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Examining Student Preferences in Online Learning: Enabling Camera vs. Disabling Camera and Recorded Videos vs. Live Online Meetings

Memeriksa Keutamaan Pelajar dalam Pembelajaran dalam Talian: Mengaktifkan Kamera vs. Mematikan Kamera dan Video Dirakam vs. Mesyuarat dalam Talian Secara Langsung

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Abstract: Owing to the onset of the COVID-19 pandemic, the majority of educational institutions decided it was necessary to transition to online learning platforms as a means to ensure the continuity of students' education during this period. However, the attitudes and perceptions of students towards these online learning platforms and video conferencing applications have remained a relatively underexplored area, largely due to the recent development of the pandemic. As such, the objectives of the present study are to determine the tendency of UiTM, Permatang Pauh students towards turning on their cameras during virtual instructional sessions, and to examine the preferences of university students on their preferred mode of learning; either videos or live online meetings. This study adheres to a quantitative research design and utilizes a survey instrument, which was administered to a sample of 103 students from UiTM, Permatang Pauh, Pulau Pinang recruited using convenience and snowball sampling. The survey outcomes reveal that a significant portion of the respondents (58.2%) expressed a reluctance to turn on their cameras during online learning, citing concerns regarding their personal appearance. Notably, a sizeable minority (34%) remained uncertain about their preferences in this regard. In summary, the survey outcomes indicate a prevalent hesitance among students to activate their cameras during online learning, primarily due to concerns about personal appearance. Thus, understanding and addressing these concerns can create a more inclusive and supportive online learning environment, leading to enhanced student engagement and overall satisfaction in virtual classrooms.

Keywords: Online learning, video conferencing, recorded video, live video;

Abstrak: Disebabkan oleh penularan pandemik COVID-19, majoriti institusi pendidikan memutuskan untuk beralih ke platform pembelajaran dalam talian sebagai langkah untuk memastikan kesinambungan pendidikan pelajar sepanjang tempoh ini. Walau bagaimanapun, sikap dan persepsi pelajar terhadap platform pembelajaran dalam talian dan aplikasi persidangan video masih merupakan perkara yang kurang diterokai, terutamanya disebabkan oleh perkembangan pandemik yang baru-baru ini. Oleh itu, objektif kajian ini adalah untuk menentukan kecenderungan

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pelajar UiTM, Permatang Pauh untuk menghidupkan kamera mereka semasa sesi pengajaran secara maya, serta meneliti pilihan pelajar universiti terhadap mod pembelajaran yang mereka gemari; sama ada melalui video rakaman atau pembelajaran dalam talian secara langsung. Kajian ini menggunakan reka bentuk penyelidikan kuantitatif dan instrumen kaji selidik, yang diedarkan kepada sampel seramai 103 pelajar dari UiTM, Permatang Pauh, Pulau Pinang yang direkrut menggunakan teknik persampelan mudah dan bola salji. Hasil kajian menunjukkan bahawa sebahagian besar responden (58.2%) menyatakan keengganan untuk menghidupkan kamera mereka semasa pembelajaran dalam talian, dengan alasan kebimbangan terhadap penampilan peribadi mereka. Menariknya, sebahagian kecil (34%) masih tidak pasti mengenai pilihan mereka dalam hal ini. Secara ringkas, hasil kaji selidik menunjukkan terdapat keengganan yang ketara dalam kalangan pelajar untuk menghidupkan kamera mereka semasa pembelajaran dalam talian, terutamanya disebabkan oleh kebimbangan terhadap penampilan peribadi. Oleh itu, memahami dan menangani kebimbangan ini dapat mewujudkan persekitaran pembelajaran dalam talian yang lebih inklusif dan menyokong, yang seterusnya meningkatkan penglibatan pelajar dan kepuasan keseluruhan dalam kelas maya.

Kata kunci: Pembelajaran dalam talian, persidangan video, video rakaman, video langsung;

Introduction

In response to the challenges posed by the COVID-19 pandemic, institutions of higher education have embraced video conferencing systems to facilitate the delivery of classroom experiences in an online format. This technological solution has enabled students to engage in remote sessions over the internet, effectively bridging the gap between digital technology and traditional face-to-face pedagogy (Gladović et al., 2020). Notably, video conferencing has demonstrated substantial educational advantages, including the enhancement of students' communication and presentation skills (Paderanga, 2014). However, it is noteworthy that students' perceptions of video conferencing in higher education contexts exhibit a degree of variance (Candarli & Yuksel, 2012). Furthermore, students' satisfaction with video conferencing is subject to multifaceted determinants such as their expectations of success, the availability of facilitating conditions, and general social influences (Lakhal et al., 2013). Consequently, two salient conditions emerge in the domain of online learning employing video conferencing: the extent to which students are comfortable turning on their own video feeds, and their proclivity to view the video feeds of the instructor. The manifestation of these conditions is intrinsically contingent upon students' attitudes towards video conferencing practices in an online educational environment.

Video conferencing, as a variant of distance education, furnishes a resource-efficient and cost-effective avenue for the dissemination of instruction and training (Gladović et al., 2020). An array of technological systems, including Microsoft Teams, Google Meet, or Zoom, can be used for the provision of distance education via video conferencing. The efficacy of video conferencing as a pedagogical modality is influenced by a constellation of factors encompassing the contextual milieu, institutional infrastructure, the instructor's orientation, and the attitudes held by the students (Candarli & Yuksel, 2012). It is observable that students exhibit a heightened proclivity for engagement when afforded the opportunity to interact with their peers and instructors through audio-visual communication tools in an online educational environment (Basaran & Yalman, 2020). Additionally, video conferencing allows students of the occasion to immerse themselves in the realm of socio-cultural learning and analysis, grounded within the theoretical framework of socio-cultural theory (Candarli & Yuksel, 2012).

Problem Statement

The advent of the COVID-19 pandemic at the end of 2019 propelled video conferencing applications into the forefront as the primary educational

platforms, exerting a profound influence on the landscape of students' education. Since the COVID-19 outbreak, the transition to urgent remote teaching has further aggravated the existing digital gap, posing challenges in ensuring equitable opportunities for learning online for all students. Additionally, concerns have been raised about digital material accessibility (Trust, 2020). However, even in the post-COVID-19 period, it is imperative to reconsider the substitution of traditional physical classrooms with online alternatives (Jones & Sharma, 2020). The findings obtained from the research of Sim et al. (2021) demonstrate the potential of online learning as a viable pedagogical approach in the post-COVID-19 era for the field of education. Nonetheless, there persists a lack of knowledge regarding students' perceptions of this modality of learning especially with regard to using video conferencing in online learning. For example, Correia et al. (2020) highlights the lack of scholarly studies pertaining to the utilization of video conferencing technologies within the context of online education and instructional delivery. Also, it is argued by Al-Samarraie (2019) that the current state of research indicates a dearth of comprehensive and methodical examination of videoconferencing systems specifically designed to facilitate educational activities and provide instructional assistance to instructors.

Video conferencing tools and applications often incorporate camera functionalities to enrich communication by enabling the observation of facial expressions, thereby enhancing the efficacy of instructional sessions. The present study endeavors to delve into the degree of students' comfort when it comes to the activation of their cameras during video conferencing and their preferences for the mode of instruction, whether through synchronous live online sessions or asynchronous consumption of recorded instructional content. Existing scholarship has predominantly focused on juxtaposing video conferencing against conventional classroom settings (Candarli & Yuksel, 2012). Nevertheless, an exigent need remains for more comprehensive research efforts aimed at elucidating the multifaceted dimensions of students' perceptions and the rationales underlying their stances. Furthermore, a more extensive and diverse sample is needed to engender a nuanced understanding of this matter.

In a study conducted by Fatani (2020), which involved the participation of 162 undergraduate medical students at King Abdul-Aziz University, video conferencing was employed in conjunction with case-based discussions to evaluate real-world learning experiences and the cultivation of analytical thinking. The purview of the investigation encompassed an evaluation of technology satisfaction and the confidence level pertaining to the utilization of online learning platforms. However, it is imperative to note that this study was circumscribed to the examination of a singular cohort comprising male students, which introduces the potential for recall bias and does not address the critical facet of students' comfort within the digital learning milieu. Consequently, there arises a palpable imperative for further empirical inquiry into the aspects of students' comfort and their perspectives. Notably, our review of the extant literature yielded a dearth of studies or articles emanating from the Malaysian context that grapple with the dynamics of online learning during the COVID-19 pandemic.

Also, the rapid increase in the use of video conferencing applications during the COVID-19 epidemic has generated apprehensions over individuals' face appearances during such virtual communication sessions (Cristel et al., 2020). However, it is not certain if UiTM, Permatang Pauh students also experience a similar situation and feel uncomfortable showing their faces in video conferencing learning sessions. In light of the foregoing, it becomes evident that a gap exists in the realm of research concerning students' comfort levels with respect to the activation of their cameras during video conferencing and their proclivities for the online learning modality. It is the primary aspiration of this study to contribute towards the mitigation of this gap in the scholarly discourse, thereby providing an enriched understanding of this matter. Thus, it is anticipated that this research will furnish valuable insights for the benefit of both students and educators alike, facilitating a more efficacious utilization of video conferencing as the preeminent platform for the attainment of comprehensive and impactful learning outcomes.

Research Objectives

The primary aim of this study is to examine the favored video conferencing methods for online distance learning among university students, with a particular focus directed towards the academic community of UiTM, Permatang Pauh. To delineate the specific research objectives, the researchers formulated the following objectives:

1. To identify the video conferencing application that UiTM, Permatang Pauh students frequently use and their perception about it.
2. To determine whether UiTM, Permatang Pauh

students prefer to turn on their cameras during their online classes.

3. To investigate whether UiTM, Permatang Pauh students prefer to learn through recorded videos or live online meetings.

Research Questions

The present research intends to seek answers to the following questions:

1. Which video conferencing application do UiTM, Permatang Pauh students frequently use and what is their perception about it?
2. Do UiTM, Permatang Pauh students prefer to turn on their cameras during their online classes?
3. Do UiTM, Permatang Pauh students prefer to learn through recorded videos or live online meetings?

Significance of this Study

This research has important implications for many stakeholders, most notably the administrative departments of the university, particularly the student affairs division. The insights from this study will highlight the concerns and challenges students face with video conferencing sessions. Furthermore, the study aims to collect data pertaining to the students' comfort levels in the utilization of video conferencing technology. The study gives students in UiTM, Permatang Pauh the opportunity to furnish invaluable feedback on the landscape of their online distance learning experience during the pandemic. It is envisaged that the findings of this study will not only augment the depth of understanding but will also offer actionable insights that may assist the Ministry of Education in the development of plans, particularly for students from underprivileged backgrounds and are grappling with the challenges of limited access to the digital resources for their online learning.

Literature Review

Video Conferencing as an Educational Tool

Video conferencing, characterized by synchronous communication facilitating the interactive exchange of voice, video, and data among multiple parties, has been a prominent technology used in the corporate domain for virtual meetings (Correia et al., 2020). However, with the advent of the COVID-19 era, video conferencing has taken on newfound importance as an essential tool for conducting online educational sessions. Video conferencing is the implementation of system technology that enables individuals or groups located in various locations to exchange video, audio, and documents using transmission lines and multimedia devices, therefore facilitating immediate and interactive communication (Xu & Jiankang, 2020). A video conference is a live communication event, such as a video conferencing call or video-based call or video chat, where participants may interact with many other participants in real-time and have access to audio and visual content (Shin, 2023). The COVID-19 pandemic has caused a recent spike in the popularity of certain video conferencing tools, like Zoom, that offer free options (Rapant et al., 2020). In the realm of online education, the four prominent and extensively used video conferencing applications, according to Correia et al. (2020) are Zoom, Skype, Teams, and instant messaging application, WhatsApp that can also function as a video conferencing platform. A video conferencing system is a communication method that enables linked individuals to directly exchange audio and visual facilities instantaneously (Al-Samarraie, 2019). Additionally, video conferencing technology enables authorized users to send files, slides, still pictures, and text across the platform they are using (Al-Samarraie, 2019). Online learning such as through the use of video conferencing has accorded students the flexibility to partake in dynamic learning encounters, empowering them to engage in scholarly discourse, debates, and the exchange of ideas with peers (Coman et al., 2020).

Extant investigations have corroborated that students manifest an appreciable preference for the flexibility and convenience inherent to attending Zoom sessions from diverse and distant locales (Serhan, 2020). In light of the enhanced accessibility and learning convenience that transcends physical boundaries, students are increasingly opting for Zoom sessions over conventional face-to-face instruction. Moreover, video conferencing augments the ease and efficacy of interpersonal communication among students and educators alike (Serhan, 2020). It promotes real-time feedback mechanisms, engenders learner-centered engagement, and fosters an environment conducive to collaborative initiatives, thereby heightening the efficacy of distance education (Correia et al., 2020). A paramount advantage inherent to video conferencing resides in its inherent flexibility, which transcends physical constraints and endows participants with the capacity for real-time communication, irrespective of their geographical location (Shahmohammadi, 2014). Such flexibility is

of pronounced import in the context of online learning, as it affords students the autonomy to engage with educational content at their individualized pace and partake in virtual classrooms aligned with their learning proclivities.

Challenges Associated with Learning Using Video Conferencing and Enabling Camera

Despite the manifold advantages ascribed to video conferencing, a number of salient challenges have emerged. A principal predicament pertains to the limited attention span of participants during video conferencing sessions (Mukhtar et al., 2020). The study of Mukhtar et al. (2020) on medical/dental students and instructors revealed that because of the absence of prompt feedback from students, instructors were unable to evaluate students' comprehension during lectures conducted online. Besides, teaching and learning practical and clinical work were also discovered to be difficult during online video conferencing (Mukhtar et al., 2020). The insufficient network connectivity led to unclear communication during video conferencing sessions and academic workload has been observed to exert a negative impact on students' attentiveness, thereby compromising the overall quality of the learning experience (Alchamdani et al., 2020). Further complicating matters is the resource-intensive nature of video conferencing, particularly in locales characterized by limited internet connectivity (Mukhtar et al., 2020). Students hailing from regions marked by inadequate internet coverage, such as rural hinterlands, may confront formidable challenges in accessing critical instructional content during video conferencing sessions. The study by Alchamdani et al (2020) concludes that the lecture content is challenging to comprehend due to its lack of interactivity and communication in the learning process, thus leading the majority of the Indonesian students to believe that in-person learning is preferable to online learning. Besides, the study by Adnan and Anwar (2020) discovered that insufficient availability of internet facilities, inadequate engagement and communication with students and teachers, and inefficient technology were among the primary obstacles encountered by university students in Pakistan during online learning. The research conducted by Coman et al. (2020) identified technical issues in online learning that were associated with connectivity to the platform. These problems included issues with sound quality, delayed content viewing, and signal loss during video conferences (Coman et al., 2020). An area of significant concern that has arisen with the ongoing adoption of video conference technologies is Zoom Fatigue (Yang et al., 2024). In terms of using cameras in video conferencing, according to Gherhes et al. (2021), the usage of cameras in the classroom can impose a psychological burden on learners in terms of their own worry as well as privacy. By compelling students to activate the camera, there is a risk of unauthorized exposure of the students' images or details, in addition to the possibility of other students using the content displayed on the monitor without proper authorization (Pham, 2022). Pham (2022) claims that certain learners may experience reticence when making public appearances due to a deficiency of self-confidence in their physical appearance. Furthermore, learners must bear the apprehension of being observed when they divert their focus from the lectures (Pham, 2022).

The Advantages and Disadvantages of Learning Using Pre-Recorded Videos

Emerging studies have indicated that the current generation thrives on technology convenience and exhibits a preference for virtual pre-recorded video lectures over live online classes (Park et al., 2021; Sung et al., 2021). Regarding the preferences for online learning delivery modes, the research conducted by Othman et al. (2022) revealed that live video conferencing received the highest response rate of 72.1%, followed by instructor-made text materials at 69.5% and instructor-made pre-recorded video at 67.2%. According to the findings of the research conducted by Islam et al. (2020), a majority of students, specifically 53.8%, expressed a preference for pre-recorded video lectures over live Zoom lectures. Conversely, 7.7% of students reported choosing live Zoom lectures when prompted to choose their preferred learning method. The preferences for pre-recorded lecture videos are perhaps due to their advantages. Jun (2023) argues that in spite of the advantages of a real-time lecture in terms of real sense and speedy communication, more students favor online pre-recorded video lectures over real-time lectures. The study by Aulakh et al. (2021) revealed that an inherent benefit of recorded videos is their capacity to be viewed by the students any number of times needed, therefore facilitating a more comprehensive grasp of the subject matter. Besides, a consensus among the students was that the use of recorded video lectures should complement the conventional classroom instructions (Aulakh et al., 2021). The findings of the study by Islam et al. (2020) indicate that pre-recorded video lectures are highly favored over live ZOOM lectures because of their adaptability, ease of use, and pedagogical efficacy.

Online pre-recorded video lectures allow a more adaptable and omnipresent learning environment than online real-time classes (Jun, 2023). Despite the advantages of pre-recorded video lectures, a study by Lange and Costley (2020) on the responses from 654 participants from a university in South Korea, it was discovered that the primary concerns expressed about recorded video lectures were issues with video quality (34%) followed by intelligibility (23%), speed (20%), media variety (17%), and congruence (6%). In an experimental study conducted by Kuznekoff (2020) on 178 students from a university in America revealed that student engagement in the pre-recorded video lectures could be an issue. For instance, it was discovered that a mere 34% of participants probably viewed the entire lecture video, 40% only partially watched it, and 25% spent a significantly longer duration on the video lecture than the video's actual duration.

Methodology

Research Design

This study was structured around a quantitative research design, employing a questionnaire survey to elicit data from students at UiTM, Permatang Pauh, Pulau Pinang, aimed at elucidating their perspectives concerning learning through video conferencing and pre-recorded videos. The principal objectives encompassed an examination of students' inclination to turn on their cameras during video conferencing sessions and their proclivities regarding learning via pre-recorded videos versus live online video conferencing meetings.

Participants

The questionnaire survey was specifically targeted for students from an assortment of academic disciplines, including but not limited to hotel and management, mechanical engineering, chemical engineering, civil engineering, and electrical engineering, enrolled at UiTM, Permatang Pauh campus. According to Hair et al. (2019), a sample size of 100 is regarded as adequate for most research circumstances. Thus, the present research targeted recruiting at least 100 respondents. After the sample screening, missing data checking and filter question eligibility, the researchers decided to analyze the responses from 103 respondents, whose ages ranged between 18 and 26.

Sampling Procedure

This study employed a few sampling methods starting with convenience sampling. Convenience sampling facilitates the selection of participants predicated on the criterion of their accessibility, willingness and geographical proximity to the researchers (Creswell & Creswell, 2022). In this context, students from UiTM, Permatang Pauh campus were eminently accessible and reachable via diverse instant messaging platforms such as WhatsApp and Telegram by the researchers, provided that all the students from the university were already involved in online learning during the COVID-19 Movement Control Order (MCO) period. Additionally, the study also applied snowball sampling by encouraging the respondents who had completed the questionnaire to disseminate it to their acquaintances, thereby fostering an augmentation in the number of respondents. For snowball sampling, a researcher requests the respondents to designate others to join the sample, and this sampling method offers the benefit of enlisting a substantial number of respondents for the research (Creswell & Creswell, 2022). Next, purposive sampling was executed with a filter question that determined whether the respondents were suitable for the present research (i.e., those who had experienced learning through video conferencing). The rationale for using a purposive approach is rooted in the premise that, considering the goals and objectives of the research, certain individuals may possess distinct and significant perspectives on the concepts and matters under consideration, and hence should be included in the sample (Campbell et al., 2020).

Research Instrument

The data was amassed via a questionnaire consisting of 20 items as presented in table 3.1 below. Google Form was employed as the platform for questionnaire creation, and the data were presented descriptively through tables representing the respondents' responses.

Table 3.1. Questionnaire Items and Scales

Research Question	Item number	5-point Likert Scale
RQ 1: Which video conferencing application do UiTM, Permatang Pauh students frequently use and what is their	1	(Not applicable)
	2	Very bad (1) – Very good (5)

perception about it?		
RQ 2: Do UiTM, Permatang Pauh students prefer to turn on their cameras during their online classes?	3–4	Extremely unlikely (1) – Extremely likely (5)
	5	Very uncomfortable (1) – Very comfortable (5)
	6–10	Strongly disagree (1) – Strongly agree (5)
RQ 3: Do UiTM, Permatang Pauh students prefer to learn through recorded videos or live online meetings?	11–20	Strongly disagree (1) – Strongly agree (5)

Data Collection Procedure

The dissemination of the questionnaire was effectuated through instant messaging applications specifically WhatsApp and Telegram, as well as social media such as Instagram. The questionnaire's link was widely propagated across an array of WhatsApp and Telegram groups as well as Instagram posts. The respondents were accorded the flexibility to complete the questionnaire devoid of a strict stipulated time constraint, thereby accommodating their convenience. Periodic reminders were dispatched to stimulate and sustain their participation.

Data Analysis Methodology

Data analysis was performed through the utilization of Statistical Package for the Social Sciences (SPSS) software version 29. The data was analyzed mainly in terms of frequencies, percentages, mean and standard deviation scores effectively encapsulating the patterns of the responses of the respondents. Subsequently, the findings were captured on tables. A comprehensive discussion and summary of the research outcomes were established on the data analysis conducted using SPSS.

Data Analyses

Demographic and Background Information

Table 4.1. Respondents' genders

Gender	n	Percentage (%)
Male	29	28.2
Female	74	71.8
Total	**103**	**100**

Table 4.1 presents the statistical details of the respondents' gender. Based on the data collected, the majority of the respondents, accounting for 71.8% of the total, identified as female, with a total of 74 students. On the other hand, 28.2% of the respondents identified as male, represented by 29 students.

Table 4.2. Statistic details of respondents' age

Age Range	n	Percentage (%)
18 - 20 years	8	7.8
21 - 24 years	94	91.3
25 years and above	1	1.0
Total	**103**	**100**

Table 4.2 displays the statistical details of the respondents' ages. Based on the data obtained, the majority of the respondents (91.3%) fall within the age range of 21 to 24 years old, with a total of 94 students. Additionally, 7.8% of the respondents or 8 students are between the ages of 18 to 20 years old. Only 1% of the respondents in the category of 25 years and above, represented by only 1 student.

Table 4.3. Respondents' study programs

Program	n	Percentage (%)
Faculty of Civil Engineering	31	30.1
Faculty of Electrical Engineering	7	6.8
Faculty of Chemical Engineering	49	47.6
Faculty of Mechanical Engineering	9	8.7
Faculty of Hotel and Tourism Management	7	6.7
Total	**103**	**100**

Table 4.3 presents the statistical details of the respondents' programs of study. Based on the data, the majority of the respondents (47.6%) are enrolled in the programs offered by the Faculty of Chemical Engineering. Following this, 30.1% of the respondents are pursuing programs within the Faculty of Civil Engineering, while 8.7% are from the Faculty of Mechanical Engineering. Additionally, 6.8% of the respondents are associated with the Faculty of Electrical Engineering, and 6.7% are from the Faculty of Hotel and Tourism Management.

Table 4.4. Respondents' years of study

Study Year	n	Percentage (%)
First Year	11	10.7
Second Year	29	28.2
Third Year	52	50.5
Fourth Year	11	10.7
Total	**103**	**100**

Table 4.4 presents the statistical details of the respondents' study year. Based on the data, the majority of the respondents (50.5%) are in their third year of study. Subsequently, 28.2% of the respondents are in their second year, and 10.7% of the respondents are equally distributed between the first and fourth years of study.

Table 4.5. Respondents' responses to experience in using video conferencing

Items	Response options			
	Yes		No	
	f	%	*f*	%
Have you ever used video conferencing applications as your online learning platforms?	103	100	0	0

Note. N = 103

Table 4.5 shows the respondents' answer to the filter question if they had ever used video conferencing applications as their online learning platforms to confirm that they were the suitable respondents for the present study. Based on the data, 100% of the respondents admitted they had used video conferencing applications for their online learning.

Main Study's Results

Research Question 1: Which video conferencing application do UiTM, Permatang Pauh students frequently use and what is their perception about it?

Table 4.6. Respondents' frequently used video conferencing applications

No.	Video Conferencing Application	n	Percentage (%)
1	Webex	3	2.9
	Google Meet	38	36.9
	Microsoft Teams	62	60.2
	Total	**103**	**100**

Research question 1 aims to identify the most repeatedly utilized video conferencing applications. Table 4.6 presents the statistical details on the frequently used video conferencing applications. Based on the data collected, the majority of the respondents (60.2%) reported using Microsoft Teams as their frequently used video conferencing application when asked the question, "Which video conferencing application do you frequently use?" Following closely, 36.9% of the respondents stated that they frequently use Google Meet, while a smaller proportion of 2.9% indicated using Webex.

Table 4.7. Respondents' rating of video conferencing applications

No	Items	Response Options										Mean	Std. Dev
		Very bad (1)		Bad (2)		Unsure (3)		Good (4)	Very good (5)				
		f	%		%	*f*	%	*f*	%	*f*	%		
2	How would you rate your chosen video conferencing applications above?		0		4.9	13	12.6	50	48.5	35	34.0	4.116	0.808

Note. N = 103

Based on the responses to item 2 (table 4.7), the majority of the respondents (M= 4.116, SD= 0.808) expressed their perception toward their frequently used video conferencing applications representing their contentment with the application, with 48.5% rating it as "good" and 34% as "very good." On the other hand, 12.6% of the respondents reported being unsure about their frequently used video conferencing application, indicating some level of uncertainty in their assessment of it. Furthermore, a small percentage of 4.9% rated their frequently used video conferencing applications as "bad," expressing their dissatisfaction with it.

Research Question 2: Do UiTM, Permatang Pauh students prefer to turn on their cameras during their online classes?

Table 4.8. Respondents' responses to preferences for turning on their camera during video conferencing

No	Items	Response Options										Mean	Std. Dev
		Extremely unlikely (1)		Unlikely (2)		Neutral (3)		Likely (4)		Extremely likely (5)			
		f	%	*f*	%	*f*	%	*f*	%	*f*	%		
3	How likely are you to use video conferencing as your online learning method?	1	1.0	7	6.8	7	26.2	8	46.6	0	19.4	3.766	0.876
4	How likely are you to turn on your camera during a video conference for online learning?	4	23.3	3	32.0	6	25.2	4	13.6	6	5.8	2.466	1.161

Note. N = 103

For research question 2, items 3-10 were analyzed. Based on the data for item 3, the majority of the respondents (M= 3.766, SD= 0.876) indicated their likelihood to use video conferencing applications as their preferred online learning tools Regarding item 4, the results showed that most respondents (M= 2.466, SD= 1.161) are unlikely to turn on their camera during video conferencing for online learning. Conversely, 25.2% of the respondents remained uncertain or undecided about whether they would turn on their camera during video conferencing sessions. Lastly, a smaller proportion of the respondents (19.4%) indicated their willingness to do so, with 13.6% stating "likely," and 5.8% expressing a higher degree of assurance, answering "extremely likely."

Table 4.9. Respondents' comfortableness to turn their camera on during video conferencing

No	Items	Response Options										Mean	Std. Dev
		Very uncomfortable (1)		Uncomfortable (2)		Neutral(3)		Comfortable (4)		Very comfortable (5)			
		f	%	*f*	%	*f*	%	*f*	%	*f*	%		
5	How comfortable are you to turn on your camera during a video conference for online learning?	24	23.3	26	25.2	1	30.1	17	16.5	5	4.9	2.543	1.161

Note. N = 103

Based on the data for item 5, the majority of the respondents (M= 2.543, SD= 1.161) reported feeling uncomfortable turning on their camera during a video conferencing session for online learning. Within this group, 25.2% chose the response option "uncomfortable," and 23.3% selected "very uncomfortable." 30.1% of the respondents remained neutral regarding whether to turn on their camera during a video conference, indicating neither their feeling comfortable nor uncomfortable. On the other hand, only 21.4% of the respondents indicated their feeling comfortable with turning on their camera. Within this group, 16.5% responded as "comfortable," and a smaller portion of 4.9% expressed a higher level of comfort, choosing "very comfortable."

Table 4.10. Respondents' preferences for turning their camera on during a video conferencing session

No	Items	Response Options										Mean	Std. Dev
		Strongly disagre (1)		Disagre (2)		Unsure (3)		Agree (4)		Strongly agree (5)			
		f	%	*f*	%	*f*	%	*f*	%	*f*	%		
6	I don't prefer to turn on my camera during online learning because of my self-appearance.	3	2.9	5	4.9	5	34.0	3	32.0	7	26.2	3.737	0.999
7	I don't prefer to turn on my camera during online learning because of my video background.	6	5.8	4	3.9	8	17.5	3	32.0	2	40.8	3.980	1.128
8	I don't prefer turning on my camera during online learning because lecturers tend to question the person who turns on their camera.	3	2.9	5	14.6	4	23.3	1	21.4	0	38.8	3.776	1.195
9	I don't prefer to turn on my camera during online learning because I'm afraid of being judged by my friends. (e.g., facial expression, body language, etc.)	5	14.6	4	13.6	7	16.5	5	24.3	2	31.1	3.436	1.425
10	I don't prefer to turn on my camera during online learning because I'm doing other things too during a video conference (being multitasking).	6	5.8		8.7	8	17.5	4	33	6	35	3.825	1.175

Note. N = 103

Based on the data for item 6, the majority of the respondents (M= 3.737, SD= 0.999) indicated that they do not prefer to turn on their camera during online learning due to concerns about their self-appearance. Additionally, 34% of the respondents remained unsure about their preferences. Moving on to question 7, a significant proportion of the respondents, 40.8% (M= 3.980, SD= 1.128) strongly agreed with not preferring to turn on their camera during online learning due to concerns about their background. In contrast, only a minority of the respondents (9.7%) disagreed with this statement, with 3.9% choosing "disagree" and 5.8% selecting "strongly disagree."

For the data analyses of question 8, the majority of the respondents (38.8%) strongly agreed that they do not prefer to turn on their camera while video conferencing because they fear being asked questions by their lecturers. Regarding question 9, most of the respondents, 31.1% (M= 3.436, SD= 1.425) also strongly agreed that they do not prefer to turn on their camera during an online learning session because they fear being judged by their friends, especially concerning their facial expressions and body language, among other factors. Next, for the tenth question (item 10) of research question 1, a majority of the respondents, 35% (M= 3.825, SD= 1.175) strongly agreed that they do not prefer to turn on their camera during online learning because they engage in other activities too during the video conferencing session, meaning being multitasking. On the other hand, only 14.5% disagreed with this statement, comprising 8.7% who chose "disagree" and 5.8% who selected "strongly disagree."

Research Question 3: Do UiTM, Permatang Pauh students prefer learning through recorded videos or live online meetings?

Table 4.11. Respondents' preferences for learning through recorded videos or live online meetings

No	Items	Response Options										Mean	Std. Dev
		Strongly disagree (1)		Disagree (2)		Unsur (3)		Agree (4)		Strongly agree (5)			
		f	%	*f*	%	*f*	%	*f*	%	*f*	%		
11	For online learning, I prefer to learn through recorded videos.	8	7.8	6	5.8	8	17.5	2	31.1	9	37.9	3.854	1.215
12	For online learning, I prefer to learn through live online meetings.	1	1.0	9	8.9	9	28.2	42	40.8	22	21.4	3.728	0.930
13	I prefer to learn online using recorded videos because I can re-watch them anytime.	1	1.0	0	0	0	9.7	21	20.4	71	68.9	4.563	0.749
14	I prefer to learn online using recorded videos because I can accumulate all my questions before asking my lecturers about the videos that I have watched earlier.	3	2.9	4	3.9	25	24.3	36	35	5	34.0	3.932	1.002
15	I don't need to turn on my camera if learning using recorded videos and this doesn't require me to dress up for classes.	4	3.9	0	0	9	8.7	0	29.1	0	58.3	4.378	0.940
16	I don't like learning using recorded videos because I cannot find the right time to watch the videos.	6	5.8	2	21.4	27	26.2	4	23.3	4	23.3	3.368	1.220
17	I prefer to learn using live online meetings because this makes me feel like I'm in the real classroom.	5	4.9	5	14.6	4	33.0	8	27.2	1	20.4	3.436	1.117
18	I prefer to learn through live online meetings because I can directly ask questions to my lecturers.	0	0	7	6.8	8	27.2	4	42.7	4	23.3	3.825	0.868
19	Learning through live online meetings is easier to understand than through recorded videos.	5	4.9	2	11.7	5	34	3	32	8	17.5	3.456	1.064
20	I don't prefer to learn through live online meetings because my internet connection is not always stable.	6	5.8	8	7.8	5	24.3	0	38.8	4	23.3	3.660	1.098

Note. N = 103

Based on the data for the items dedicated to research question 3, which explores students' preferences for online learning methods between recorded videos and live online meetings, the following results were observed: For item 11, the majority of the respondents, 37.9% (M= 3.854, SD=

1.215) indicated a preference for learning through recorded videos. Conversely, only a small percentage of the respondents (13.6%) disagreed with this preference, with 5.8% choosing "disagree" and 7.8% selecting "strongly disagree."

Regarding item 12, more than half of the respondents (62.2%, M= 3.728, SD= 0.930) agreed that they prefer to learn through live online meetings. Within this group, 40.8% responded with "agree," while 21.4% with "strongly agree." On the other hand, 28.2% of the respondents remained undecided about their preferences for learning through live online meetings. Moving on to item 13, an overwhelming majority of the respondents, 68.9% (M= 4.563, SD= 0.749) strongly agreed that they prefer to learn online using recorded videos because they can re-watch them anytime. Only a negligible percentage of the respondents (1%) strongly disagreed with this preference. Based on the findings for item 14, most of the respondents, 35% (M= 3.932, SD= 1.002) agreed that they prefer to learn online using recorded videos because they can accumulate all their questions before asking their lecturers about the videos they have watched earlier. Regarding item 15, a substantial number of the respondents, 58.3% (M= 4.378, SD= 0.940) strongly agreed that they do not need to turn on their camera if learning using recorded videos, and this eliminates the requirement to dress up for classes. Conversely, only 3.9% strongly disagreed with this statement.

Regarding item 16, a majority of the respondents (46.6%, M= 3.368, SD= 1.220) agreed and strongly agreed that they do not prefer learning using recorded videos due to difficulties in finding the right time to watch them. Additionally, a significant portion of the respondents (26.2%) remained unsure or undecided about their preferences for online learning using recorded videos, citing the challenge of finding the appropriate time to watch the videos. As for item 17, the majority of the respondents (47.6%, M=3.436, SD= 1.117) both agreed and strongly agreed that they prefer to learn using live online meetings because they provide a more immersive experience, akin to being in real classrooms. However, a considerable number of respondents (33%) were uncertain about their preferences on this item. Continuing with item 18, a significant majority of the respondents, 42.7% (M= 3.825, SD= 0.868) agreed that they prefer learning through live online meetings because it allows them to directly ask questions to their lecturers. In contrast, only a small percentage of the respondents (6.8%) disagreed with this statement.

Next, based on the data for item 19, a majority of the respondents (49.5%, M= 3.456, SD= 1.064) agreed and strongly agreed that learning through live online meetings is easier to understand compared to learning through recorded videos. However, with only a slight difference, 34.0% of the respondents remained undecided about whether learning through live online meetings is easier to comprehend. Lastly, for item 20, the majority of the respondents, 38.8% (M= 3.660, SD= 1.098) agreed that they do not prefer to learn through live online meetings due to the inconsistency of their internet connection. With only a slight difference, 24.3% of the respondents remained unsure about this item. In contrast, only a minority of the respondents (13.6%) disagreed and strongly disagreed with the statement that they do not prefer to learn through live online meetings because of their unstable internet connection.

Discussion

The preponderance of respondents exhibits a proclivity toward the utilization of video conferencing, a predilection potentially ascribed to its accessibility and heightened flexibility. Approximately more than half of the participants manifest a degree of discomfort with and aversion to enabling their camera during video conferencing sessions. This aversion, largely substantiated by a prevailing consensus, is rooted in self-consciousness pertaining to personal appearance and a prevailing fear of social scrutiny, particularly emanating from peers. This result is in line with the findings of the study by Cristel et al. (2020) which revealed a significant prevalence of anxiety and self-consciousness pertaining to face aesthetics during video conferencing sessions. Furthermore, a significant cohort of respondents concurs that their physical surroundings, and by extension, the backdrop they present, serves as a deterrent for camera activation. The conjecture here is that their surroundings may not meet prescriptive standards of presentation, consequently engendering apprehension about potential judgment for its public display. Moreover, the majority of respondents concur that the act of camera activation is discouraged by an apprehension that doing so may draw undue attention from educators who may single out those displaying their video feed for interrogation or questioning, potentially resulting in heightened visibility relative to their peers. Several recommendations for optimizing one's look on video conferencing platforms involve altering the lighting, positioning the video camera at a downward angle, and using embedded "touch up" functions to enhance one's visual presentation (Farsace, 2020; Leskin, 2020).

A sizable proportion of the respondents corroborate a preference for learning through recorded video content. Such preferences may derive, at least in part, from the liberty entailed in revisiting these materials at one's convenience. This assumption can be supported by the evidence from the study by Islam et al. (2020) which indicates that pre-recorded video lectures are favored over live Zoom lectures because of its convenience, flexibility and educational efficacy. Frequently, students grapple with diminished concentration, and recorded video content alleviates this concern by enabling them to focus more attentively on the instructional materials (Islam et al., 2020). The capacity to learn at a time and location commensurate with their personal constraints buttress the attractiveness of this mode of learning. A noteworthy majority of the respondents assert their proclivity for online learning via recorded videos, citing its facilitation of queries' compilation before direct interaction with their instructors. This particular modality of learning is especially valued because it promotes students' convenience in addressing their questions, resulting in an optimal learning experience. In contrast, an appreciable number of respondents favor learning through live online meetings, substantiated by an acknowledgment that such sessions engender an immersive educational environment akin to traditional classroom settings. Furthermore, the value of real-time interaction intrinsic to live online meetings cannot be understated. This feature fortifies the allure of this mode of learning, underscoring the paramount importance of location flexibility in facilitating such meaningful engagement. The implications are that live online meetings are instrumental in simulating the in-person classroom experience, with the added advantages of temporal and spatial convenience.

Conclusion

The findings derived from this study provide valuable insights that underpin the following conclusions. In the context of the initial objective, it is evident that an appreciable proportion of respondents, constituting approximately half, demonstrate a palpable unease and reluctance to turn on their cameras during video conferencing sessions. Several contributory factors are identified, including but not limited to concerns related to self-presentation, apprehension of peer judgment, the influence of one's physical surroundings, an apprehension that excessive visibility may invite scrutiny by educators, and the proclivity for multitasking during video conferencing sessions.

On the other hand, in consonance with the results aligned with the second objective, a prevailing consensus is discerned among the majority of respondents in their proclivity for learning through recorded video content. This preference is expressed by the capacity to revisit educational materials at the discretion of the learner, thus ensuring a heightened level of focus and comprehension. Additionally, the allure of this modality derives from the unprecedented flexibility it affords, enabling students to engage with the learning materials at times and in locations that best suit their individual preferences and commitments. It is noteworthy that the majority of respondents concur with the value of learning through live online meetings, primarily predicated on the capacity of this format to replicate the immersive educational environment characteristic of traditional in-person classroom settings. In this regard, these meetings provide a commendable simulacrum of the real classroom experience and facilitate meaningful real-time interactions.

According to Rehn et al. (2016), it is important for educators to acquire the necessary skills to modify their teaching methods in order to effectively use synchronous videoconferencing technology. Thus, to engender a more effective and gratifying learning experience, it is incumbent upon educational institutions to conscientiously craft and curate pertinent content, establish efficacious delivery systems, and proffer comprehensive digital literacy training to their academic faculty. According to Huang et al. (2020), online learning programs offer the ability to use technology in order to effectively include students via the incorporation of simulations, animations, audio, video, documents, and several other forms of interactive materials. Thus, online learning despite the challenges should be utilized for the benefits are far greater if used effectively.

Limitations of the Study and Recommendations

This research endeavor is not without its inherent constraints and limitations. Several noteworthy considerations merit explication. Firstly, the study imposes a prerequisite for the active involvement of at least 100 students drawn from the UiTM, Permatang Pauh academic community to partake in the survey. It is incumbent to acknowledge that the selected sample size, albeit diligently acquired, may not exhibit a comprehensive representation of the overarching university populace. Consequently, the generalizability of the research findings to the entire spectrum of Malaysian tertiary students remains

restricted. Lastly, another limitation pertains to the paucity of extant scholarly articles that specifically delve into the nuanced dimension of students' proclivities regarding the activation of their cameras during video conferencing. This dearth of comprehensive literature engenders a challenge in amassing an ample corpus of information germane to the pursuit of the first research objective.

To enhance the efficacy of online learning, the following recommendations are put forth. For example, both educators and students should engage in dialogues aimed at identifying the most suitable mode of online learning, taking into account students' circumstances. Recognizing that disparities in internet access and inadequate study environments exist among students, it is imperative to cater to their unique needs. Also, educators are encouraged to explore novel and captivating teaching strategies that can captivate students' attention during online classes, particularly when live video conferencing is employed. Interactive online learning modalities should be considered to mitigate the likelihood of students becoming disengaged and turning to alternative activities like video games or films. Besides, academic institutions should provide comprehensive training in online learning tools and software, equipping students with the necessary skills to effectively navigate virtual learning environments. This is especially crucial in ensuring that students can proficiently engage with their course content. Educators should strategically reduce the duration of lectures and actively foster student engagement during live classes. Shorter lecture times are conducive to sustained student attention and participation. On the other hand, student organizations should undertake the task of identifying and collating information regarding students facing connectivity challenges and those lacking the requisite devices for online learning. This data can then be leveraged to initiate discussions with university administrations, seeking solutions to address these challenges.

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