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Challenges of online learning during the COVID-19 pandemic: A survey of Cambodian high school students

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Abstract

The COVID-19 pandemic has disrupted every aspect of society. It has caused intense disturbance to the education system worldwide as governments around the world have temporarily postponed physical classes and moved them online to prevent the spread of the virus. These sudden changes from face-to-face to online learning have caused numerous challenges for students, teachers, administrators, and education leaders. Against this background, this survey research was conducted with 80 high school students in Takeo province, Cambodia, to find out the challenges these students face during the pandemic. The results show that limited access to the internet was the most challenging problem, while other challenges included interruptions at home, ineffectiveness of teachers, lack of smartphones and money to recharge phone credits, difficulties in navigating online learning, and eye problems caused by constant exposure to bright light. Further studies should be conducted to explore the challenges faced by high school teachers and administrators.

Keywords: Online learning; COVID-19; challenges; high school students; Cambodia

Introduction

Education plays a crucial role in human life. Without proper education, people surely go wandering without any specific destination. Moreover, in this digital

era without the basic knowledge of technology, learners will find it hard to learn and acquire knowledge. According to Bhardwaj (2016), human society has come a long way with the advancement of science and technology, with many growth success stories under its belt. The importance of education in personal, social, political, fiscal, and cultural advancement cannot be overstated. Today, education is available in all facets of life, paving the way for the holistic growth of people, communities, and countries. Education is, without a doubt, a boon to human civilization. However, education does not only focus on the idea of literacy. Fundamentally, we should ensure that all pupils are taught morals and critical value-based education if we are to produce good human capital. Thus, value-based instruction should be integrated into every chapter of our curriculum in an engaging manner so that children and students can learn and grow at every stage of their education. As research has demonstrated, value-based instruction plays a critical role in students' holistic growth (Bhardwaj, 2016).

From the early outbreak of COVID-19, all schools in Cambodia were ordered to close and classes moved to online learning. In fact, schools in most countries around the world have been temporarily closed due to the pandemic. According to Mahyoob (2020), COVID-19 has impacted virtually every sector globally. In many countries around the world, education is the only sector that has entirely transitioned to an online mode. Thus, during the pandemic, online learning has become the best alternative for the continuation of education, both in schools and universities.

There are several benefits and drawbacks of online learning. First, online education is accessible everywhere, and it saves time, resources, and efforts. Another benefit of online learning is the ability to record lectures and presentations. Students can then view the lectures at any time to get a greater understanding of the content. However, problems still persist. For example, not all students have reliable internet access, and some struggle with network issues and a lack of high-quality learning equipment (Mahyoob, 2020).

Educators, teachers, school administrators, and parents, among other stakeholders, have faced many obstacles while navigating online learning during COVID-19. According to Heng and Sol (2020), key challenges were related to "technological infrastructure and digital competence, socio-economic

factors (educational inequality), assessment and supervision, heavy workload, and compatibility (some subjects such as sports sciences require physical interactions)" (p. 5). Other concerns included "learner loneliness, frustration, pressure, additional costs, health issues, and increased exposure to cyber-bullying and online harassment" (Heng & Sol, 2020, p.10).

Heng (2021) and Sun (2020) stated that COVID-19 had forced educational institutions around the world to transition from face-to-face classroom to online learning and teaching. In the case of Cambodia, to avoid the spread of COVID-19, all public and private educational institutions were forced to close temporarily in March 2020. Later some schools were permitted to reopen if they could adhere to rigorous safety measures. Despite efforts by the Cambodian Ministry of Education, Youth and Sport to provide video lectures through television, Facebook, Telegram, and YouTube channels, teachers and students have faced many problems, such as limited internet connection and lack of knowledge about information communication technology (ICT) and other supporting systems, resulting in students' poor educational attainment (Sun, 2020).

Since March 2021, all educational institutions in Cambodia have been ordered to close, and classes moved online again (Khmer Times, 2021). Because of the pandemic, all students and teachers are required to adapt to the new way of learning and teaching, making them face many difficulties and challenges. Against this backdrop, I conducted a survey to explore the challenges faced by high school students in Takeo province, located in the south of Cambodia. This article presents a summary of the results from the survey.

Research context

The study reported in this article was conducted with students at Kith Meng Brasat High School, a public high school located in Bati district, Takeo province, Cambodia. There are six grade levels (Grades 7 to 12) in this high school. In the academic year 2020-2021, there are 850 students (500 are females) and 33 teachers (14 are females). There are two Grade 12 classes which have 85 students, 45 (52%) of whom are females. These students are preparing for their high school national exam which is supposed to take place in December 2021.

During the pandemic, all classes are moved online, so students continue their education through online learning by using online platforms such as Zoom and Google Meet. Teachers also use Telegram groups as a means of sending resources and other necessary documents to their students.

Research objectives

This survey study was conducted with Grade 12 students at Kith Meng Brasat High School. The survey explored the challenges these students faced during the pandemic. It also aimed to seek possible solutions to overcome these problems from the perspectives of high school students.

The objectives of the study are as follows:

1. To find out the challenges of online learning encountered by high school students.
2. To explore the most appropriate solutions to the problems raised by high school students.

Research questions

The study aims to answer the following research questions:

1. What are the challenges of online learning faced by Grade 12 students at Kith Meng Brasat High School?
2. What are the appropriate solutions to the problems raised by these students?

Literature review

The World Health Organization (WHO) declared a new coronavirus that causes COVID-19 as a pandemic in March 2020. WHO also urged nations all over the world to implement strict restrictions on the movement of people in order to prevent the viral spread. Such restrictions, including the practice of social distancing, mean people need to stay home to work or study from home. As schools were closed and classes were offered online, the need for alternative

modes of learning and teaching has increased, which led to the rise of online learning.

Online learning is "a form of distance education that involves using technology as the mediator of the learning process, and that teaching is entirely delivered through the internet" (Heng & Sol, 2020, p. 3). In terms of both pedagogy and technology, this method of learning is still in its infancy in many developing countries such as Cambodia. However, online or mobile learning represents a new age in learning and educational development, although there are challenges and limitations associated with it (Alanezi & AlAzwani, 2020; Heng & Sol, 2020).

Alanezi and AlAzwani (2020) conducted a study to investigate the implementation of mobile learning in Kuwait. The findings demonstrated a favorable attitude toward the use of mobile learning in higher education. The researchers suggested that mobile learning should be incorporated into mainstream classes.

In another study, Yildiz (2020) conducted a meta-analysis on emerging developments in educational technology from 2015 to 2020. The results showed that incorporating educational technologies into teaching and learning was a good idea. Students enjoyed online learning because even though they could not fully learn everything like they did in physical classes, online learning offered them the opportunity to continue learning during the pandemic.

However, it is important to consider the challenges of online learning during the pandemic. Alturise (2020) explored learners and instructors' satisfaction with an online learning model using the Blackboard interface. The study showed that while online learning was a step forward in education, further efforts were needed to expand online learning applications, as they played a crucial role in the success of online learning.

Another study by Rajab et al. (2020) found that issues related to communication, appraisal, virtual education expertise, technology usage, resources, time management, anxiety, and COVID-19 tensions were the difficulties associated with online learning.

Likewise, a study by Mahyoob (2020) showed that the majority of English as Foreign Language (EFL) students in Saudi Arabia were not dissatisfied with their online learning because they were not making the desired progress in language learning. Specifically, it was found that students could not learn well in terms of pronunciation, morphemes, and phonemes.

Another study on the effect of the pandemic on entrepreneurship education showed that more resources such as extra-curricular and co-curricular pedagogical expansion and experimentation were needed to improve the process of online learning and teaching (Liguori & Winkler, 2020).

Heng and Sol (2020) noted that the COVID-19 pandemic has wreaked havoc on every aspect of society. As face-to-face classes have been phased out and replaced by online classes, there was the growth of online learning which has allowed students to continue their education. However, there are many challenges, including "technological infrastructure, digital competence, socio-economic factors, assessment, supervision, heavy workload, and compatibility" (Heng & Sol, 2020, p. 5).

However, Heng (2020) argued that COVID-19 was a silver lining for Cambodia's education sector as it brought about a shift to online learning, which offered a once-in-a-lifetime chance for the country to push for the digital transformation of its education system. Heng (2021) also argued that COVID-19 served as a catalyst for the digital transformation of Cambodian education. Despite the opportunities triggered by COVID-19, the challenges it has caused to educational stakeholders are immense. This article presents a summary of the results from a survey with Grade 12 students that attempts to shed light on the challenges Cambodian high school students face while continuing their education via online learning.

Methodology

This study employed a survey design to explore the challenges that Grade 12 students at Kith Meng Brasat High School face while engaging in online learning. Because of the spread of COVID-19 in the community, face-to-face data collection was not possible. Therefore, Google Form was used as a means of data collection. Before the questionnaire survey was administered to the

students, the researcher surveyed a group of five students by asking them questions via Zoom App. This process was conducted to contextualize the challenging problems that students have encountered in order to inform the design of the questionnaire. The questionnaire which was administered via the Google Forms was sent to the students through a Telegram group of which the researcher and the participants were members.

Research participants

The survey involved 80 Grade 12 students at Kith Meng Brasat High School. These students were between 16 to 20 years old. There were 35 males and 45 females. They were from different socioeconomic backgrounds ranging from poor to rich. They had been in Grade 12 for six months. However, since the beginning of the academic year, they had been learning via online classes, enabled by Zoom, Google Meet, Telegram and Facebook Messenger.

Research instrument

The questionnaire used in this study contained three sections. The first section was about demographic information such as students' names, gender, and age range. The second section aimed to examine the challenges of online learning. It consisted of 10 items (see Table 2). The third section contained an optional comment space in which students could write their suggestions on how to improve their online learning experience. It took about 25 minutes to complete the questionnaire, and all the 80 students returned their completed questionnaires after three days. There were only 70 students who responded to the third section and offered their suggestions in the comment space.

Data analysis

The researcher analyzed the survey data manually by using Microsoft Excel to calculate the number of each item filled out by the respondents. The analysis focused on the frequency of responses by the student participants.

Results

Participants' profile

As Table 1 shows, 35 (44%) of the participants were males, and 45 (56%) were females. Their age ranged from 16 to 20. All of them were Grade 12 students. The total number of the students who joined the survey was 80 (a 100% response rate).

Table 1. *Participants' profile (n=80)*

Demographics	Value	N	Frequency (%)
Gender	Male	35	44
	Female	45	56
Age	16-20	80	100
Grade	12	80	100

Key challenges of online learning

Key challenges of online learning are presented in Table 2. Overall, 40 students (50% of the respondents) chose limited internet connection as the most challenging problem for them when they studied online. The second most challenging problem was the many interruptions they had to cope with when learning from home. Ten (12.75%) students selected this challenge. Another challenge that was selected by six participants was related to the fact that some of their teachers did not teach them during the pandemic. Other challenges that were selected by five students each included the difficulty in speaking and listening to lectures or discussion during online classes; the lack of smartphones; and the lack of money to recharge their phone credits to use the internet.

Table 2. *Key challenges of online learning (n = 80)*

No.	Items	N	Frequency (%)
1	I have limited internet connection.	40	50.00
2	I face many interruptions when learning at home.	10	12.50
3	Some teachers do not teach.	6	7.50
4	It is hard to speak or listen in online classes.	5	6.25

5	I do not have a smartphone.	5	6.25
6	I do not have money to recharge phone credits.	5	6.25
7	There is a lack of concise explanations from the teachers.	3	3.75
8	My parents do not allow me to use a phone.	2	2.50
9	I am afraid of lightning.	2	2.50
10	I have eye problems because of exposure to bright light.	2	2.50
	Total	80	100

How to solve the problems

The third section of the questionnaire asked the students to write their suggestions to improve their online learning experience. As seen in Table 3, 60 students (about 85%) wrote about the need to improve the internet connection. They suggested the Ministry of Education, Youth and Sport and other stakeholders to address the issue of limited internet connection. Five students (about 7%) suggested that their teachers should teach them by using different methods, not to repeat the same method again and again. Interestingly, five more students blamed some of their teachers who did not teach them. They suggested that all teachers in every subject should teach them regularly.

Table 3. *How to solve the problems (n=70)*

No.	Items	N	Frequency (%)
1	Improving internet connection	60	85.71
2	Using different teaching methods	5	7.14
3	Requesting all teachers to teach them	5	7.14
	Total	70	100

Discussion

This study aims to investigate the challenges faced by high school students who continue their education via online learning. As the results show, some of the challenges were related to the limited access to the internet, interruptions when learning at home, lack of access to smartphones for learning and lack of money to recharge phone credits to access the internet using mobile data. The results

suggest that many students could not learn well because of the limited internet connection which created a barrier preventing them from taking full advantage of online learning.

The results regarding the lack of access to the internet is in line with a study by Rajab et al. (2020) which found that technology resources were still limited for online learning in Saudi Arabia. Additionally, the results of this study corroborate Mahyoob (2020) who found that Saudi Arabian students faced technological, academic, and communication difficulties when learning online. This study also supports Sun (2020) who noted that Cambodian students in rural areas faced a key challenge regarding the lack of digital devices to access online video lessons. Likewise, the study confirms reports in the media about educational inequalities faced by students in rural and remote areas of Cambodia (see Cambodianess, 2020; Post, 2021).

The results regarding the challenges related to the lack of money to recharge their phone credits, fear of lightning, eye problems, interruptions at home and parental restrictions on phone usage seem to support what Heng and Sol (2020) noted in their article. That is, there were concerns about "learner isolation, frustration, pressure, extra expenses, health issues, and increased exposure to cyberbullying and online violence" (p. 10).

Conclusion

The present study has explored the challenges faced by Grade 12 students at Kith Meng Brasat High School in Krangbroteal village, Doung commune, Bati district, Takeo province, Cambodia. The study reveals that the major challenges encountered by high school students in online learning are related to technical issues, particularly the lack of access to the internet. This problem was raised by half of the respondents. Concerning online communication issues, some students could not effectively interact with their teachers and peers during virtual classes. As the results show, some students found it hard to participate in online classes. They could not listen to lectures and discussion well. Some even did not have a suitable digital device such as smartphones to participate in online learning effectively. There were other challenges as seen in Table 2.

The results reported in this study can be used as empirical evidence to inform policymakers, the Education Ministry, and other concerned stakeholders to consider appropriate measures to solve these problems. The issue of limited internet connection must receive full attention from the Education Ministry and concerned stakeholders. They need to address it quickly and effectively. Moreover, as Heng and Sol (2020) argued, educational institutions should establish and improve online learning platforms, as well as enhance the internet access and online library resources to support students' online learning. Training and orientation programs on online teaching and learning tools and tactics should also be delivered on a regular basis so that students, teachers, and staff can have a better understanding of the various components and intricacies of online education (Heng and Sol, 2020). Heng's (2021) recommendations regarding the digital transformation of Cambodian education should also be considered.

In conclusion, in this difficult time, public high school principals should make special efforts to inform students' parents and guardians about the advantages of online learning which is the only alternative to physical classes during the pandemic. School principals should also collaborate with village chiefs, students' parents, and people in the community to facilitate the process of online learning to make it more accessible to students so that they can benefit from this mode of learning. It is also recommended that future research should be undertaken to understand teachers' views and experiences conducting online classes during the pandemic. Research that examines the attitudes of people in the community toward online learning may also be worthwhile.

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