telegram and Google Classroom were chosen as the recommended medium for pre-university students for online learning involving submission of their assignments in this study. Malaysia's Ministry of Education required them to submit their assignments as proof of their learning. Simultaneously, teachers may analyse and assess pre-university students' learning progress based on submitted assignments. Nonetheless, it seemed to be difficult for both sides during this Covid-19 pandemic. Certain schools have chosen to ask parents and pre-university students to submit their assignments in a box provided at the guardhouse. Indeed, it seemed hazardous, and it was ineffective since many pre-university students and parents were unable to deliver homework on time. Likewise, teachers were required to visit the school to collect assignments for grading purposes. The pre-university students would almost likely get their assignments returned within a week. It was not a good technique for all pre-university students, parents, and teachers for a lengthy period. Thus, this study recommended Telegram or Google Classroom as a platform for online learning, developed by the Ministry of Education for assignments submission. Finally, this study was driven by two primary research questions, encompassing two respective hypotheses which include the following:

1. What are the effects of online platforms on usage frequency among pre-university students' during the pandemic of Covid-19?

Ho1: There is no significance of effects of online platforms on usage frequency among pre-university students' during the pandemic of Covid-19.

2. What are the effects of online platforms on user-friendliness among pre-university students' during the pandemic of Covid-19?

Ho2: There is no significance of effects of online platforms on user-friendliness among pre-university students' during the pandemic of Covid-19.

### **Connectivism in Learning Technology**

Nowadays, every individual life in a digital age where students' lifestyles are defined by their use of technology such as instant messaging, video sharing, social networking tools, podcasting, and blogging (Soh et al., 2018). Not only are mobile phones, tablets and computers used to make calls, but they are also used to take photos, post them to shared storage, create blogs, and browse the web on the Internet. The mobility and flexibility of technologies represent a primary untapped resource. The educational movement is away from didactic, teacher-centred instruction and toward student-centred, interactive learning (Abdul Halim et al., 2021).

Furthermore, technology is not a substitute for traditional methods of learning and teaching, but rather a complement to particular learning abilities included in educational material (Kack & Muhammad, 2017; Falloon, 2020), since it addresses students' demand for language acquisition, in this research, it aims to encourage pre-university students to submit their assignments through Telegram or Google Classroom. The learning process becomes more meaningful as a result of the knowledge building that occurs as a result of the tool with which the students are already acquainted. Technology integration is cutting-edge instructional technology in higher education (Sullivan et al., 2018).

Besides, Fu and Hwang (2018) said that technology enables new learning modes, such as fostering realistic learning settings and enabling students to link classroom teachings to personal learning (Lai & Smith, 2018). Students were able to maintain a higher level of engagement while studying through technologies (Zeng et al., 2020). The degree to which students' interests were engaged in completing educational activities rose in courses that used technology and could generate autonomous learning (Suarez et al., 2018). The integration of technology empowers students to take charge of their education by choosing their learning objectives (Walker et al., 2020). Furthermore, it enables students to control their studies (Chung et al., 2019). Undoubtedly, technology motivates students to be more engaged and supportive of their peers (Chen & Hsu, 2020). It could be said that they would be more engaged to submit their homework in this research.

In addition, technology may be used in place of conventional instruction to help students improve their writing abilities. Online learning creates a new learning environment via advanced devices that communicate wirelessly (Gandasari et al., 2020). It increased students' motivation to complete educational activities, increased their happiness with their learning, and encouraged them to collaborate. According to Choi et al. (2020), it cannot be considered a single, homogeneous technology, and it is critical to pay attention to it in particular.

Over the last two decades, advanced devices have also been progressively incorporated into the educational environment (Chan et al., 2021). Many students are now used to utilising privately owned, portable digital gadgets capable of wireless connectivity and are present every time (Sarker et al., 2020). Not only can the term mobility apply to individuals, but also human relationships. Technology improves their learning by facilitating continuous contact with young people (Ali, 2020). Dahlstrom et al. (2015) performed a survey of about 112,000 university students from the United States of America and 13 other countries. They discovered that the usage of electronic gadgets for academic purposes increased significantly between 2011 and 2013. Bartholomew & Reeve (2018) found that more than half of university students in Utah use their mobile devices for academic reasons.

Concurrently, Alt (2017); Dyer et al (2018), demonstrate that students who study using technology are more engaged with their learning environment because they converse and interact with other students to share ideas. Its usage is becoming more prevalent among ESL students, enabling students to obtain pertinent information since communication is no longer a barrier. In 2009, 90 per cent of kids between the ages of 15 and 17 in Australia used an advanced device ten years ago. Since then, the significance of online learning has grown in students' lives (Grant, 2019). Hence, it is believed that using technology with Telegram or Google Classroom could motivate students to involve themselves actively in learning.

Finally, a well-structured learning environment should enable users to link various technologies to create, share, and enhance their level of knowledge using a range of learning models (Tague & Frew, 2021). Zhang and Zou (2021), discovered that students had a favourable attitude toward technology usage and made improvements in recognising writing styles through forums, blogs, and wikis. According to Harris and De Bruin (2018), writing is a talent that can be learned via practice. The use of tools in literature has shown many advantages for creating a stress-free learning environment and improving writing abilities. By providing students with a tool to assist them in the process, they may potentially enhance their English writing abilities (Zheng et al., 2018). In this study, online platforms (Telegram and Google Classroom) were utilised to support pre-university students for online learning.

## Methodology

This study used a quantitative research approach to distinguish between the online platforms for education that pre-university students use to learn online during a pandemic with Covid-19. The research site for this study was a college in Ipoh, Malaysia. It was a school for pre-university students who needed to complete their studies to continue their studies at the next higher education level. In 2021, this college enrolled a total of 112 pre-university students. The college was chosen because the pupils reflected the population of pre-university students in Malaysia.

Due to the study's enormous population, a random sample technique was used to streamline the data collection procedure. The population for this study included pre-university students (upper Form Six) who were currently studying English in preparation for the Malaysian University English Test (MUET) in 2021. Specifically, the study sampled 112 pre-university students as research participants using a probabilistic random sampling procedure to prevent biases in the study. For two weeks, the first group (n=56) used Telegram as the internet medium for online learning. On the other hand, the second group (n=56) was provided with Google Classroom as the online platform for their two weeks of online study. Both online platforms were exchanged for the first as a second group during the third and fourth weeks. As a result, the first group used Google Classroom, whilst the second group used Telegram as their online learning platform. The rationale was to expose them to both types of online platforms prior to responding to a survey questionnaire on their preferred online platform's usage frequency and user-friendliness. They frequently used the online platforms to learn due to Covid-19 and the government's lockdown policy. Students attended lessons, interact with teachers, downloaded educational materials online or offline, and completed tests using smartphones, laptops, or desktop computers.

Meanwhile, the researchers received 100 questionnaires back from the total number sent (49 males; 51 females). Another 12 questionnaires were eliminated for outliers (Allen, 2018). The normality test, linearity test, outliers, multicollinearity, and correlation tests were performed in the manner suggested by Verma (2019). The data were analysed using descriptive analysis and one-way ANOVA with the Statistical Package for the Social Sciences (SPSS) software. Prior to the data analysis procedure, the validity test, pilot studies, factor analysis, and reliability testing were conducted on the constructs that comprise the instrument for this study.

The tool used in this study is a Questionnaire for Usage Frequency and a Questionnaire for User-Friendliness that has had its content and constructs confirmed by three education experts and has a Cronbach's Alpha score of 0.829 and .924, respectively, which is regarded acceptable (Pallant, 2011).

## Results

Table 1 and Figure 1 have shown that the mean of Google Classroom Platform (M = 3.5906, SD = 3.5045) is almost same compared with the mean of Telegram Platform (M = 3.5045, SD = .52758) in usage friendly item. Meanwhile, the mean of Google Classroom Platform (M = 3.5278, SD = .47744) is also showed that Telegram Platform (M = 3.4500, SD = .43674) in friendliness item are similar.

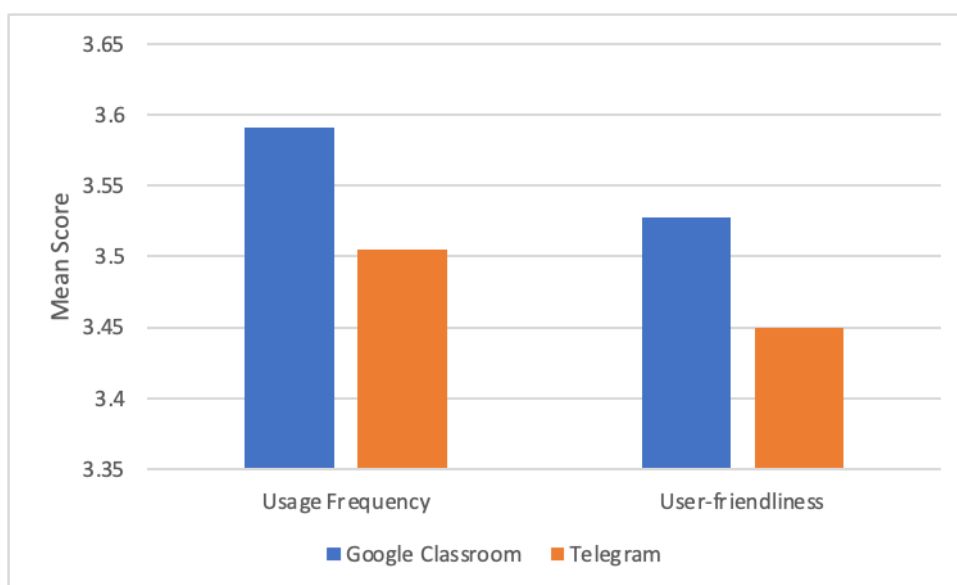
**Table 1**

*Descriptive Analysis for Technology Platforms towards Usage Frequency and User-Friendliness*

Platform	N	Usage Frequency		User-friendliness	
		Mean	SD	Mean	SD
Google Classroom	50	3.5906	.44315	3.5278	.47744
Telegram	50	3.5045	.52758	3.4500	.43674

**Figure 1**

*Analysis for Technology Platforms towards Usage Frequency and User-Friendliness*



Moreover, the results of the between-groups in Table 2 were found that the usage frequency was insignificant ( $F = .684, p = 0.41$ ), while the user-friendliness was insignificant ( $F = 0.56, p = 0.456$ ) also.

**Table 2**

*Results of ANOVA*

Item	Sum of Squares	df	Mean Square	F	Sig.
Usage Frequency	.150	1	.150	.684	.410
User-friendliness	.122	1	.122	.560	.456

According to results findings, Ho1 failed to be rejected as insignificant differences in the mean of usage frequency between Google Classroom and Telegram platform. Meanwhile, Ho2 also failed to be rejected as insignificant differences in the mean of friendliness between Google Classroom and Telegram platform too. Thus, it can be concluded that the use of Google Classroom and Telegram platform are effective towards usage frequency and friendliness among students.

## Discussion

### ***Usage Frequency of Online Platforms***

The study used two online platforms, Telegram and Google Classroom. According to the data analysis for usage frequency, Google Classroom had a higher mean (3.5906) than Telegram (3.5045). The difference in mean scores across groups was 0.0861. One may argue that Google Classroom had a greater usage rate than Telegram. In other words, pre-university students opted to use Google Classroom as their online learning platform for a variety of purposes, including:

- i) registering for online education
- ii) social interactions that are simple and useful for learning
- iii) timely submission of tasks
- iv) the platform's ease of use
- v) perusing instructor evaluations
- vi) demonstrating consistency in terms of educational objectives, evaluation, and content
- vii) ensuring that critical deadlines for assignments are met.

With reference to the data analysis, Google Classroom was superior and preferred by pre-university students. However, the difference of 0.0861 demonstrated that Telegram retained its importance as an online platform, as a portion of pre-university students chose it as their preferred online learning platform during the Covid-19 pandemic. Eventually, Google Classroom and Telegram appeared to be equally efficient at increasing pre-university students' online learning usage frequency.

### ***User-Friendliness of Online Platforms***

On the other hand, user-friendliness was examined for both online systems (Telegram and Google Classroom). According to the data analysis above, Google Classroom had a higher mean of 3.5278 than Telegram (3.4500) in terms of user-friendliness. The difference between the two internet platforms was 0.0778, a quite insignificant difference. As a result, Google Classroom may be considered a more user-friendly online platform for pre-university students. They assessed the online services' usability using the following criteria:

- i) gaining access to educational materials
- ii) task transmission and receipt
- iii) unambiguous directions
- iv) online education's quality
- v) a sense of ease with the internet platform's use
- vi) teachers' zeal for utilising the internet platform for instruction
- vii) achieving a personal learning objective
- viii) effective teacher-student communication

In general, it was assumed that pre-university students preferred Google Classroom to Telegram for online learning since it was more user-friendly. A similar phenomenon occurred in terms of user-friendliness, with a difference of 0.0778, which was insignificant in establishing that Telegram was an entirely unfriendly internet medium for pre-university students. In comparison to the difference in usage frequency (0.0861), the difference in user-friendliness (0.0778) indicated no significant differences in the use of either online platform for online learning by pre-university students, as both platforms were user-friendly, according to the data analysed.



### ***Unexpected Results***

The study's primary objective was to ascertain the most preferred online platform among 112 pre-university students. However, the analysis revealed that Google Classroom and Telegram were equally popular among pre-university students. It was a completely unexpected outcome of data analysis. Nonetheless, it emphasised the study's authenticity by examining the usage frequency and user-friendliness of two online platforms for online learning during the Covid-19 pandemic. The unexpected findings contrasted with previous research pointing to one online platform with a significantly higher mean than another. However, the results demonstrated the positive effects of Telegram and Google Classroom as online platforms for online learning among pre-university students, which corroborated the findings of (Fu and Huang, 2018; Suarez et al., 2018; Chung et al., 2019; Falloon, 2020; Singh et al., 2020; Walker et al., 2020; Zeng et al., 2020).

### ***Limitations***

The study highlighted two shortcomings. First, because of the Covid-19 pandemic, it was challenging to recruit a large number of pre-university students for the study, as most teachers were already overburdened with tiresome online learning and others required school chores and documentations. As a result, the first constraint was a small number of research participants (n=112) rather than a high number (Ewing, 2020).

The second constraint was regarding 112 pre-university pupils' use of modern technologies. The researchers were informed that they came from various social statuses. As a result, they were unable to use mobile phones, tablets, or PCs in unison to access both online platforms for their online learning in this study. Mobile phone users accounted for 81 of the 112 pre-university pupils, while desktop users accounted for 31. This could have influenced the study's findings. Nonetheless, it was beyond the researchers' control because of the Covid-19 problem and economic crisis.

### ***Conclusion***

To begin, the study's findings indicated that Google Classroom had a higher usage frequency and was more user-friendly than Telegram. However, the distinctions between Google Classroom and Telegram were minimal. Furthermore, both hypotheses for research questions one and two were refuted, as Telegram and Google Classroom were both critical for pre-university students to use as an online learning platform during the Covid-19 pandemic. Thus, the overall data suggested that Telegram and Google Classroom were similar in terms of usage frequency and user-friendliness among pre-university students, albeit Google Classroom looked to have better mean scores for both. It might be concluded that both online platforms are beneficial and well-accepted by pre-university students, given Malaysia's vulnerability to the Covid-19 pandemic and the apparent continuity of online schooling until further notice.

The study had several implications for Malaysian educators. To initiate, people may make a more informed decision based on the study's findings. Google Classroom was selected as the official online learning platform during Covid-19 in Malaysia. On the other hand, Telegram was convenient and pleasant for some Malaysian educators. Thus, the outcomes of this study provided them with credible and accurate information about the use of either online platform in terms of usage frequency and user-friendliness among pre-university students. If they had to choose between Google Classroom and Telegram, it was clear that both had a similar effect on student learning in Malaysia. Second, the implication appeared

to favour either online platform for online learning, as there may be a group of practitioners who are opposed to using an online platform during this perilous Covid-19 pandemic.

The current study has limitations in terms of sample size and technology tools employed by pre-university students. Thus, for future research, the researchers may view the limits as a means of filling up gaps. In this era of globalised schooling, technology is vital. Further research could include the use of different digital tools such as Zoom Meeting and WeChat with elementary, secondary, and tertiary students and teachers at various levels to provide more context for the literature and readers.

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