



ATTITUDES AND PERCEPTIONS OF USING ZOOM: A SURVEY OF CAMBODIAN UNIVERSITY STUDENTS

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Abstract: Due to the COVID-19 pandemic, many Cambodian schools and universities have been forced to move their educational activities from face-to-face to online modes. Those universities and schools have been using some online applications like Zoom as their teaching and learning delivery platform. Consequently, there have been challenges to the use of the app. The current study employed a quantitative design, and it was conducted at a Cambodian university with a total of 50 students. The study aimed to investigate those students' attitudes and perceptions toward using the Zoom platform for their online learning. The results showed that the students had negative attitudes toward the use of Zoom as well as low perceptions of using Zoom during the pandemic. Future studies should be conducted with a bigger sample size at other universities across the country. A qualitative study or a mixed-methods design is also recommended. Teachers' attitudes and perceptions of using Zoom for teaching might also be welcome.

Keywords: Attitudes, Cambodian Students, COVID-19, Perceptions, Zoom

Abstrak: Karena pandemi COVID-19, banyak sekolah dan universitas Kamboja terpaksa memindahkan kegiatan pendidikannya dari model tatap muka ke online. Universitas dan sekolah tersebut telah menggunakan beberapa aplikasi online seperti Zoom sebagai platform penyampaian pengajaran dan pembelajaran mereka. Akibatnya, ada tantangan untuk penggunaan aplikasi. Studi ini menggunakan desain kuantitatif, dan dilakukan di sebuah universitas Kamboja dengan total 50 mahasiswa. Studi ini bertujuan untuk menyelidiki sikap dan persepsi siswa tersebut terhadap penggunaan platform Zoom untuk pembelajaran daring mereka. Hasil penelitian menunjukkan bahwa mahasiswa memiliki sikap negatif terhadap penggunaan Zoom serta rendahnya persepsi penggunaan Zoom di masa pandemi. Studi selanjutnya harus dilakukan dengan ukuran sampel yang lebih besar di universitas lain di seluruh negeri. Studi kualitatif atau desain metode campuran juga direkomendasikan. Sikap dan persepsi guru tentang penggunaan Zoom untuk mengajar juga dapat menerima.

Kata Kunci: Sikap, Pelajar Kamboja, COVID-19, Persepsi, Zoom

DOI: <https://doi.org/10.37249/assalam.v7i1.511>

Received: 21 November 2022; **Revised:** 28 February 2023; **Accepted:** 31 March 2023

To cite this article: Sey, K., & Em, S. ATTITUDES AND PERCEPTIONS OF USING ZOOM: A SURVEY OF CAMBODIAN UNIVERSITY STUDENTS. *Jurnal As-Salam*, 7(1). <https://doi.org/10.37249/assalam.v7i1.511>

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INTRODUCTION

COVID-19 was previously discovered in Wuhan, China, near the end of 2019. Since then, the virus has spread over the world and is still doing so, albeit it is not as harmful as it once was (Heng et al., 2023). The virus has infected many individuals worldwide, and many of them have died because they could not be treated. Every industry has been negatively impacted by COVID-19, including education. To stop the

epidemic from spreading, all schools, colleges, and other educational institutions have been shuttered (Em, 2022, Em, 2023).

Likewise, after the first case of COVID-19 was found in Preah Sihanouk province (see WHO, 2020), the Cambodian government informed the public about the danger. Then most people became aware of the danger and took action to live their lives better and safer. However, the virus was becoming more and more dangerous. As a result, public and private schools and universities were ordered to close down to curb the pandemic (see Em, 2021).

The presence of COVID-19 has revolutionized all spheres of society, including education. It is quite shocking that education is moving to online platforms while technopedagogy is a real challenge since it is a new context for Cambodia (Rapanta et al., 2020). Interestingly, like many other aspects of everyday life, COVID-19 has badly impacted students, teachers, and educational organizations around Cambodia. (Almanthari et al., 2020). Moreover, since nobody knows when this pandemic will stop, all schools in Cambodia decided to apply the available platforms to create online learning (Kaur, 2020).

When there is a problem, there is always a solution. This condition forces teachers and students to master digital technology to learn and teach online using a variety of platforms (Bagata et al., 2020). All teachers and students were instructed to teach and learn from a distance. All possible means were considered to ensure that teaching and learning activities were still possible. The Ministry of Education, Youth, and Sport (MoEYS) of the Kingdom of Cambodia introduced many measures for teachers and students so that they could teach and learn. Those measures included asking a class monitor to come to schools and take the lessons written on the papers to deliver; sending the exercises into students' group messengers or telegrams; teaching through television; and teaching online using apps like Google Meet, Microsoft Team, and Zoom. Of these means, teaching and learning through Zoom has been much easier and more accessible than the others.

As Heng and Sol (2020) noted, the COVID-19 pandemic has caused chaos in all aspects of society. Since face-to-face lessons have been minimized and maximized by online lessons, there has been an increase in online applications that has allowed students to continue their education. Furthermore, Heng and Sol (2020) noted that educational institutions should establish and improve online learning platforms and also improve internet access and online library resources to support online learning. COVID-19 was also seen as a silver lining for Cambodian education to innovate teaching and learning by using digital technology in its educational system (Heng, 2020). According to Mahyoob (2020), COVID-19 has turned education online with different platforms such as Zoom.

Online learning is described as access to learning experiences via the use of some technology platforms (Moore et al., 2011). Regarding the Zoom app, students could join the class with a variety of different educational activities within the Zoom environment. For instance, learning and teaching online activities include greeting classmates, classroom lectures, questions and answers, and group work in different online rooms (Rahayu, 2020). Furthermore, going online can reduce students' stress levels and increase

their motivation (Lowenthal et al., 2020). Learning via Zoom decreases materials for students so that they can save time and money (Li & Lalani, 2020). With the Zoom platform, students and teachers can see each other and discuss the assignment and other work (McClendon et al., 2017).

However, students and teachers may find difficulty when using Zoom owing to the internet bandwidth, noisy environment, and some problems with the headphones and sound online. Sometimes, it is unclear and immediately cut off (Ferns et al., 2020). In addition, the features of Zoom can be hard to access at the first time (Dharma et al., 2017).

Because of the COVID-19 epidemic, universities and institutions globally have shifted from physical to online classrooms. In Cambodia, students and teachers faced challenges, including learning to use new technology, designing instructional materials, providing an interactive online learning environment, and applying ICT platforms. Many universities have provided professional training sessions to their faculty members to ease the transition from face-to-face to online instruction. In this sense, understanding students' attitudes and perceptions helps teachers and school leaders successfully implement electronic tools for learning and teaching online, motivating students to learn through digital technology.

This survey study was conducted at a Cambodian university in Phnom Penh. The survey aimed to explore students' attitudes and perceptions of using the Zoom application during the pandemic. The study also suggested some useful clues for the digital transformation of Cambodian higher education using different online platforms, especially the Zoom app.

LITERATURE REVIEW

Since the pandemic, there has been a rise in online learning. Online learning has been practiced in many developed countries for a long time, but it is a new idea for many developing countries like Cambodia. This section reviews students' attitudes and perceptions of online learning using digital applications like Google Meet, Microsoft Team, and especially Zoom. The review looks at the studies from the broader areas and finally focuses on the Cambodian context.

Many studies concentrated on the use of videoconferencing tools. For example, Anastasiades et al. (2010) noted that video conferencing broadens students' opportunities for communication, collaboration, and expression by strengthening their willingness to make new contacts all over the world. Mader and Ming (2015) added that the use of videoconferencing can be a new opportunity to facilitate learning. Instructors can use emerging video technology to coach and retain students, and it is very valuable (Maul et al., 2018). However, the significant problems when using videoconferencing are the sound, speed, and connectivity issues (Karal et al., 2019).

Consequently, the use of videoconferencing is not new for students and teachers in many countries. Instructors in higher education have been using videoconferencing for many years to communicate and give instructions to students online (Candarli & Yuksel, 2012). Nevertheless, teaching and learning by using videoconferencing are very new to

Cambodia since Cambodian teachers and students have never experienced it before. Even though teachers and students have been using Zoom, they still want to move back to traditional classrooms, according to Knipe and Lee (2002).

Wan-Hassan et al. (2020) found that students had a moderate level of positive attitudes toward using the Zoom application for their studies based on their attitudes and perceptions of the Zoom platform. Besides, Archibald et al. (2019) conducted a study to reconnoiter the suitability of using Zoom for qualitative data collection in the interior of a health context. The authors found that 69% of the participants preferred using Zoom as an interview technique compared to face-to-face, telephone, or other videoconference platforms because the patients mentioned that they did not have to meet face-to-face with the doctors; thus, using the Zoom application must have helped them communicate when needed. Another study conducted by Lussianda et al. (2021) also indicated that students found that the Zoom app affected student learning interests.

As shown in Cakrawati (2017) emphasized the students' perceptions of the use of online learning platforms in the ELF classroom. Her study found that students preferred using the online platform because it saved time and allowed them to access the classroom from anywhere. In addition to this, Demuyakor (2020) revealed that students supported the establishment of online learning programs, and they were satisfied with the mass online learning program during the transition from face-to-face to online and perceived the online courses as effective. Additionally, Sayem et al. (2017) revealed that the use of Zoom could increase students' satisfaction and reduce instructors' workload. Another study by Singhal (2020) also indicated that students liked using the Zoom app and seemed active in learning activities. Furthermore, Suhaimi and Yunus (2021) revealed that the students positively perceived online cooperative learning via the Zoom application.

Furthermore, Alameri et al. (2020) conducted research with students at the University of Jordan, which revealed that the students were satisfied with the use of Zoom and appeared very optimistic about learning because it could help them improve their learning during the virus period. As Saudi (2021) indicated, the virtual classroom for EFL university students using an online application was a very useful way to help the students learn. In addition to this, Long and Khoi (2020) noted that teaching and learning via Zoom is a very good choice during the pandemic because it is easy and fast. Moreover, students get accustomed to using the Zoom application rather than using other platforms. Ironically, Mu'awanah (2021) supported that learning English via Zoom helps students to practice English, makes the teaching-learning process more effective, and facilitates teacher-student interaction and communication. Fitzpatrick et al. (2020) also found that using Zoom can create a good relationship between students and teachers. In addition, Li and Lalani (2020) pointed out that online classes can decrease time; for example, students do not have to spend the whole session learning. Moreover, Nuryanto (2021) pointed out that Zoom meetings can enhance learners' English skills and motivation.

However, another study conducted by Vandenberg and Magnuson (2021) revealed that students' attitudes toward online practice experiences were overwhelmingly negative,

citing concerns about a lack of relational practice and skill development. Rahayu (2020) found that the traditional face-to-face modes still gave easier and better access in terms of communication and materials compared to the Zoom application as perceived by the students. The findings conducted by Yasin (2021) also indicated that the majority of students have negative perceptions of using Zoom. In relevance to this, Fauziah (2021) noted that English online learning through Zoom has some advantages and disadvantages; students can at least join an online classroom to experience a new online platform, and somehow it provides slow internet access. Demuyakor (2020) noted that students who took courses outside of China, on the other hand, said they spent a lot of money to secure internet data for online learning. Furthermore, students who stayed in dorms reported that internet access was extremely slow.

However, students indicated excellent and bad feelings toward learning online by applying Zoom (Tsarapkina et al., 2021). Moreover, Fujiono et al. (2021) showed that most of the students' attitudes toward the Zoom application were less interesting, interactive, effective, efficient, and energetic. As Wang et al. (2018) indicated, students liked the flexibility and convenience of attending lessons via Zoom. However, the authors observed that students' participation through Zoom was low. Interestingly, Gillantes and Yreck (2021) suggested that to successfully learn via the Zoom app, students have to look for a peaceful atmosphere because it can undoubtedly improve a person's concentration level, while a noisy environment will exacerbate one's focus during the learning phase.

Regarding the challenges in using the Zoom app for teaching and learning, Saudi (2021) pointed out that the Zoom app needs a more speed internet connection. Somehow, the connection is bandwidth. Furthermore, Fujiono et al. (2021) also found that Zoom has many troubles with its signal, and students often get limited internet packages. Additionally, Wang et al. (2018) added that students occasionally shut down their cameras and did not answer when they were called upon. Male et al. (2020) also added that students tend to be bored while learning from home.

Another study by Mu'awanah (2021) revealed that Zoom is also challenging for students with slow internet connection and unsupported gadgets, and students and teachers must pay for internet access. In relevance to this, Dharma et al. (2017) added that Zoom is not easy to join because it needs a faster internet connection. Interestingly, using Zoom can be limited by a lack of stable online connection, security issues, limited pedagogical resources, and background noise (Em, 2021).

Additionally, Mouton (2020) found some challenges while using Zoom. Zoom provides only 40 minutes per meeting, less administrative control, and one needs to use good-quality microphones and speakers; otherwise, one cannot hear the sound. As Komsiyah (2021) revealed, students had difficulties in providing internet networks while using Zoom; moreover, they wanted each Zoom activity to be more interactive. One significant problem addressed by Adenegan and Abiodun (2018) is that with the Zoom basic package, one gets limitless meetings, one-on-one meetings, and unlimited minutes. The meeting ends after 40 minutes for the basic account. So, if ones are holding an essential meeting where critical problems are being discussed, one will need to start another immediate meeting or click on the same meeting link if the conversation is cut

off. Zoom charges a monthly fee of \$14.99 for a Pro account to provide security and access to all of ZCM's features. For all virtual meetings to be held by multiple departments, schools, and committees, as requested, an institution may only have one single Zoom account.

In the Cambodian context, Em (2021b) conducted a survey study with 80 high school students during the pandemic at a provincial high school and found that the students who participated in the study had many problems with online learning, like limited internet connection, disruptions from nearby places, problems accessing digital platforms like Google Meet or Zoom, and other similar things. As a result, those students had low attitudes toward online learning.

In a recent study of 1,002 Cambodian undergraduate students, Chet et al. (2022) discovered that students' study dedication played an active role in satisfying online learning throughout the pandemic. After the outbreak, the propensity of students to choose online education using digital apps like Zoom was investigated. The authors found that 62.3% of participants indicated online learning negatively influenced their academics, and 81.4% of student participants said they would stop taking classes online following the outbreak because it had hurt their grades. These findings imply that the student's perceptions of online learning were unfavorable.

RESEARCH METHODOLOGY

This quantitative study employed a survey design to investigate students' attitudes and perceptions of using the Zoom platform with their learning from a Cambodian university in Phnom Penh. Due to the spread of COVID-19 in the community, face-to-face data collection was impossible. Therefore, Google Forms was used as a means of data collection, and the link to Google Survey was administered to students through Telegram groups.

The survey involved 50 BA students from a Cambodian university in Phnom Penh. There were 35 males and 15 females aged between 18 and 40 years old, majoring in educational fields participating in this study. They were from different socioeconomic backgrounds and had been learning via online classes enabled by Zoom, Google Meet, Telegram, and Facebook Messenger.

The participants filled out a 5-point Likert-type 11-item survey that was developed based on the literature review and the study's aims. The scale of the survey responses ranged from Strongly Disagree (1) to Strongly Agree (5). The questionnaire used in this study contained three sections. The first section was about demographic information, such as students' gender and age range. The second section aimed to examine students' attitudes toward using Zoom. It consisted of 5 items (see Table 2), and the third section indicated students' perceptions of using Zoom during the pandemic. It consisted of 6 items (see Table 3). It took around 15 minutes to complete the questionnaire, and those who were invited to participate in the survey returned their completed questionnaires after two days. After the data was collected, Cronbach's Alpha of the item was also tested, and it was 0.75, suggesting the reliability of the questionnaire items.

Statistical package for social sciences (SPSS) version 21 was used as data analyzing tool. The analysis focused on the percentage (%), mean (M), and standard deviation (SD) of the participants' responses using descriptive statistics (frequencies and descriptives). The analysis also focused on minimum (Min) and maximum (Max). However, these last two analyses were not reported in line with the previous studies. They were only inserted in the table to let the readers know about Min and Max, chosen by the respondents. Before analyzing the data, the first author needed to copy responses from Google Forms and give the codes for each item, and then the author keyed the codes into the SPSS spreadsheet.

FINDINGS AND DISCUSSION

Findings

This section presents the findings from the survey. The study's aims are fulfilled here as presented in Tables 2 and 3, while Table 1 (the first table) presents participants' demographic information.

Finding 1

This section presents participants' demographic information. The data is presented in Table 1, and the report is below.

Table 1. Participant's demographic information (N = 50)

Demographic	Value	N	Percentage
Gender	Male	35	76.20
	Female	15	23.80
Age	18-25 Years	24	54.90
	31-35 Years	8	15.40
	36-40 Years	3	4.60

As presented in Table 1, 50 students (15 were females) participated in the survey. There were 24 participants, with an age range of 18 to 25 years old. Eight participants were between 31 and 35 years old, and the rest (three participants) were between 36 and 40 years old. Notably, all the participants were doing their bachelor's degrees in educational fields.

Finding 2

This section presents participants' attitudes toward using Zoom for online learning during the pandemic. The data is presented in Table 2, and the report is below.

Table 2. Students' attitudes toward Zoom

No.	Students' Attitude Items	M	SD	Min	Max
1.	I love studying on Zoom while I am online.	2.50	0.14	1	5
2.	I feel good about learning via Zoom.	2.90	0.15	1	5

3.	I like using Zoom for online learning.	2.30	0.23	1	5
4.	The use of Zoom allows flexibility in my learning schedule.	3.00	0.30	1	5
5.	I enjoy learning via Zoom.	2.55	0.16	1	5
	Overall	2.65	0.19	1	5

Note: Mean score of 1.00-1.80 = Lowest, 1.81-2.60 = Low, 2.61-3.40 = Moderate, 3.41-4.20 = High, and 4.21-5.00 = Highest

As shown in Table 2, the students reported low mean scores in items 1, 3, and 5 ($M = 2.50$, $SD = 0.14$; $M = 2.30$, $SD = 0.23$; $M = 2.55$, $SD = 0.16$). It means the students disliked or enjoyed using Zoom for their online learning. The students reported average mean scores in items 2 and 4 ($M = 2.90$; $SD = 0.15$; $M = 3.00$, $SD = 0.30$). The students reported an average mean score ($M = 2.65$, $SD = 0.19$). The results show that the students simply had negative attitudes toward using Zoom for their online learning.

Finding 3

This section presents participants' perceptions toward using Zoom as a means of online learning during the pandemic. The data is presented in Table 3, and the report is below.

Table 3. Students' perceptions of the use of Zoom

No.	Students' Perception Items	M	SD	Min	Max
1.	Using Zoom helps me participate in the class in ways that improve my learning.	2.20	0.13	1	5
2.	The use of Zoom motivates me to participate actively in class activities.	2.15	0.36	1	4
3.	Using Zoom makes it easier for me to engage more in class discussions.	2.33	0.34	1	5
4.	The use of Zoom increases my interaction with my instructor.	2.30	0.31	1	5
5.	The use of Zoom increases my interaction with my classmates.	1.98	0.14	1	3
6.	Using Zoom motivates me to seek help from tutors, classmates, or the instructor.	2.69	0.44	1	5
	Overall	2.27	0.28	1	4.50

As presented in Table 3, the students reported low mean scores in items 1, 2, 3, 4, and 5 ($M = 2.20$, $SD = 0.13$; $M = 2.15$, $SD = 0.36$; $M = 2.33$, $SD = 0.34$; $M = 2.30$, $SD = 0.31$; $M = 1.98$, $SD = 0.14$). The students also reported a moderate mean score on item 6 ($M = 2.69$, $SD = 0.44$). These results simply mean that the students thought using Zoom for online learning was ineffective. The students reported a low mean score ($M = 2.27$, $SD = 0.28$). These results can be interpreted to mean that the students in the studied context had a negative perception of using Zoom for their online learning.

Discussion

The Zoom application is less favorable for Cambodian students since it is a new platform. The current study revealed that Cambodian university students who participated in the study had a negative attitude toward using Zoom for online learning. The study also presented students' negative perceptions of using the Zoom app for their online learning. Overall, the participants rated Zoom use and their likeness to the app negatively.

The current study supports a similar study conducted by Candarli and Yuksel (2012) at Yildiz Technical University, which found that Turkish students tend to have a negative attitude toward using video conferencing. However, the results contradict the findings conducted by Wang et al. (2018). The Singaporean students in their study had positive attitudes toward using Zoom in their courses. Despite some technical issues, they perceived it as a valuable tool for facilitating teaching.

Regarding students' perception of their Zoom engagement, this study supports the results of Wang et al. (2018), who found that student participation through Zoom was low; students occasionally shut down their webcams and did not answer when they were called upon. Students' interactions and experiences during the Zoom sessions were lower than the students' interactions in traditional classroom settings. Doggett (2007) found similar findings; most American students indicated they would have been more comfortable in a traditional classroom setting. Moreover, Roy et al. (2020) pointed out that students preferred to go back to the face-to-face classroom.

Even though the current study is different from many studies from the developed parts of the world, such as Knipe and Lee (2002); Candarli and Yuksel (2012); Cakrawati (2017); Sayem et al. (2017); Karal et al. (2019); Archibald et al. (2019); Alameri et al. (2020); Demuyakor (2020); Fitzpatrick et al. (2020); Khoi (2020); Li and Lalani (2020); Singhal (2020); Wan-Hasan et al. (2020); Lussianda et al. (2021); Mu'awanah (2021), Nuryanto (2021); Saudi (2021); and Suhaimi and Yunus (2021) who found that the students had positive attitudes and perceptions of using Zoom for their online learning, it supports Em (2021b) who found that the students had negative attitudes of online applications like Zoom and Chet et al. (2022) who found students' negative perceptions of online learning. The last two studies were conducted in the Cambodian context.

Cambodian university students' attitudes towards the Zoom application seem to be dissatisfactory because they found it hard to keep in touch with lecturers while learning online, or somehow they lost connection. Students, for example, could not ask teachers to explain the lessons in detail, and teachers simply dropped the lessons into Telegram groups. Moreover, their engagement on Zoom is also low, which means that Zoom classroom engagement did not increase their interaction. As a result, the students did not start the video, respond when they were called, or pretend not to hear anything from their teachers.

CONCLUSION

The current study revealed that the students who participated in the study had a negative attitude toward using Zoom for their online learning. The result also revealed that those students had a negative perception of using Zoom for their online learning since it is a new platform for the Cambodian context. Based on these results, all

concerned education stakeholders, MoEYS, educational institution leaders, teachers, and students must take urgent actions to solve the problems. Those individuals should consider the below recommendations.

The first individual that needs to take action to solve the problem is MoEYS. MoEYS must take measures to guarantee the provision of training courses for teachers and students so that they can use the platform more effectively. Besides, MoEYS needs to seek funds from the government and education partners to support the training costs. Rather than using Zoom as revealed in the studied context, MoEYS can also look for other alternatives to let teachers and students adopt in the future. Even though the pandemic has been regarded as a worldwide challenge, for developing countries like Cambodia, it is a good idea that Cambodian students and teachers have the opportunity to learn technology for learning and teaching in the 21st century. Thus, MoEYS should take this opportunity to implement digital transformation for higher education.

The second most crucial individual needs to take action in educational institutions like schools or universities. Education leaders, school principals, and university rectors require promoting digital knowledge improvement to teachers and students so that they can teach and learn to beat the pandemic. Promoting digital knowledge improvement for teachers and students is also crucial for 21st-century learning skills. Therefore, these people need to encourage teachers and students to learn new technology regularly, and they also need to inspect how much the teachers and students have learned. If the educational institution leaders consider the comments above, the situation will be better.

Teachers and students are simply the final individuals to take action. Teachers must seriously take part in upgrading and participating in using new technology in teaching. As a result, new technology can help motivate teachers to love using technological tools in everyday situations. Professional competence and performance are what teachers need to upgrade regularly to improve their existing knowledge (Em, 2021a; Em et al., 2021; Pang et al., 2022). Additionally, Hoeun and Em (2021) pointed out that to employ new technology for regular learning and teaching, educators need to master it. Besides, it is also a must for students to engage in any online learning platform to explore new experiences and advance themselves in terms of using digital technology, even if it is hard for the first time. To successfully implement an online learning platform such as Zoom, students must put in the effort to acquire new digital skills. Students who never try something new or different cannot make a difference. Overall, Sey (2021) made a similar suggestion, noting that all interested parties in the field of education should have a solid grasp of issues relating to digital knowledge, such as the ability to use online platforms and soft skills.

Overall, the aforementioned principles should be taken into account by all relevant education stakeholders, and implementation from higher to lower education levels should be encouraged. Teachers and students will not encounter many difficulties in the future if they are compelled to transfer online, as in the case of the COVID-19 epidemic, and then thank the implementation of the concepts.

Limitations are typical for all studies in all contexts. This study was conducted with only 50 participants from only one university in Phnom Penh, so generalization for the

whole country is impossible. As a result, the study cannot represent all Cambodian students' attitudes and perceptions since it is limited in resources and time in conducting this study. Future studies with a larger number of participants and with other fields are recommended. The study to explore both students' and teachers' attitudes toward the use of the Zoom application is also a great idea. Using a qualitative or mixed-methods design for similar topics is also welcome.

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