

Promoting ‘Discord’ as a Platform for Learning Engagement during Covid-19 Pandemic

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<https://doi.org/10.24191/ajue.v18i3.18953>

Received: 25 January 2022

Accepted: 30 April 2022

Date Published Online: 31 July 2022

Published: 31 July 2022

Abstract: Many universities shifted to Open Distance Learning (ODL) to ensure the continuity of teaching and learning when Covid-19 struck. One of the applications is ‘Discord’ which has become popular among gamers. Since many university students are gamers themselves, it is vital to investigate the use of Discord in the classroom. Therefore, this paper presents the potential, effectiveness, and satisfaction of using Discord as a digital learning tool among higher education students. Discord is a very convenient way of communication which can be a best platform to engage students and instructors during pandemic. A study was carried out among 81 students through questionnaire survey via Google Form to seek students’ feedback on the usefulness and satisfaction of using Discord as platform for learning interaction and engagement during pandemic. All returned survey was analysed using Statistical Package for Social Science (SPSS) 20 through reliability test, descriptive analysis, and correlation test. The non-parametric statistical methods such as Chi Square and Mann-Whitney U were selected for this study. Both Kolmogorov Smirnov and Shapiro-Wilk Test indicate that the statistically significant result where dependent variable such as the average time spend daily is not normally distributed. The findings from this study shows that Discord is a very convenient application to help with the promotion of learning engagement through its usefulness and user satisfaction. The study shows that the use of Discord may help students in having better understanding by encouraging the active social and learning engagement on Discord platform where students and instructors can have discussion and socialise among members of Discord server in a flexible time and condition.

Keywords: Discord, Learning Engagement, Social Interaction, Active Learning, Pandemic

1. Introduction

When Covid-19 pandemic struck, the government has enforced Movement Control Order (MCO) which at first appeared temporarily but prolonged and later became the new norms. The education system suffered the most from such situation in terms of teaching and learning process at various level (Rio-Chillce et al., 2021). Educational institutions such as universities were forced to respond to the situation and promptly shift to Open Distance Learning (ODL) for teaching and learning (Bakhov et al., 2021). Not only educational institutions, people around the world have also shifted to

digital life (Wahyuningsih & Baidi, 2021). Teaching and learning process were conducted online from the instructors' and students' home. In such crisis, the government enforced the use of ODL and conducted classes from home to fulfil the educational right for its citizen while preventing the spread of Covid-19 virus (Wahyuningsih & Baidi, 2021). ODL was considered as the most appropriate alternative to conduct teaching and learning in response to the pandemic (Wahyuningsih & Baidi, 2021; Nur Nadiah, Norshima, Siti Rahayu & Nurul Hidayah, 2022; Abdul 'Izz, Noor Akmal, Ahmad Arzlee, Raja Rafidah & Mohd Arif, 2022; Muhammad Hakimi, Norwati & Mohd Izwan, 2022). To facilitate fast transition to ODL, educational institutions utilized digital platform (Bakhov et al., 2021). The pedagogy must continue to ensure students equipped with necessary knowledge for their future. ODL allows teaching and learning to be conducted online and enable interaction between instructors and students in the virtual environments (Strielkowski, 2020). Before the pandemic, ODL is often viewed only as support system which digitalisation took months or years even though all the necessary tools in placed due to public reluctance and red tape. However, Covid-19 pandemic unexpectedly changed this perception and the shift to digitalisation were promptly introduced (Strielkowski, 2020). Nevertheless, ODL for the undergraduates is more challenging for both students and instructors as compared to the postgraduates (Danjou, 2020). This is because undergraduates were young students and spent more time with mobile or online games rather than interacting with people in real life, thus they prefer teaching and learning process to be conducted in the real classrooms (Strielkowski, 2020).

Active learning is anything course-related that all students in a class session are called upon to do other than simply watching, listening, and taking notes (Felder & Brent, 2019). Teacher's presence and quality of content were the major factors that influence student engagement, where parental concerns, norms, and traditions emerged as the major factors in the crisis, influencing engagement (Khlaif et al., 2021). Student engagement is understood to be an important benchmark and indicator of the quality of the student experience for higher education and social interaction together with learning engagement are considered essential in effective online learning (Redmond et al., 2018). People prefer virtual communication in social networks in comparison to face to face communication and similar trends are manifested in higher education (Olga et al., 2019). Social interaction in online learning can lead to increased student engagement and motivation as well as can help to improve student performance (Illiana & Kay, 2021).

As educators, the consideration on how to create opportunities for meaningful and sustained social interactions in online courses is crucial, especially when many students are taking multiple online courses while balancing their studies with home and work responsibilities (Illiana & Kay, 2021). The social interaction between learners and instructor-learner has proven to be vital for both the online and offline environment. In the online environment, this interaction holds more importance because the learners feel isolated and far from the social existence of the classroom (Baber, 2021). Social intimacy is a part of social interaction where a person feels comfortable sharing their ideas and thoughts with the people around and instructors should make sure that they provide an ecosystem of social intimacy where every member of the classroom should feel comfortable in sharing ideas (Baber, 2021).

To reduce the gap, there is a videoconference digital application which students could communicate and receive instructions as in person in real-time named Discord (Rio-Chillcce et al., 2021). This application is an alternative digital tool to conduct ODL in addition to several others (Wahyuningsih & Baidi, 2021). As a digital learning tool, Discord has some potential advantages. Several advantages of Discord are easy communication in real-time, audio and video streaming, screen sharing, multi-platform support, easy registration, various communities, free, programmable and automations (Vladoiu & Constantinescu, 2020). However, Discord does not support for video recording (Rio-Chillcce et al., 2021). Discord could facilitate communication among instructors and students in interactive way, communicate in real time with students, use for teaching and learning process outside classroom and many others in various context of educational environment (Wahyuningsih & Baidi, 2021). The goal of using Discord is to build a close community of students and instructors to create sense of belonging (Vladoiu & Constantinescu, 2020). During MCO, Discord became the place for virtual hangout by the students. Discord was used for communication between students even though they were distance away.

Eventually, Discord became the students' own space and primarily use to socialize. Among others, Discord was chosen due to limitations in another applications. Discord also enables students to keep in touch with friends, discuss on assignments, catch up and clarify for any unclear lesson (Squire,

2021). The lack presence of classmates when using other applications during teaching and learning process caused the students to feel empty after spending a day in virtual class that they finally turn to Discord. Even Discord allows members to see the presence of their friends and aware what their friends are doing. In other words, students use Discord to compensate for the desires they only get when physically studying in the universities (Squire, 2021). In Discord, students can host their own servers which they virtually hang out with friends, acquaintances, share links, using videos interactively, and having conversation. They can create separate servers for different group of friends and create multiple channels for different purposes. This allows students to have autonomous learning anywhere without limitations while socializing and build strong community among them (Wahyuningsih & Baidi, 2021).

Initially, Discord was developed to support communication among gamers but in time Discord has grown into other communities such as education (Vladoiu & Constantinescu, 2020). Discord slowly grows beyond gamers due to the ability to create and manage multiple voice and text channels. Sharing of various media is also possible through the servers and messages. With a lot of features, usage of Discord for formal and informal learning can be useful for students and instructors. Most student perceived learning using Discord as entertaining and interactive. Discord could significantly improve communication and pedagogy for students although they learn in distance during the pandemic. Instructors and students could use Discord for interaction outside of class for information sharing, messages, and other credential activities. When used appropriately, Discord has a lot of advantages to support ODL in educational settings (Wahyuningsih & Baidi, 2021). Using Discord, student can coordinate group assignments outside class (Squire, 2021). There is study reported that other applications were not successful to attract students (Vladoiu & Constantinescu, 2020). As compared to other applications, Discord was chosen by gamers to communicate. Coincidentally, a lot of students were also gamers and heavily used Discord (Wahyuningsih & Baidi, 2021). Students have already used it for gaming, and this could contribute to quick adaption (Vladoiu & Constantinescu, 2020). Therefore, this could become the factor to easy voluntary participation of using Discord in the education community.

Due to its capabilities, Discord provides opportunities for students to match between interests and learning. Although Discord has gained popularity among gamers, it now has diversified to other communities (Wahyuningsih & Baidi, 2021). In Discord, students and instructors can gather in text and voice channel to carry out not only ODL activities but also social linkages (Danjou, 2020). Various text and voice channels could be established in Discord server for different use such as announcements, notes, link to websites, tutorials, references, entertainment, and lectures (Vladoiu & Constantinescu, 2020). Discord allows students to post content and open channels to facilitate togetherness. Many students were reported to feel better supported, less isolated, and increased satisfaction (Squire, 2021). Students could see online members, discuss assignments, post information, share resources and hang out in ad hoc voice and video channels. With a lot of benefits, Discord could be an effective digital tool to improve students' ability in soft skills such as communication (Wahyuningsih & Baidi, 2021). Outside of Discord, students are socially isolated in front of the computer and without integration in anything in life beyond classroom (Squire, 2021). However, majority of instructors have high knowledge of Zoom and Google Meet but low knowledge of Discord. Almost all instructors use Zoom and Google Meet to conduct online classes (Rio-Chillce et al., 2021). Therefore, bridging Discord as digital platform in education environment is challenging (Wahyuningsih & Baidi, 2021). There is paucity of study in digital learning on the potential use of Discord in ODL. Therefore, the objective of this study is to examine the potential, effectiveness, and satisfaction of using Discord as digital learning tool in the context of higher education during pandemic Covid-19.

2. Discord Concept and Idea for Learning Engagement

Discord is basically a platform commonly used by gamers to communicate in-game with other members. In Discord, users can create a server and inside the server, several channels can be created and classified. The concept of server and channel in Discord is like the concept of house and room. In a house we can have several rooms and inside a room people can sit together having conversation and only people inside the room can listen to each other. In Discord, the server is like a house and channels are the rooms. There are two types of channels which are text channel and voice channel where the text channel allows members of the server to post anything in text form or upload files while the voice

channel allows members to have a verbal conversation, video calls, discussion, consultation, and meetings. The first one which is the text channel, chatting and discussion in text-form can also be posted and published. Several text channels were created to make sure the information and discussions were published and discussed in a proper and organised manner. Text channel '*general*' allowed members to make general announcements, text channel '*homework-help*' to call up the instructor or other student members in the server for discussion and consultation, text channel '*notes*' held the notes related to the subject and can be accessed by members in the server. There are also text channels for social purposes such as '*gaming*' and '*spam*' dedicated for students' pleasure.

The second type of channel is the voice channel where members of the server can enter the voice channel to have verbal and video conversations, create podcast and share their screen and media. In the voice channel, members also can share their stream from their devices. In Discord, the user can know who is currently online and offline. Only people invited into a particular server can see whatever posting was made in the text channel and join into the voice channel under the server. In Discord, all postings and files are uploaded in cloud, so it won't consume much storage if user just want to view and not to download. Discord can be installed in personal computer or application in mobile phones, so the platform is very convenient to cope with current situation which students and their instructors can have interaction anywhere from around the world.

Before the pandemic, students and instructors can engage and socialise freely in the campus. However, when the pandemic struck, they had to go online, and social engagement became very limited. This paper shows how Discord can be a suitable and convenient platform for learning engagement during pandemic. A server named 'Sir Acap the Great' in Discord was set up for the subject BGN163 Site Survey II, AP116 Diploma in Building UiTM Sarawak Branch for second-semester students, in session 20212. Apart from scheduled teaching and learning sessions, students and instructor freely interacted on the Discord platform. All verbal meetings and discussions were carried out in the voice channel for every class.

2.1 Text Channels in 'Sir Acap The Great' Server

There are several text channels in the 'Sir Acap the Great' server as a platform for students and instructor to engage and interact from academic to non-academic contexts. All text channels are well organized into several purposes. This made information spread in proper and organized way to reach the students, who are members of the server. First the '*general*' text server, where all general announcements were posted to inform every member in the server about the latest update about class or any general news related to the students and university. When posting an announcement by using command @everyone, all members of the server will get the notification in their inbox. Other than command @everyone, members of the server also have been assigned with unique roles according to their group of class. There are 3 roles of classes AP1162A, AP1162B and AP1162C. Each member was assigned with one of this 3 roles according to the group of class they registered for the semester. By having this unique feature, if there was an announcement made for AP1162A, it can be done by using command @AP1162A so the post will notify only members who have the roles of AP1162A. Files in Discord can freely be uploaded up to 8.00mb in size. Notes related to BGN163 topic can be uploaded in pdf file format in '*notes*' text channel. All notes posted in this channel can easily be downloaded and retrieved by students or members of the server. The instructor may also share the link of videos from Youtube or any related website for the teaching and learning process in the text channel.

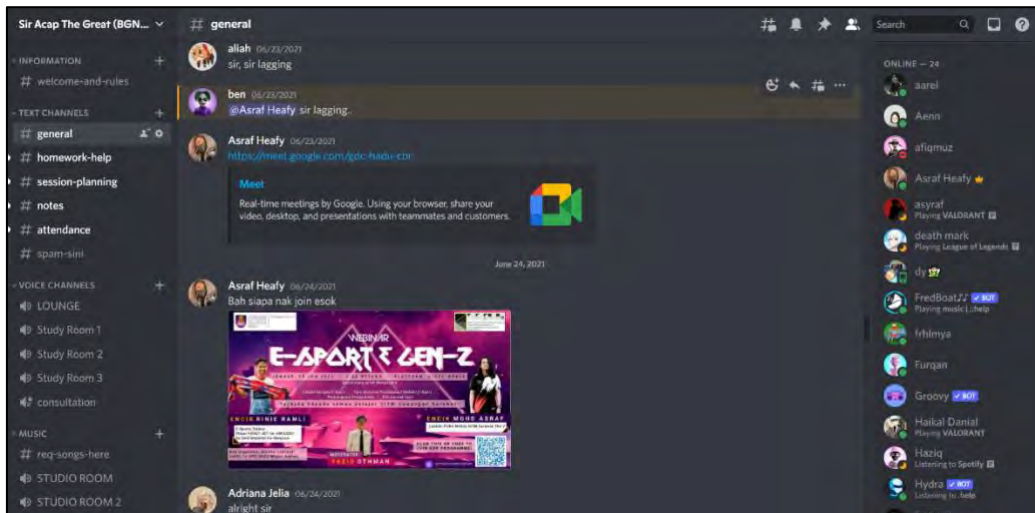


Fig. 1 General Text Channel, a channel where all general announcements from academic to non-academic context were posted to inform members of the server about learning and social activities.

The most active text channel, 'homework-help' is the channel where students seek for help or having discussion when there are some queries while doing tutorial including theoretical based questions and calculations. When the students need some clarification and guide from peers or instructor in the server, they may publish their question with related file attached. The instructor or any students may respond to the question in the channel. All members of the server can view the conversation including the questions and answers, instead of the student asks privately for a consultation which may benefit only the one who asked, by having this platform every member of the server will get benefit from it. There is a text channel named 'attendance' where the instructor may post current attendance link in case there are some students who missed to fill their attendance form during class due to poor internet connection.

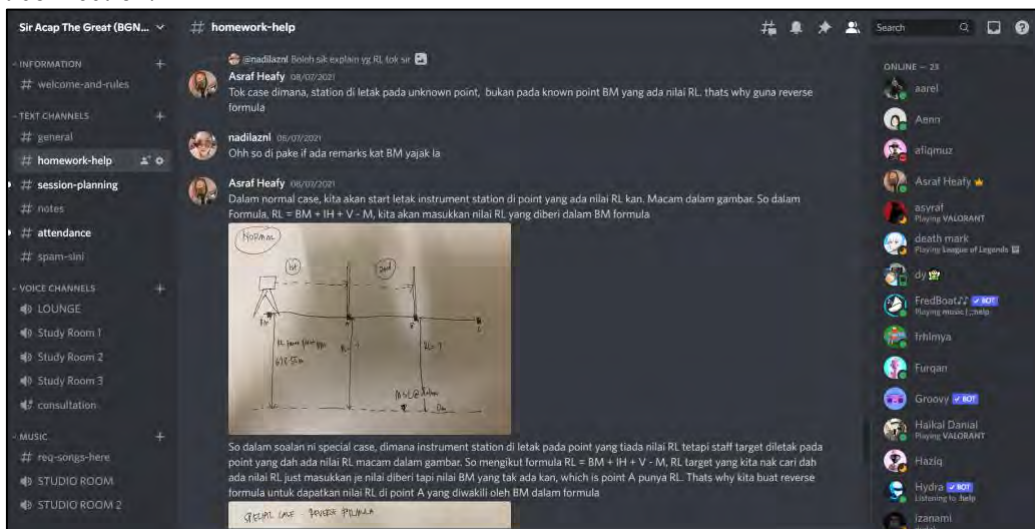


Fig. 2 Homework-Help Text Channel, most active text channel in the server where lot of interaction took place when student asking questions and seek help in their study and all queries were responded by the instructor and other students.

2.2 Voice Channel in ‘Sir Acap The Great’ Server

Voice channel is the room for members of the server to sit together and have verbal and virtual conversation. 25 members are allowed to sit in a channel to have video meeting together. Several voice channels were set in ‘Sir Acap the Great’ server to allow verbal and virtual conversation among the member of the server. All servers are classified for different purposes. First, a general voice channel named ‘Lounge’ is set for general meeting among members. This is the voice channel where meetings and discussion took place. ‘Study room’ voice channel is the room for members to have group discussion while doing assignments, tutorials or any discussion related to the topic learned. Instructor and students can also sit together in the voice channel to have tutorial session. Students can directly ask questions and guidance from the instructor about the assignments and task given.

Everyone in the channel can share their screen simultaneously while having discussion. If member of the server wants to sit back and relax, they might enter the ‘music’ voice channel and call out for bot to play music for them. So, everyone who enter the same channel will enjoy listening to the music played by the bot. The voice channel can be locked by the admin and only allow members with permission to enter the voice channel. This is good for the instructor to have private consultation with students or member of the server without any interruption by other members in the server. For social purpose, there are voice channels classified as ‘Social & Gaming’ that allow members of the server to sit together and have social interaction like chatting and playing video games together out of the academic context.

3. Research Methodology

A survey was carried out to identify the perception of students using Discord as a platform for learning and social engagement with peers and instructors. The target populations for this research are students who enrolled in course BGN163 Site Survey II. The questionnaire survey was conducted via Google Form and distributed to the respondents in the end of semester March – July 2021.

From the 82 questionnaires distributed to the respondents, 81 were returned, which makes the response rate of 98.78%. The four-point Likert scale was employed in the questionnaire survey for the component of the usefulness of the Discord application ranging from 1 (strongly agree) to 4 (strongly disagree) and from 1 (extremely satisfied) to 4 (not satisfied at all) for experience to learning’s section. According to the research done by Squire (2021), the author did not find that the absence of a midpoint affected instrument validity and reliability differently. Therefore, instead of five-point Likert scale, the four-point Likert scale was employed to avoid safe and neutral option. The results have been tabulated in sections. Section 1 presents respondent’s information such as gender, internet connection’s speed and average time spent in Discord daily, other sections (2 and 3) are assessing the perceived usefulness and satisfaction of the respondents towards the Discord application.

The returned questionnaires survey was analysed using Statistical Package for Social Science (SPSS) 20 through reliability test, descriptive analysis and correlation test. The non-parametric statistical methods such as Chi Square and Mann-Whitney U were selected due to nature of the instrument design in the questionnaire based on the assumption that the data was to be skewed as shown in Table 1. Both Kolmogorov Smirnov and Shapiro-Wilk Test indicate that the statistically significant result where dependent variable such as the average time spend daily is not normally distributed.

Table 1. Normality Test

Gender		Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Average time spend daily	Male	.224	34	.000	.843	34	.000
	Female	.337	47	.000	.718	47	.000

4. Result and Discussion

Based on the survey, it is observed that the respondents are dominated by female. Figure 3 shows that the percentage of female respondents (58%) are slightly higher than the male counterpart (42%). Figure 4 shows the percentage of the respondents' internet connection speed. The table shows that slightly above 70% of the respondents have fast to very fast internet speed, while only 2% experienced slow internet connection. This implies that majority of the respondents have acceptable internet connectivity and able to attend lesson according to the schedule.

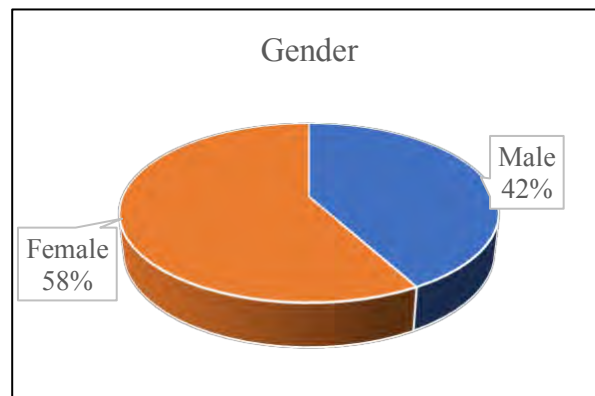


Fig. 3 Gender percentage of the respondents (N = 81)

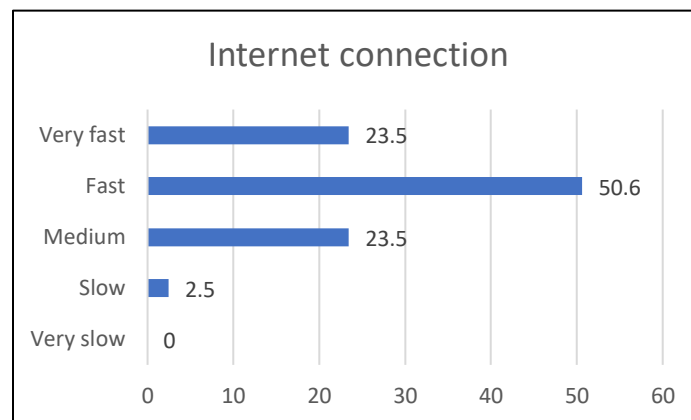


Fig. 4 The percentage of respondents' internet connection speed (N = 81)

Table. 2 The correlation matrix between the purpose of using Discord exclude to attend classes and the respondent's gender

Items	Correlation
Use Discord for voice chat while playing online game	0.104
Use Discord to ask questions	1.000
Use Discord for chatting purpose	0.842
Used Discord to collect information	0.374

Table 2 shows the relationship between the purpose of using Discord excluding to attend classes and the respondents' gender. Using chi square correlation test, no correlation was found for all the items. This shows that with no regards to the gender, respondents are accessing Discord for various reasons. However, the Mann-Whitney U test revealed that there is significant difference in average time spend in Discord daily among the respondents (p value = 0.013). The results of the test were in the expected

direction and significant, $z = -2.383$, $p < 0.05$. Male had an average rank of 48.10 while female had average rank of 35.86 as shown in Table 3. This indicates that male do spend more time in Discord compared to female respondents.

Table. 3 Mean rank of average time spend in Discord daily according to gender

	Gender	N	Mean Rank	Sum of Ranks
Average time spend daily	Male	34	48.10	1635.50
	Female	47	35.86	1685.50
	Total	81		

Cronbach Alpha is employed to check the reliability of the findings on the perceived usefulness in engaging teaching and learning of Discord application. The alpha value is 0.926, indicates high scale of reliability (Adelson & McCoach, 2010).

Table. 4 Perceived usefulness of Discord application

	Items	Mean	Std. Deviation	Rank
Perceived Usefulness	Lesson on the theoretical part of this course is easy to understand using Discord.	3.04	0.660	1
	Discussion in Discord leads toward better understanding of the topic.	3.04	0.749	1
	Lesson on the concept and steps of calculation for this course is easy to understand by using Discord.	3.02	0.724	2
	By using Discord, every query will get fast response by peers and instructor.	2.99	0.716	3
	Discord promotes engagement and active interaction experience during a learning session.	2.86	0.737	4
	Demonstration/discussion can be done effectively during each learning session using Discord application.	2.81	0.726	5
	Learning session with peers and instructor is flexible using Discord.	2.80	0.697	6

Table 4 shows a ranking of the perceived usefulness in engaging teaching and learning of Discord application. It shows that all scores are above average with the highest mean are shared by lesson on the theoretical part of this course is easy to understand using Discord and discussion in Discord leads toward better understanding of the topic with mean of 3.04. This indicates that the application can be the medium of sharing links for lecture video and at the same time online discussion can be done simultaneously within the text or voice channel. Streaming platforms i.e., Google Meet or WebEx do not yield a permanent record of the chat discussion (Hinton et al., 2014). If teaching and learning process was conducted via streaming platforms, the instructors must rely on their students to take notes or email them pertinent material afterwards. In Discord, while the students watch the video, any inquiries regarding the lecture video can be asked directly during the discussion and will be available for future reference in the channel. This allows the respondents to actively interact virtually. In Discord, students and instructors can gather in text and voice channel to carry out not only ODL activities but also social linkages (Danjou, 2020).

Interestingly, learning session with peers and instructor is flexible using Discord is listed last on the ranking. The result is expected because of time constraint due to the adherence of the lesson

schedule. Although students are allowed to discuss in Discord outside the class schedule, the students might feel reluctant to do so outside the provided hours. However, due to lack of statistical research done in teaching and learning using Discord, the comparison of result with previous research is not feasible. This demonstrates that there is the need on more future studies to be conducted on examining the nature of relationship between students and instructors on Discord platform. Cronbach Alpha is employed to check the reliability of the findings on the perceived satisfaction on the features of Discord application. The alpha value is 0.937. An Alpha score above 0.75 is generally taken to indicate a scale of high reliability (Adelson & McCoach, 2010).

Table. 5 Perceived respondents' satisfaction on the features of Discord application

	Item	Mean	Std. Deviation	Rank
Perceived satisfaction	Ease of Installation	3.12	0.600	1
	Engagement with members' user	3.09	0.656	2
	Arrangement and setting of the application	3.02	0.612	3
	Ease of use and functionality	3.01	0.680	4
	Interface of the application	3.01	0.602	5
	Accessibility of the application	2.99	0.602	6

Table 5 shows the perceived respondents' satisfaction on the features of Discord application. It is found majority of respondents do not face any trouble in installing Discord application (mean score = 3.12). Discord is widely available to be used in any major operating systems i.e., Windows, Mac, Android, IOS and Linux (Schwartz, 2021) which enables majority of users to have access to install the application. Expectedly, engagement with members' user ranked 2 in the list (mean score = 3.09). This shows that the respondents are satisfied with the engagement features offered by the application. Discord application is not limited to be used in computer as mobile device(s) also offers the similar features where users are able to receive notifications of new comments/questions. This allows the instructor and students to interact actively in the app. However, accessibility of the application is rated as the least satisfied by the respondents (mean score = 2.99). The result might be inaccurate since all respondents have no disability that might need this feature. Further research must be done regarding this item.

5. Conclusion

This research paper manages to achieve the main objective which is understanding the perception of students on using Discord as a platform for learning and social engagement with peers and instructors. It is found that there is no significant relationship between the gender and the reasons for using Discord if attending physical class is excluded. However, gender does play its role in time spent on Discord daily. It is found that male students spent more time in Discord compared to their female counterpart. It is also found that lesson on the theoretical part of this course is easier to understand when using Discord and discussion in Discord leads toward better understanding of the topic are the strongest reasons from the aspect of perceived usefulness on Discord application. Moreover, all 7 listed features of Discord, all are above average, which indicates the respondents are satisfied with the app features. However, further research on the item of accessibility of the application needs to be done with the more group of respondents from different courses. It is also recommended to future researchers to evaluate on the limitation of the application and further suggesting teaching methods to improve the application in promoting Discord as a digital learning tool within the context of higher education during pandemic Covid-19.

6. Co-author contribution

All authors for this study dedicate their time and idea without any conflict of interest to ensure this study were conducted in full ethical and proper manner where Mohd Asraf did the execution of engagement on Discord platform and Dr Mohamad Ezad Hafez worked on the literature part. Nurulhudaya and Nabil Fikri did all the statistical findings while Balkhiz was the one on the questionnaire survey's part. All authors did the writing part for this paper.

7. Acknowledgement

We would like to thank the research groups for this study including all the authors and students as responsive respondents by giving fast and useful feedback on their point of views on social and learning interactions and engagements on Discord.

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