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Master's Thesis of Education

**A Case Study on the Impact of
COVID-19 on Cambodian Teachers**

코로나-19가 캄보디아 교사에게 미친 영향에
관한 사례연구

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Abstract

A Case Study on the Impact of COVID-19 on Cambodian Teachers

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Since 1990, the international society has continued to improve the conditions of education all around the world. Educational goals of the international society were implemented along with the goals such as the Education for All (EFA), the Millennium Development Goals (MDGs), and the Sustainable Development Goals (SDGs). However, as Coronavirus Disease-19 (COVID-19) spread around the world, education in all countries has been negatively affected. Then there was a crisis in the education system, and it has become a greater threat to developing countries that lack infrastructure and finances.

This study begins with the questions about what difficulties Cambodian teachers faced in crisis and how they were treated. It aims to reveal the situation of teachers in Cambodian society based on the understanding of the difficulties of teachers due to COVID-19 and the government's support for teachers. The purpose of the study is to reveal the challenges of Cambodian teachers and problems that threaten the quality

education in crisis situations.

The research was conducted through case study methods. Data were collected through teacher interviews and public officials of the Ministry of Education. The main data are interviews with Cambodian teachers. The findings were embodied and analyzed with the interviews and reports.

The results that can be found through this study are as follows: first, common difficulties for Cambodian teachers include online class operation and adaptation, student management, lack of adequate Internet provision, and excessive work. The difficulties caused by COVID-19 imposed more pressure and stress on teachers than before. Teachers tried to endure these problems.

Second, the support for Cambodian teachers was not enough in budget support, teacher education, and salary. The learning materials was insufficient for general public school teachers. Ministry of Education, Youth, and Sport (MoEYS) provided education to teachers, but not all of them could participate. The teachers who are better at English had a higher opportunity of receiving this education program. They taught others how to teach in online class. It shows there is a need to assist the most teachers.

Third, there was a gap between the plans and actions of MoEYS. It draws up a plan on how to react to COVID-19, stressing the importance of support for teachers. As shown in the plan, teacher education and online education support were provided. However, there was a lack of budget and devices given. In addition, support for health products has become a priority rather than teachers' needs. Therefore, salaries were not raised, and the teachers had to suffered financial difficulties.

Cambodia made efforts to respond to the educational crisis along with the announcement of various policies. However, it is still not practiced as much as emphasized in the policy. The results of this study showed the difficulties of teachers. The development of education emphasized, which Cambodia is aiming to reach, cannot be fulfilled when there is an

insufficient support on teachers. Therefore, along with changes in society's perception of teachers, appropriate and equitable support and treatment for them should be practiced.

Keyword : Impact, COVID-19, Teachers, Quality of Education, Cambodia

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Chapter 1. Introduction

1.1. Background

Since 1990, the international society has made great efforts to improve the conditions of education all around the world. The international development cooperation agendas, the Education for All (EFA), the Millennium Development Goal (MDG) 2, and the Sustainable Development Goal (SDG) 4 aim to ensure equal educational opportunities and inclusive quality education (UNESCO, 2015; UNESCO, 2017). International society emphasized the importance of education while pursuing many goals, and a lot of investment and effort have been made in education. These goals have promoted the national policies for access to educational opportunities, and the enrollment rate has increased in developing countries (Lewin & Sabates, 2011). Under these educational goals, the international society and many countries supported education for development, poverty reduction, and increasing human rights.

However, Coronavirus Disease-19 (COVID-19) emerged in 2019 and destroyed efforts for the EFA, the MDGs, and the SDGs. As COVID-19 spread all over the world, every area of society faced problems. Not only did COVID-19 stop the society, but also caused the worst situation in education. The impact of COVID-19 on education was reported by the United Nations Education, Scientific and Cultural Organization (UNESCO), World Bank, and the United Nations International Children's Emergency Fund (UNICEF).

UNESCO (2020c) reported on the duration of school closure data. The total duration of full and partial school closures in most countries was over 10 weeks. Among the 210 countries, schools in 83 countries fully or partially closed for over 41 weeks. COVID-19 has a huge impact on schooling all over the world. Most countries closed educational institutions to protect their children. Children were unable to go to school and had to adapt to the new educational system (Em, 2021). Governments all around the world tried to change the learning system from traditional learning to distance learning to prevent the absence of education (Daniel, 2020). Both teachers and students had a difficult time adapting to the distance education. It has had a serious impact on education globally. The negative effects of COVID-19 were more fatal to developing countries (UNESCO, 2021a). The governments' abilities make different quality of distance education. The pandemic situation expands the gap between developed countries and developing countries (Tadesse & Muluye, 2020).

The developing countries, who tend to lack resources, had more serious problems. Most developing countries had a hard time protecting people because they did not have enough finance, infrastructure, health products, technologies and clean water compared to developed countries (Corlatean, 2020). Despite the crisis, developed countries have recovered to some extent by finding and implementing solutions. Developing countries are also trying to find solutions within their countries, but it is difficult to recover quickly due to a lack of resources. The same phenomenon is manifested in the educational context. In developing countries, there is a shortage of learning materials, and internet connection is unstable. They are behind in technology and have limited access to electricity (Subedi et al, 2020). Compared to the developed countries, online education has rarely been conducted. When all classes were switched online after the outbreak of COVID-19, there was a bigger problem in providing education in

developing countries (Zarei & Mohammadi, 2021). It is crucial to study how developing countries get through this difficult time.

In post-COVID-19, especially in fields of education, not only learners but also teachers had to go through difficult situations after schools have closed. Teachers had to learn how to use online classes and had to take care of children. They were given more work because of COVID-19. It could be hard for teachers in developing countries, so it is important to be understanding of their situation and support them.

Among the developing countries, Cambodia emphasizes the importance of education as intellectuals and educators were slaughtered after the Khmer Rouge period. Cambodia also has a goal to move to the status of upper-middle-income country by 2030 in phase 4 of the Rectangular Strategy for national development (MoEYS, 2019b). The government prioritized human resources for supporting economic growth of the country. Cambodia's Ministry of Education Youth and Sports (MoEYS) announced its Education Strategic Plan (ESP) in 2019, the 2030 Roadmap of Cambodia's Sustainable Development Goal 4, and Cambodia Education Response Plan to COVID-19 Pandemic (ERP) to achieve the quality of education (MoEYS, 2019b; MoEYS, 2019c; MoEYS, 2020a).

In the ERP, online education support and teacher support policies are presented. It can be seen that even in crisis situations, discussions for the educational field and suggestions for solutions are presented. In Cambodia, about 13,482 schools were closed in March 2020, and 3.2 million students were affected due to the closure of schools (UNICEF, 2021). The duration of full and partial school closure was 64 weeks, and full school closure was 40 weeks until 30 November 2021.¹ Many researches examine how students

¹ UNESCO. Total duration of school closures. Retrieved 31 May 2022, from <https://en.unesco.org/covid19/educationresponse>

were affected in their learning (Duraku & Hoxha, 2020; Em, 2021). There are researches on the impact of COVID-19 to students, but it is also necessary to study how Cambodian teachers were affected because of the pandemic. By exploring the situations of the teachers in Cambodia, answers can be found on how they endure difficulties and whether government support was enough. It is necessary to understand how COVID-19 has affected Cambodian teachers and how Cambodian government supports teachers as they emphasized.

1.2. Need of Research

Quality of education do not exceed the quality of teachers. Many researchers agreed with the importance of quality of teachers (UNESCO, 2006; Park, 2015; Clarke, 2018). Teachers are recognized as important agency for quality education. It depends on how teachers provide education. As COVID-19 has been challenge to education, the nation have to change the teaching method, and operation of education. Some researches emphasized that the role of teacher is important because they were the ones who implemented distance learning (Alhumaid et al, 2020; Aytaç, 2021). The role of teachers is important for quality education and it is more emphasized to provide proper education for every student during an educational crisis (Duraku & Hoxha, 2020). Teachers support students to continue their learning and the education system to be maintained.

In an educational crisis, it is necessary to research about challenges of teachers and understand their school life because they provide education. By understanding the difficulties of teachers, the problems that threaten to ensure quality education can be identified. Also, it can be checked how the government supports quality education. This is also an important issue in Cambodia, because after the Khmer Rouge regime period passed, the Cambodian government emphasized the importance of education. They

announced multiple education development policies (MoEYS, 2019b; MoEYS, 2019c, MoEYS, 2020a; MoEYS, 2020d) and policies toward teachers (MoEYS, 2015; MoEYS, 2017). It shows that Cambodia has interested in quality education and teachers. Thus, the situation and treatment of Cambodian teacher need to be analyzed with ‘Quality Education Framework’ suggested by UNESCO (2004).

However, there are not many reports on whether the government implemented its plans during COVID-19. Despite the importance of education, existing studies on education in Cambodia are limited. In addition, there is no in-depth study on what Cambodian teachers have experienced since COVID-19. It is necessary to know what the difficulties of teachers are and how they endure them in the Cambodian context. By exploring the support from government, I can evaluate whether the supports were adequately implemented.

This study can reveal the situation of Cambodian teachers in Cambodia education system. It is crucial to explore how Cambodian teachers are treated and how the government implemented its education plan for them. It will helpful to identify the problem and to learn how to implement solutions in an educational crisis. It is necessary to research the support for teachers so that better treatment for teachers can be ensured. This research can contribute to find the gap between policy and practice and suggest the effort to reduce the gap. By studying the teachers’ situation and treatment in education, it can show the positions of teachers in Cambodian society. It has been more than two years since the pandemic outbreak, but we still live in a pandemic situation. It is still important to understand the impact it had on Cambodian teachers even in the pandemic.

1.3. Purpose of Research

Based on the need of research, the purpose of this study is to

understand the situation of Cambodian teachers and reveal the problems that threaten the quality education in Cambodia since the outbreak of COVID-19. This study will examine what are the difficulties of teachers are facing in urban and rural area in Cambodia. Through this, it is possible to find out the difficulties experienced by Cambodian teachers. This study focuses to understand the current situations of teachers and to find how they are treated in an education crisis. By examining the situations of teachers, we can infer what it means to live as a teaching profession in Cambodia. It will also be the evidence to improve Cambodian teachers' status in a pandemic situation.

To achieve the research purpose, the following research question will be examined:

- (1) What are the difficulties Cambodian teachers experienced due to COVID-19?

Chapter 2. Literature Review

2.1. Teachers in Developing Countries

The belief that the quality of teachers defines the quality of education in developing countries has been agreed (UNESCO, 2006; Park, 2015; Kim, 2017; Clarke, 2018). The SDG 4 reinforces the right to education for all people in the global society with the goal of “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (UNESCO, 2017, p. 7). In order to achieve quality and access to education, there is a consensus around the world that a qualified teacher is needed. The Incheon Declaration identifies teachers as the key to achieving all of the Education 2030 agenda (UNESCO, 2016). In recent educational development cooperation, “teachers” are emphasized as a key to sustainable education development rather than physical investment and aid support (Kim, 2017). Looking at the studies on teachers in developing countries so far, there are many studies on topics such as teacher education, teacher salary, and teacher status.

First, there is a vast amount of research on teacher education in developing countries. The research on the quality of teachers has been actively conducted since the 1990s when the importance of quality education and teachers emerged. Based on a global survey, one third of teachers could access Continuous Professional Learning and Development,

and 77% of teachers answered that their education has low quality and value (Stromquist, 2018). The low quality of teacher education makes teachers have low qualifications. As the developing countries face a lack of teachers, low qualified teachers have increased (Chudgar et al, 2014). These teachers are known as ‘contract teachers’, so this form of hiring creates problems like professional status and teacher motivation. Increasing teacher quality is needed in the long-term rather than relying on economically efficient hiring (Chudgar et al, 2014). The demand for qualified teachers has increased research about teacher education. Kim (2017) focused on Cambodia’s primary education environment and teachers. It revealed the poor education environments, low quality of teachers, and vulnerability of the teacher training system. The researcher argued that providing training programs based on the needs of teachers and establishing an institutional foundation for a quality improvement system are needed to improve Cambodian primary education. Some researchers reviewed the teacher education situation of developing countries such as the challenges of Mozambique’s teacher education (Yoo & Park, 2015) and issues regarding the development of teacher professionalism in the structural, economic, and socio-cultural aspect in Cambodia (Tan & Ng, 2012), examining the how teacher capacity was developed under the cascade model (King, 2018).

Second, teacher’s salary was emerged as a problem that must be improved in developing countries. According to UNESCO’s (2016) report, teachers’ wages are still low compared to those of other professions of similar qualifications. The research investigates the relationship between incentives and teacher motivation in Cambodia (Fukao, 2016). The wages are paid without considering the teacher's experience or ability, resulting in a poor sense of mission and satisfaction for the teaching profession. This is why teachers are not motivated to develop their expertise. The education budgets and support for teachers are insufficient to implement quality

educational goals (Tan & Ng, 2012). According to Cambodia Independent Teachers Association (2014), 93% of teachers have second jobs to survive. As the wages of teachers are overdue, they have no choice but to rely on different jobs. It weakens the enthusiasm and expertise for teaching, causing the quality of teaching to be lowered.

Third, the global society had interest in teacher status. Since 1996, ILO/UNESCO released reports concerning the status of teachers (UNESCO, 2006). In Saudi Arabia, teachers cannot participate in curriculum development, so they were marginalized in the decision-making process (Alnefaie, 2016). The Ministry of Education treated teachers as implementers of curriculum, so teachers have no choice but to follow the designed program. The researcher addresses the problem of power relation in the education system and states that it needs time to change this task. In addition, some studies review how communities raise the social status of teachers, addressing teachers to have high level of well-being and confidence for effective teaching and learning (Schleicher, 2018). This research stresses that valuing teachers and cooperating with them is good for the quality of education. Stromquist (2018) also describes the difficulties of teachers and overall working conditions of teachers. It shows that lots of teachers are employed in unstable situations, revealing the reality of teachers' status around the world. Part-time contracts are increasing, and respect and support for one of the most essential professions is increasingly lacking. Stable teacher recruitment and retention are key factors of ensuring education opportunities for children. Some studies revealed that increasing teachers' socioeconomic status (SES) has a positive impact on teachers job satisfaction, morale, or commitment in school (Werang et al, 2017). Providing programs to increase the teachers' SES is important for developing countries.

I explored the research about the teachers in developing countries.

There is a lot of research in teacher education, salary, and status. These research reports examine the situation of teachers in the education system and the difficulties of teachers. According to literature review, it is well known of the lack of teacher education, insufficient salary, and low status of teachers. It is similar to my study because it deals with the poor situation of teachers and difficulties. However, this study is different from other research because it explores the situation and treatment faced by teachers during an educational crisis. It will focus on the Cambodian teachers' situation in Pandemic.

2.2. Teachers during COVID-19

After the outbreak of COVID-19, researches about strategy for schools, government policy, and challenges in the learning environment were studied. In terms of teachers, there are researches on the perception and response of online learning, difficulties in providing online classes, and instruction of support for teachers and education in developing countries. First, many researchers studied the perception and response of online learning. Aliyyah et al (2020) explained the perception of Indonesian teachers in online learning programs and readiness of technology. It revealed that the success of online learning is depends on the cooperation between teachers, parents, and schools. Almanthari et al (2020) also researched the opinions of secondary school mathematics teachers on E-learning implementation in Indonesia. Teachers transit face-to-face classes to online classes. The shift in education was challenging for teachers who are familiar with traditional education. Rahayu & Wirza (2020) investigated teachers' perceptions of online learning. In this research, teachers have a positive perception of the online learning systems, but roughly half of the teachers didn't agree with its effectiveness. Other research explores the response of secondary school teachers on school closure in Afghanistan, Libya, and Palestine (Khlaif et al, 2021). As the COVID-19 pandemic had a

negative impact on the educational system, the government switched from face-to-face education to distance education. Teachers are asked to develop their technical ability to provide online learning. Thus, teachers were provided online class education or taught themselves to use platforms for online classes. They tried to develop their skills to provide online learning and cooperated with local communities and established community centers for poor students' learning (Khlaif et al, 2021).

Second, studies reviewed the impact and challenges of COVID-19 on the education system, students, parents, and teachers (Duraku & Hoxha, 2020; Tadesse & Muluye, 2020). Providing online learning needs preparations such as teacher education, learning material and internet infrastructure. However, most southeast Asia countries lack of teacher education and learning materials and online infrastructure (UNESCO, 2021a). There are big gaps in learning with ICT technology and the internet between developed and developing countries (Tadesse & Muluye, 2020). Developing countries are more negatively affected, and teachers need training to learn skills for distance learning. Azhari & Fajri (2021) explored the challenges such as limited internet access, the low capacity of teachers, and absences of guidelines in Indonesia. Other researchers explored the benefits and challenges of teachers in providing online education (Oyedotun, 2020; Talidong & Toquero, 2021). Challenges include technical problems in teaching, learning materials, and learning environment. Bautista Jr et al (2021) also explored supports and challenges teachers faced and support they need in online education in the Philippines. Teachers are looking for more financial, emotional support and professional development (Bautista Jr et al, 2021). As COVID-19 affected education system, developing countries asked their teachers to implement online learning. Several researches explored the challenges of COVID-19 and emphasized the importance of teachers in educational crisis (Alhumaid et al, 2020; Duraku & Hoxha,

2020; Aytaç, 2021). It shows how teachers are crucial to provide online learning and to support education system during pandemic.

Third, Many studies are focused on response plan, strategy, and explaining the situation. Most of governments have no time to prepare for online learning because of unexpected changes, so research suggests the instructions for teachers and educational organization, and officials. UNESCO published reports about the response to COVID-19. The reports showed distance learning strategies and advice for policy interventions (UNESCO, 2020a; UNESCO, 2020b). Another study provided an overview of the challenges and impact on education during COVID-19 (UNESCO, 2021a). Also, another study reviewed the responses in Asia and South America and drew lessons for developing countries to respond to COVID-19 (Chowdhury & Jomo, 2020). It stressed responsible government action and public cooperation as a success factor to escape from crisis. The role of the government's quick action is important for an effective response. Daniel (2020) provided guidelines on how to prepare for education including preparations for the education system, needs of students, curricula, and assessment.

In terms of Cambodia, there are researches on the impact of COVID-19 and assessment on education (Sothy, 2021; UNICEF, 2021). Sothy (2021) reviewed that teachers are having trouble with adapting ICT skills, lack of delivery of learning makes the quality of education low, and implementation of ESP is disrupted. Other research focused on the major reforms in the Cambodian education system and the challenges caused by COVID-19 (Heng, 2021). The recommendation for utilizing ICT is also suggested. Cambodian teachers adopted online teaching without training and experience (Heng et al, 2020). The lack of tools and knowledge makes it difficult for teachers. The secondary school teachers' readiness for online teaching also studied during COVID-19 (Phal et al, 2022). Providing online

learning remains as an inconvenient task for teachers. It is a challenge for the Cambodian education system to shift from in-person classes to online learning because of lack of the internet access. COVID-19 derived digital transformation of education in Cambodia. There are many barriers to the implementation of online teaching such as limited teachers' ICT capacity, increased teachers' workload, and lack of resources. However, Cambodian students and teachers are adapting to online education. The COVID-19 pandemic made schools to shift classes online, and MoEYS have to offer lessons on television or other platforms.

In conclusion, many research focused on the perception of online learning, the challenges of teachers, and support for teachers and education in developing countries. This study is similar to other research that explores the difficulties and support of teachers. However, it is different in the point that it helps to understand the deeper situation of Cambodian teachers and how they respond to the challenges of providing quality education. Most of the studies and reports in Cambodia researched the strategy and response to COVID-19 (Heng, 2021; MoEYS, 2020d; UNICEF, 2021). However, there is little research on the impact of COVID-19 on Cambodian teachers in the pandemic situation. Reviewing teachers' situations in crisis will reveal the phenomenon more directly. It is meaningful to reveal the situation of teachers through the experience in the Cambodia context. Also, it can identify how government policy was implemented for teachers and how it was different as they emphasized. It can contribute to know the support for Cambodian teachers.

2.3. Overview of the Cambodian Education System

2.3.1. Historical Timeline of Cambodia's Education System

This study focuses on the situation of Cambodian teachers. It is needed to explore the history and context of the Cambodian education

system. It will help to understand the flow followed by the historical background of the education sector and the Cambodian teachers' situation. This review will contain the history from pre-colonialism to the present.

Traditional Cambodian Education

Cambodia is a country that believes in Buddhism in Southeast Asia, and traditional education had been provided in local Wat such as temples or Pagodas by monks and priests (Bilodeau et al, 1995). Students in Cambodia were educated with Buddhist ethics. The traditional Wat school curriculum focuses on the "reading and writing Khmer, principles of Buddhism, rules of propriety, some arithmetic, and various manual arts" (Gyallay-Pap, 1989, p. 258). Only Cambodian males could learn in schools, so there was discrimination in education against women. Before 1863, there was no standardization in education system (MoEYS, 2017).

French Protectorate (1863-1953)

In the period of French protectorate, Cambodia education experienced huge changes. At first, the French ignored the traditional Wat schools by monks and priests in male population (Collins, 2008). The French neglected Cambodian education and did not provide a formal education system because education was a barrier in the colonial period (Dy, 2004). Few schools were open only for some children of French residents, and they tried to modernize the traditional school in Cambodia because it did not fit the formal schooling of the French (Ayres, 2000).

After that, the French operated a French model with traditional education model. Primary education was divided into two cycles of three years each and secondary education was also divided into two cycles (MoEYS, 2017). France focused on their language education and was interested in educating elite male Cambodians for their colonial support as

administrators (Collins, 2008). By the end of the colonial period, the French made the foundation of the education system.

Post-independence period (1954-1969)

From 1954 to 1969, when Cambodia gained independence from France, Cambodia made an effort to expand formal education. In general, the French implemented a part of the Westernized curriculum into the traditional schools (Crowley, 2010). The French established the intellectual foundation of the education system. Cambodian people had the belief that education could increase their economic status, so demand for education increased (Ayres, 2000). Mass education was operated based on the French model. During the reign of King Sihanouk, the Cambodian education system expanded impressively. King Sihanouk built a number of schools. The physical infrastructure surpassed the human elements in the education system. The human resources and investment were concentrated in urban areas where rich people could pay even though most of the people live in rural areas (Verkoren, 2005). The education system focused on the urban centers of the country; therefore, it was hard to reach the rural population (Duggan, 1996; Dy, 2004). The government was not ready to provide formal education because there was still a lack of trained personnel for schools, supplies to provide for the schools, and finance (Crowley, 2010). The quantity of schools does not ensure to quality of education. The government increased the number of teaching professions and also increased the teacher salary to secure quality teachers (Crowley, 2010).

Khmer Rouge regime (1975-1979)

The expansion of education was disturbed in the early 1970s. Cambodia was damaged by both civil war with the Khmers Rouge and the aftereffect of the Vietnam War. In 1975, the Khmer Rouge, leader Pol Pot, defeated the government and established a communist government. The

expansion of the education sector was stopped in this period. Among their population of 7 million population, almost 1.7 million of them died, and 75~80 % of teachers died (Kiernan, 1982; Tan & Ng, 2012). The Khmer Rouge was a group of agricultural communists who wanted to eliminate educated intellectuals (Crowley, 2010). According to UNESCO (1991), around 80% of higher education students and 67% of primary and secondary students were killed. As a result, only few educated elites and teachers survived. There was a huge loss of educational expertise and intellectuals.

During the Khmer Rouge regime period, infrastructure and public education were destroyed. The improvements in literacy rate disappeared. Most of the facilities and technologies related to education, such as textbooks, and educational aids have been devastated (Seo, 2018). The administration was almost paralyzed. Every school was closed and educated people and teachers were slaughtered or fled to foreign countries (Kim, 2017). At that time, public education was an obstacle to the Communist Revolution, and learning was considered a rebellion. They destroyed many educational infrastructure and human capital. It led the country to become an agrarian society without high-skilled people. The Khmer Rouge deprived people of pursuing knowledge, making them easy to control. Education in Cambodia totally was totally stopped. The loss of intellectuals was an obstacle to the development of Cambodia.

Reconstruction (Post 1979)

In 1979, the Vietnamese came to Cambodia. There were few teachers in Cambodia. Many people come back to the urban area and over 5,000 primary schools were opened with 21,000 teachers in the primary schools by 1980 as reported in ICORC/UNICEF report (Duggan, 1996). Vietnamese adopted the maxim, “those who know little teach those who know nothing” to educate manpower for the government (Kim, 2017). Even though the

development in education was slow because of a lack of teachers, lack of schools, low quality education, and high dropout rate, the Vietnamese tried to provide an in-service training program to provide essential skills for teachers (Duggan 1996; Dy 2004).

In 1980, 37,000 teachers were trained by 1981 (Kiernan 1982, p. 179). Even though teachers received training, it was not enough for qualitative improvement. In 1989, primary school enrollment increased to 1.3 million and lower secondary school enrollment increased to 24 million (Dy 2004). In this period, new problems emerged regarding quality education such as unqualified teachers, an absence of curriculum, and high dropout rates at all levels (Duggan, 1996). However, education received little attention as agriculture was the dominant interest to the population.

New Kingdom of Cambodia (1993 to the Present)

The 1993 Constitution of Cambodia article 66 states to establish a standardized educational system for equal opportunity for all people.² Since the 1990s, UNICEF, Red Cross, and UNESCO helped to rebuild institutions in Cambodia. The UN, NGOs, and other international providers funded 10 educational programs in 1993 (Duggan, 1996). Advancements have been made because Cambodia received aid from external donors such as World Bank, UNICEF and UNESCO agencies. Despite the effort to improve education with other external donors, the education problems like repetition in lower grades and dropout rates did not improve. Even though billions of dollars of aid from foreign agencies have been provided to Cambodian education, improvement of quality education were not visible as expected.

² Cambodia Constitution: Chapter VI

Article 66: The State shall establish a comprehensive and standardized educational system throughout the country which shall guarantee the principles of freedom to operate educational institutions and equal access to education in order to ensure that all citizens have an equal opportunity to earn a living.

Improvement in infrastructure and teacher training and pay can lead to advancement in education. The development of quality education with quality educational facilities is helpful for teachers and students (Booth, 2014).

MoEYS involved in UNESCO's EFA program to achieve the goal for equal access to education by 2015. The Cambodian education system has made great efforts to improve the quality of education. However, urban/rural gaps, gender gaps, and lack of quality education remain. The Cambodian government also has identified equitable access and quality education as major goals in the education sector. Cambodia country has experienced an internal and external crisis, so it had the problem to develop the national economy and education. As a lot of intellectuals were killed, it caused human capital loss. This is the reason why the Cambodian government made education goals and plans for their education reconstruction.

2.3.2. Education Policy and System

According to Article 65 and 68 of the Cambodian Constitution, the government emphasizes the access to education for all citizens and the quality of education.³ MoEYS has published the Education Strategy Plan (ESP) since 2001. The vision of MoEYS is to develop human resources and a knowledge-based society (MoEYS, 2019b). The immediate goal is to give equal access to quality education for every child and youth in Cambodia. Medium-term policies are “1) to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all, and 2) to ensure effective leadership and management of education staff at all levels”

³ Cambodia Constitution: Chapter VI

Article 65: The State shall protect and promote citizens' rights to quality education at all levels and shall take all measures, step by step, to make quality education available to all citizens.

Article 68: The State shall provide free primary and secondary education to all citizens in public schools. Citizens shall receive education for at least 9 years.

(MoEYS, 2019b). The most important goal of MoEYS is to have equal educational opportunities for all Cambodian children and adolescents. To sum up, the priorities of education policy are ensuring education and providing quality education. MoEYS approved Cambodia's SDG 4, Education 2030 roadmap in early 2019 to ensure comprehensive and equitable quality education and to promote lifelong learning opportunities for all (MoEYS, 2019c).

Cambodia's school system is a twelve-year system. It is divided into 6 years in primary school, 3 years in lower secondary school, and 3 years in upper secondary school. Compulsory education is available until ninth grade (Seo, 2018). In Cambodia's curriculum, Khmer language, mathematics, science, and society are major subjects. The four subjects are organized in all the curriculums in basic education (Kim, 2016).

When students complete lower secondary school, they must take a national exam. If they pass the exam, they can go to upper secondary school with a certificate of basic education. After completing upper secondary school, students need to take the 'National Grade 12 Exam or BacII Exam.' The result is divided into six grades (A-F), and it is divided again into pass (A-E) and fail (F) (Sreng, 2018). In recent years, Cambodia adopted an anti-cheating measure in National Examination to improve the education system (Heng et al, 2020).

MoEYS made an effort to improve the quality of teaching and management in schools. Cambodian county has interested in the education sector and announced the policy report such as Policy Guidelines For New Generation Schools For Basic Education in Cambodia (MoEYS, 2016), Cambodia's Education 2030 Road Map (MoEYS, 2019b), and Education Strategic Plan 2019-2023 (MoEYS, 2019c). Cambodia's SDGs (2016-2030) strives to develop a 'quality, equitable and inclusive education system' to

support national socio-economic development” (MoEYS, 2019b).

[Table 1] Cambodia’s Schools, Teachers, and Students Number

(Unit: Person)

2020-2021 Year						
Division	Whole Country	School Areas		School levels		
		Urban	Rural	Primary	Lower Secondary	Upper Secondary
Schools	13,597	1,458	12,139	7,304	1,766	554
Teaching staff	93,956	22,958	70,998	44,875	28,174	15,457
Students (Enrollment)	3,223,475	620,822	2,602,653	2,010,286	632,303	351,794
Repeaters	145,532	20,623	124,909	142,309	2,599	624
2021-2022 Years						
Division	Whole Country	School Areas		School levels		
		Urban	Rural	Primary	Lower Secondary	Upper Secondary
Schools	13,681	1,464	12,217	7,306	1,777	559
Teaching staff	94,718	22,625	72,093	45,148	28,236	15,713
Students (Enrollment)	3,277,076	631,100	2,645,976	2,036,566	662,106	360,617
Repeaters	175,718	30,248	145,470	164,200	7,724	3,794

(MoEYS, 2021; MoEYS, 2022b. Education Statistics & Indicators)

The table 1 shows the number of schools, teachers, and student enrollment rates from 2020 to 2022. The number was reorganized by dividing it by country, region, and school level.⁴ There are more schools

⁴ It was excluded from the tables of colleges, and Lycee that followed the French academic system.

and students in rural areas than urban area. The ratio of teachers to students is the smallest in primary schools. Even though a huge number of students are enrolled in primary schools, the number of teachers is small. Also, the number of enrolled students falls sharply from primary school to lower secondary school. When comparing 2020-2021 and 2021-2022 year, it can be seen that the number of repeat learners increased further.

2.3.3. Teacher Training

High-quality teachers are the most important factor in developing student learning (Tandon, & Fukao, 2015). The Cambodian government emphasized improving the quality of teachers. According to MoEYS, the objectives of teacher training are ensuring the supply of teachers for all levels, favorably responding to the growing demand for teachers in a rural areas, and improving the quality of teaching through in-service teacher training.⁵

Teacher Training programs are managed by the MoEYS, and there are Teacher Training Centers (TTC), Teacher Training Department (TTD), and National Institute of Education (NIE). TTD has 1 Primary School Teacher Training Center (PSTTC), 18 Provincial School Teacher Training College (PTTC), and 6 Regional Teacher Training Center (RTTC) (Kim, 2017). Until 2020, primary school teachers should complete a two-year course in PTTC after graduating from upper secondary school. Low secondary school teachers should complete a two-year course in RTTC after graduating from upper secondary school. An upper secondary school teacher must complete a one-year course in NIE after receiving a bachelor's degree. From 2020, PTTCs and RTTCs teacher trainers trained new formula of 12+4 and NIE needs mater degree+1.

⁵ MoEYS Homepage. <http://www.moeys.gov.kh/index.php/en/education/teacher-training.html#.Yot9zXZBxPZ>

Chapter 3. Research Methodology

3.1. Research Methods

3.1.1. Researcher Stance

When I visited Cambodia in 2017, I met several teachers and asked what made them become teachers, and why they work as teachers. They thought that education can help students to live a better life. They also believe that educating Cambodian students is one of the important way to develop the nation. I felt their passion and dedication on teaching children. The love and mission for children make them become teachers. They also told me that working as a teacher has many difficulties such as insufficient salary, poor working conditions. While the role of teachers is important in quality education, institutional support was not sufficient. I wondered about their current situation and how they are treated in educational crisis. This study started from this idea. I understand that my perception of the poor working condition of Cambodian teachers could affect the research. In fact, it's said that qualitative researchers tend to have bias because they use selective observation and recording of data (Johnson & Christensen, 2017). Therefore, it's important to reflect on my own position as a researcher. I do so by practicing reflexivity and I try to recognize my bias in the collection and interpretation of the data.

3.1.2. Philosophical Framework

Qualitative researcher has certain philosophical assumptions on the research. This study's philosophical assumptions is interpretivist ontology. Interpretivism argues that truth and knowledge are subjective based on people's experiences and their understanding of them (Ryan, 2018). It can help to understand the meaning of a situation that is structured by participants (Yoo et al, 2018). Ontological assumption focus on the nature of reality and researches use quotes and words of the participants (Creswell, 2013). So, I use it to understand teachers' situation and perspective in the Cambodian context. I adopted a case studies approach to gain a more in-depth understanding of the experiences of teachers.

3.1.3. Case Study

Qualitative research describes human life, experiences and interactions and then adds the researcher's interpretation of them (Kim, 2010). Creswell (2013) noted that "The key idea behind qualitative research is to learn about the problem or issue from participants and engage in the best practices to obtain that information" (p. 47). The purpose of qualitative research is to understand a particular phenomenon and to give different interpretation or meaning of the phenomenon.

In qualitative research, researchers are an 'instrument of data collection', so the professional judgment of researchers is emphasized (Johnson & Christensen, 2017). Qualitative research has 'exploratory, fluid and flexible, data-driven and context-sensitive' characteristics (Manson, 2017). These characteristics of qualitative research stress the important role of researchers. Researchers put their efforts to understand various dimensions such as how an individual or one group of people think and how they interact in a holistic perspective (Johnson & Christensen, 2017). It is most important to appreciate the reality of individuals and groups in

qualitative research.

The purpose of this study is to understand the situation of Cambodian teachers affected by COVID-19. This study is focused on a Cambodian teachers case. Case studies is an appropriate and common method to do qualitative research (Kohlbacher, 2006). The case study method enables the study of deep phenomena in contexts (Baxter & Jack, 2008). It allows researchers to find the distinctive characteristics of phenomena and holistic understandings. It is used when the researcher has “how or why” questions on the situation (Yin, 2018). The results of a case study cannot represent the whole Cambodian teachers situation so, this study suggests the context of impact of COVID-19 on Cambodian teachers. Case studies are useful when the researcher investigates phenomena because it focuses on comprehensive understandings of cases.

In case studies, large amounts data are collected such as direct observation, interviews, participant-observation, documentation and so on (Fidel, 1984; Yin, 2018). The data collection method are determined by the cases. This study also uses various resources such as interviews and documentation. As a qualitative researcher must focus on the meaning of participants’ answers depending on the problem and issue, the various data collection is crucial (Croswell, 2013). Researchers analyze the data with many kinds of resources and inductively. They consider that “reality is socially constructed and that variables are complex, interwoven, and difficult to measure” (Campbell, 1997, p. 123) and make strategies to analyze participants’ experiences. Many studies on the influence and impact of the COVID-19 on teachers used the qualitative research method. This study adopted a case studies to gain a deep understanding of the experiences. The research aims to explore the situation and treatment of Cambodian teachers.

3.2. Research Participants

The research participants are Cambodian teachers who work in Cambodia before and after the outbreak of COVID-19. They were recruited by a purposive sampling approach. Purposive sampling is choosing specific individuals, and settings. It is alternative sampling of probability sampling was suggested by Patton (1990). In qualitative study, purposeful sampling is used to select participants for research (Creswell, 2013). The followings are the recruitment criteria; Participants are recruited based on teaching experience, school level, school location and language ability.

(1) Teaching experience: Participants have to work as teachers who have experienced before and after the outbreak of COVID-19 in public schools. To identify the differences in the educational field, teachers need to have at least 2 years of teaching experience.

(2) School level: Participants have to be recruited from primary, lower secondary, and upper secondary schools to compare the situation in each school level.

(3) School location: Participants have to be recruited in the urban and rural area to compare the situation depending on the school location.

(4) Language: Participants need to communicate in English for the interview.

According to the selection criteria, participants were recruited through the recruitment document, which briefly explained the purpose of the research process.

[Table 2] Characteristic of the Research Participants

Category	Urban Area			Rural Area		
	Name/ Gender	Teaching experience	Degree	Name/ Gender	Teaching experience	Degree
Primary School	A1/F	19	BA	B1/M	15	BA
	A2/F	22	BA	B2/M	24	MA
Lower Secondary School	A3/F	8	MA	B3/F	6	BA
	A4/F	7	BA	B4/F	7	BA
Upper Secondary School	A5/F	15	MA	B5/F	5	BA
	A6/F	5	MA	B6/M	17	MA
				B7/M	10	MA
				B8/F	5	BA

My acquaintance has a connection with MoEYS’s official, so the recruitment document was shared with Cambodian teachers. After the interviewees were recruited, I provided online orientation to introduce how to make interview schedule and some research questions. A total of eighteen research participants were recruited, but some participants expressed their refusal of the research. A total of fourteen teachers participated in the online interview. Also, one MoEYS official was interviewed through an interview paper to check the support and situation during COVID-19. In terms of research process, I developed the category for the semi-structured interview questions before conducting the interview. After reviewing the literature related to the Cambodian education system and government education plan before and during COVID-19, I compromised the questions about situation

of teachers, government policy and support for teachers. The interview questions consist of the background of the teachers, the Cambodian education situation before and after the outbreak of COVID-19, teacher difficulties, and government support. It is made to understand the difficulties of teachers in Cambodia. The study interview was conducted from April to May 2022 through the online platform Zoom. During the interview, the questions were modified depending on the teachers' responses and situations. I conducted the online interview for 60-90 minutes with 13 teachers. As one participant has an unstable internet connection, I received the interview answer in word files. After the interview, I asked additional questions through telegram, so Cambodian teachers answered the questions with Word files. Individual interviews provided a specific understanding of the experiences of 14 participants on how they responded and were treated in crisis. As the interviews progressed, the participants answered comfortably. Teachers were willing to participate in the interview, and they answered the questions. Interviews were preceded one-to-one. The interviews were recorded, and it was written on the interview transcript.

<Figure 1> Map of Province of Cambodia



(Source: Greenblog.co.kr)

Participants consist of at least 2 people in the three educational levels: primary, lower secondary, and upper secondary. Also, they are divided into urban and rural areas. Urban schools are in Phnom Penh, and rural schools are in various Cambodian provinces. Even though B4's school is in Phnom Penh, B4 perceives the school is in a rural area because the school is around rice ground and it's on the outskirts of Phnom Penh. That is why I contains B4 in rural areas. Participants are divided into groups because the study want to explore situation depending on the education level and location. Most of the participants have 5 years or more teaching experience, and they are still working. Even though I tried to recruit the same ratio of gender, 11 participants were female, and 3 participants were male.

3.3. Data Collection

3.3.1. Interview

Choosing an appropriate research method is the most important part of the research process. The research method should be changed according to the type and purpose of research. The qualitative research's objectives are subjective description, empathetic understanding, and exploration (Johnson & Christensen, 2017). Qualitative researchers usually use qualitative methods to analyze qualitative data. To conduct qualitative research, a qualitative approach to inquiry and data collection is necessary (Creswell, 2013).

Interviews are one of the major sources of data collection in qualitative research. It helps the researcher to understand participants' perceptions. The interview method was used to explore the experience and knowledge of a specific situation. Also, it helps to get information about phenomena and the participant's inner voice. There are structured, semi-structured, and unstructured interviews. A semi-structured interview is used when the researcher has questions and there are possibilities that the

questions can be changed (Edwards & Holland, 2013). Compared to the structured interview, a semi-structured interview has more ‘flexibility and lack of structure’, so it is used by many qualitative researchers (Edwards & Holland, 2013). I adopted semi-structured interviews for data collection.

The central problem of this study is how Cambodian teachers are affected and treated in society during COVID-19 which is a crisis situation. To collect the data, interview is adequate in this study. I conducted interviews to the teachers in public schools and educational officials. It is a significant source for this research. Even though there are limitations to online interviews, it is the best way to collect the opinions of participants in a pandemic situation. The qualitative researcher seriously concerns about meaning and ‘participant perspectives’ (Bogdan & Biklen, 1997). I adopted the interview method to gain detailed understanding of the situation and hear the voices of participants.

3.3.2. Documentation

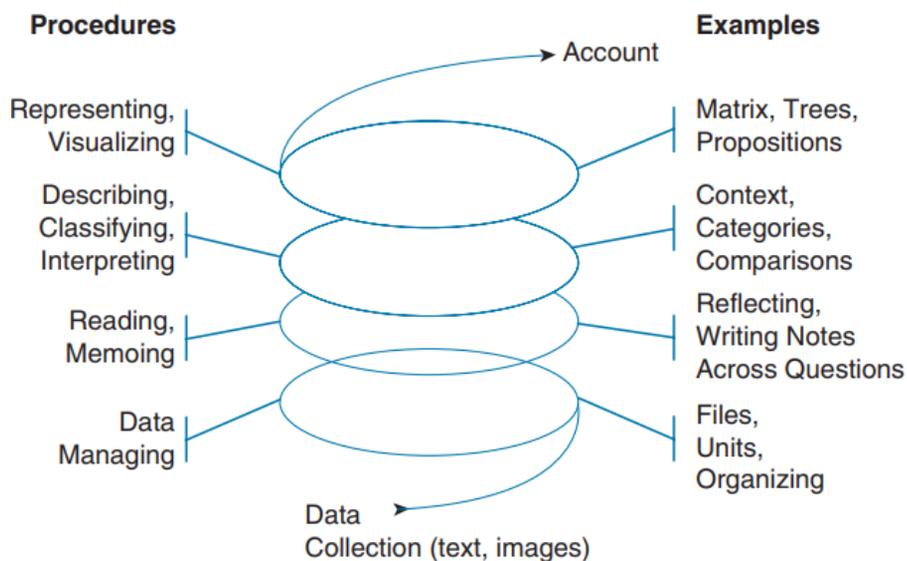
Many types of resources such as government’s reports, academic journal articles, newspaper articles, books, and thesis are the data for research. These documents are important data to analyze. Documentation is one of the crucial data collection methods. Journaling is used for data collection in case studies (Creswell, 2013, p. 174). It is reliable because it can be reviewed repeatedly and contain references. Documents are helpful because these provide specific information related to other resources (Yin, 2013). In this study, documentation included government’s reports, newspaper articles. The data in documentation is used to support the interview data.

3.4. Data Analysis

Data analysis has the process of organizing data, making code for

specific themes, and forming an interpretation of data in qualitative research (Creswell, 2013). Preparing and organizing data is important in qualitative research for data analysis. This study aims at exploring the teachers' experiences and treatment, and the meaning of these situations around them. I found the qualitative analysis methodology for qualitative data. This study adopted the data analysis spiral suggested by Creswell (2013) for data analysis and interpretation. Figure 1 indicates the procedure of data analysis spiral.

<Figure 2> The Data Analysis Spiral



(Source: Creswell, 2013, p. 183)

According to Creswell (2013), several steps for analyzing the data were introduced. The followings are the process of the data analysis.

1. *Organizing the data for management.*
2. *Reading all of the data several times to gain details and a sense of the meaning.*
3. *Developing codes and themes to aggregate the text before*

interpreting.

4. Using the coding process to create the categories for analysis.

5. Interpreting the data based on the codes and themes.

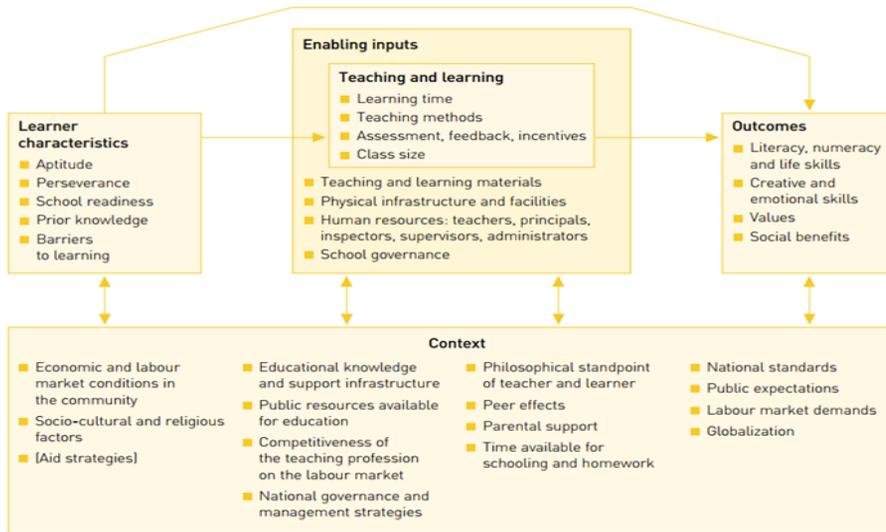
6. Representing the data through the text or figure.

As explained in the data analysis spiral, all data from the interview was converted to text and organized into computer files. Participants' interview was transcribed as each interview was finished. After that, I read the whole transcripts and the notes several times. Based on the entire materials, I generated some codes to classify the data. I used the MAXQDA software program utilized for classifying and coding data. MAXQDA was adopted from other qualitative researchers. The codes were used for categorizing the important themes. Several codes were made, and the transcripts were coded depending on the theme. Also, I distinguished the themes and subthemes within the data. Then, I analyzed the data and interpreted the main themes of meaning. Through an analysis of information, including interviews' transcripts, reports, government plans, and publications from the Cambodian government, this study aimed at understanding the situation of Cambodian teachers and support of the government a post-COVID-19.

3.4.1. Analytical Framework

The analytical framework is 'Quality Education Framework' suggested by UNESCO (2004). It presents the sectors that define what is considered quality of education. It is used to monitor and develop quality education in developing countries.

<Figure 3> Quality Education Framework



(Source: UNESCO, 2004)

In enabling inputs, there are teaching and learning process, material resources, human resources, and school governance. The teaching and learning process is important to support system and includes students' learning time, assessment and feedback, teaching styles and classroom strategies (UNESCO, 2004). The material resources mean that teaching and learning materials such as textbooks, physical infrastructures and facilities provided by governments and households. Human resources include teachers, principals, administrators. It is measured by expenditure such as proportion of GDP expenditure on education, pupil/teacher ratio, and average teacher wages. School governance includes powerful leadership and a safe school environment. The research finding will be divided and analyzed into these categories.

3.5. Validity and Reliability

In qualitative research, validity and reliability have to be ensured for the precision of findings from data (Edwards & Holland, 2013). The strategies to promote qualitative research validity are peer review, reflexivity,

and low-inference description (Johnson & Christensen, 2017). The researcher's peers can criticize the process and interpretation of research, so they can provide useful challenges and insights. A peer review was conducted to increase the validity of the interview questionnaire. I asked three professors about the content and appropriateness of the questionnaire depending on the research purpose. Questionnaires were checked by the professors, and I modified the questionnaire considering the advice. Peer review is also recommended to increase credibility of research (Lincoln & Guba, 1985). One peer in my major checks the findings and interpretations in raw data. While analyzing the data, I made efforts to have critical self-reflection against assumptions or biases. In the researcher stance part, I stated my positionality. This reflexivity can provide awareness of the situation and interpretations. The low-inference discretion means that the researcher uses the direct quotations of the participant to understand 'participants' actual language, dialect, and personal meanings' (Johnson & Christensen, 2017). In this research, direct quotations were written for a better understanding of participants' personal opinions and interpretations of the experience.

To increase the reliability of the study, I took notes while interviewing. It was used when transcribing the interviews and coding process. Also, methodological triangulation is used in the research. It means the researchers use more than one research approach to enhance confidence. Data triangulation is collecting various data and sources to obtain variety of view (Curtin & Fossey, 2007). For data collection triangulation, I gained diverse data from interviews and government reports. Gaining many opinions help to accept various perspectives, so it could increase the reliability of the research. I gathered different opinions from fourteen teachers and one MoEYS official to understand the phenomena. In qualitative research, keeping records of the raw data, and transcripts can

help ensure an audit trail (Nowell et al, 2017). I stored all data in a computer and USB.

3.6. Ethical Consideration

The ethical issues have been considered in this research. First, the voluntary participation has been taken into account. Before I conducted the interview, participants were provided with a brief introduction on research content and the interview process. I contacted the Cambodian teachers and made an appointment for the interview. The consent form was shared with the participants, and they signed voluntarily. The consent form was approved by IRB of Seoul National University and was kept on the computer. I double-checked the agreements after I received the consent form. I also ensured the right of participant for refusal of the research. Before starting the interview, I asked about participants' agreement about the voice and video recording. Second, I protected the privacy of participants. I used pseudonyms to hide their identities in the research. The personal information of participants is in my computer with a password. It can ensure the confidentiality of data.

However, there are some limitations in this study. First, this study does not represent the entire teachers in Cambodia. I interviewed only 14 teachers and one MoEYS Official for the study. It cannot represent the whole country, but it helped to understand some of the teachers' experience. Moreover, the interview was conducted online, so it has limitation in quality interview compared to face-to-face interview. It was hard to recognize the overall expression of participants. The participants were not native English speakers, so they may not have addressed their feeling or situation fully.

Chapter 4. Findings

4.1. Teaching and Learning Process

4.1.1. Online Teaching Method

In 2020, It was a very hard situation in Cambodia because at the time the teacher, they don't know how to teach the student by online. It is like sounds so funny because in Cambodia some teacher they don't have even desktop in at their home, so they don't know how to type. They don't know how to use computer.
(A5)

The new technology that we should learn was hard. We use the new technologies that we never known before in our career.
(B7)

The drastic change from face-to-face education to distance education made it difficult for teachers to adapt and teach students. It was a big problem for teachers because they had never conducted an online class before. Many of the teachers lacked technical skills. Some teachers had no computers. The appropriate support for teachers is needed to provide online classes. Thus, MoEYS provided Television (TV), YouTube, and radio program for student's learning. I asked teachers whether they knew that MoEYS provided online class through Television (TV) or YouTube. Most teachers knew the existence of those programs because they saw the

information on MoEYS's Facebook page.

The MoEYS had produced video on teaching from the primary to the high school level in order to facilitate in teaching and learning of students and teachers, the video had been broadcasted and time set up in the TV channel. But the teaching videos were also stoved in YouTube. If students miss the teaching from teacher they can learn from the TV. (A2)

Yes, I know because they announce by Facebook. They have a program they set up the program and they set up the time. They provide the TV show and YouTube. (B8)

One of the objectives of MoEYS is that “Staff and students are able to continue remote teaching and learning safely” (MoEYS, 2020a). They developed distance learning contents and ensured opportunities for children. Online education programs were developed by MoEYS, and students can access through its official Facebook page, e-learning websites, YouTube, WiKi TV, and Radio. Distance learning programs were broadcasted through an education television channel (TVK2) and radio (UNICEF, 2021). The TVK2 channel dedicates to providing contents from pre-school to upper secondary students (MoEYS, 2020a).

Moreover, other organizations supported online learning. UNESCO also reported the support to Cambodia. UNESCO is a player in supporting Strengthening Teacher Education Programmes in Cambodia (STEPCam). As all schools were closed in March 2020, UNESCO had been working on developing online video lesson focused on Mathematics and Khmer language. The STEPCam supported MoEYS to make video lessons on Mathematics and Khmer language in Grade 1-3 (UNESCO, 2020d). The video lessons were broadcasted live on MoEYS's official Facebook page. Basic Education Equivalency Programme (BEEP) is an alternative learning

platform for lower secondary school dropouts. It provides 11 online subjects such as Khmer, Math, Physics, etc. Since March 2020, roughly over 5,000 secondary school students have used the platform (UNESCO, 2020d).

At first, teachers and students were confused about online learning because they did not know how to use online learning platforms. Teachers needed to learn how to utilize the platforms and provide online classes. Most schools were closed in 2020, but they shifted classes to half online and half offline in 2021. They implemented a blended learning, so it was pressure on the teachers. They had to prepare two kinds of classes and care for students as well. Teachers felt stressed, and they expressed how hard the classes were. It delayed the learning because teachers had to explain one more time when another group came to class. It takes time and energy for teachers.

<Urban>

After COVID-19, the difficulty is delivering the lesson. It is very hard. Like as I said earlier, we had to divide students into two part and that's why it very hard for teacher to deliver the lesson. one in face to face another group online. It demanded for teacher to know well how to deliver their lesson by using so my zoom by deliver their lesson. It's very hard to control very hard.
(A1)

It is difficult to teach online class because it's the first time of experience and I spend more time to pre teaching video. (A3)

As COVID-19 situation got better, schools divided the class into two groups in 2021. The teacher had to teach in schools and open Zoom at the same time. If students could not join the Zoom, they could study through telegram. The teacher posted the worksheet or screenshots of the lesson for

students to copy. The reasons the students could not attend Zoom classes were a lack of devices, internet, and app capacity. Most teachers answered that classes were divided into two groups. Urban school teachers answered that they use telegram or Zoom, and Google Meet for the online class. Most urban teacher utilized Zoom and Telegram for class. The teachers made up the class directly using Google meet or zoom. They start the class and then during the lesson they use Google forms to test ability. In urban area, the teacher can use various platforms and methods. They can choose any application they want to use or depending on the situation.

<Rural>

Student come to study in turn. For Primary School, the students are a little and they haven't got smartphone. And they are low in using technology. (B1)

I prefer to use messenger and Telegram. I just provide a lesson and make it explain. The student will give an answer by their hand or their writing back we didn't have a video call. (B3)

We have option but our principles suggest that all the teacher should make at least like with the students on Zoom more options because if we just drop the material on Telegram and then we don't know whether how many students learn the materials and how many students send material so it's strongly encouraged on the teacher running the class on zoom in real time. (B4)

I find a very hard time to take like two classes at the same time like one is in the classroom and another one online. I just prepare like the slide or the lesson and then send to the group and for other student. Internet connection is not really good and

it hasn't been the computer or the laptop to the classroom because we don't have the electricity (B5)

Teachers in rural area have trouble providing class through Zoom in offline class. Normally, the teachers use Telegram more because electricity and the internet connection are not provided in class. Teachers can send the lesson if they use Telegram, but using Zoom requires more internet fee, and it is hard to utilize during offline class. Another reason is that students cannot participate in class through Zoom because Telegram is more accessible than Zoom. There are two reasons. Students would have to borrow their parent's phones for class. If the parents went out to work, they could study after their parents came home. Students study after teachers send the lesson through Telegram. Also, the Zoom application has a big capacity, so they have trouble opening the Zoom application. Even though the school wants to use Zoom, it is hard to use it because teachers and students have obstacles to use Zoom or Google Meet. If the teachers send the lessons through Telegram, students write down the homework on a notebook. The dropping lesson in telegram is used mostly in rural area and is also one kind of online class in Cambodia.

4.1.2. Management of Students

The percentages of students in class are low because students did not attend due to lack of motivation. Low students' motivation is one of the common challenges in developing counties (Aytaç, 2021). It is not easy for students to focus on class and study hard. In other developing countries, teachers had to motivate their students for learning. Compared to offline teaching, online teaching has more burden for teachers. The students' concentration was low. They don't focus on teaching in the online class. Teachers feel students do not want to study and are lazy. A4 said that "So I don't have any like feeling to teach the class anymore because the students

seem like they don't want to study.” B4 also answered that some students have poor internet, but some students are lazy. Even if the teacher tries to convince them, it is hard to persuade them to join the class and focus on the class.

A class have 45 or 50 students, but when I checked online my students join online 20 students. I can say 40% to join online class with me because some students didn't have computer, laptop or smartphone. (A3)

Not many students join online class. 50 student in my class and they can join only lower than 10 students in online class. some of students they have problems but their financial support so they go to work part-time at some place. So when I asked them to study they said they don't have time. So it's hard to get there, you know, like their commitment back to our class. (A4)

I have six classes. And then I've worried that if I teach one classes at a time, maybe not many students will join. So I asked them to join all together at the same time and only seven students join. Six classes and only seven students join. (B5)

However, some students did not attend the class because of financial problem. Poor students have more difficulties studying online. They need help from teachers and schools. Thus, most teachers manage the poor and vulnerable students. Some students do not have a mobile phone or computer and internet access. Also, other students go to work for their family. It is important that teachers or schools manage the vulnerable students who are unable to have access to regular internet and TV channel for distance education. The students cannot join the class because of the internet connection. If students' situation is poor to participate in class, they have more possibility to drop out of school. I asked teachers “How do teachers

mange vulnerable students who are at the greatest risk of dropping out?”.

They answered:

For students who are at the greatest risk of dropping out, I usually make a phone call to contact and persuade their parents (A1)

For this point, first I have to inform the parents and then school team managers. school team leaders will bring the problems in any time of meeting. After that they will find the solutions. Three factors school, community and teachers have to link to each other. (A2)

I have to give them the worksheet at school or at another place. I have to call them to give the worksheet to do. And then give it to me. (B8)

The teachers visited the students’ houses to give the worksheet for class when they did not attend class. For students, teachers made direct contact with students’ parents for schooling. After that, they also ask for help from school team leaders, who are school principals or vice principals, and they find solutions in teacher meetings. It shows that teachers make an effort for vulnerable students and schools are also cooperative with the teachers. In primary schools, six schools are connected with a 'core' school called the cluster system is well organized (GPE, 2020). In monthly teacher meetings, they share and discuss issues and problems in schools. In rural areas, teachers and schools also cooperative to prevent dropout of students.

We try to motivate and persuade them. My school has not many for this thing because we have a group of consultants with parents and authority to protect them and look after them. We try to stay closer and meet and contact them and parent very

often.(B2)

If we still couldn't get the contact, we visit the student's houses.

(B4)

Homeroom teachers will contact students parent if the students are absent too often and invite parents for a meeting at school.

And we mostly have parents meeting once or twice a year..

Sometimes, Homeroom teachers and school members go directly to students' house. (B5)

Mostly, teachers contact the parents, and they have to persuade them. Teachers also invite parents in meeting and discuss about the problem. There are few meetings with parents in a year. B2 said that they have a contraction on the participation in teacher meeting at the beginning of the year or at the first of enrollment. I asked how cooperative parents with teachers. Some teachers responded that parents are cooperative with teachers' words and instruction. However, other teachers feel that parents didn't care about the teachers' opinion. They think that only teachers consider children's problems.

Epecially, the their parents they seem like don't care about their children studying they care about the business. So if the parents did not focus on the children studying, how do the teacher improve their life. (B1)

There are some parents never come for parents' meeting.(B5)

I think parents don't really care. (B6)

When monitoring students who are at risk, it is observed that the parents of the students are an important factor that causes the students to drop out of school. They let their children do

other things, such as farming, to support their families, and they have no regrets about dropping out of school.(B7)

The parents did not care of advice and instruction of teachers. A6 answered that even though they tried to contact the parents and discuss such a problem, it cannot increase student attendance. Some students decided to go to work because of money, and some students miss class because the internet connection is not good. Lack of cooperation from parents discourages the teachers motivation and willingness to teach. It also threatens the opportunities of learning for children. It is difficult for teachers to solve all these problems by themselves. The support from government is needed for teachers. I asked MoEYS Official (MO) that “Did MoEYS support vulnerable students who are at the greatest risk of dropping out?” MO answered:

Continue to produce video lessons, study materials, and improve the app to make it easier for students to learn on their own. During Covid 19, the schools did not strictly on the monthly and semester exam. The schools still provide changes for the children who did not take the exam to complete it even over the due date. (MO)

MoEYS tried to provide online learning to vulnerable children by supporting class video and delivering the learning documents. They are also flexible to respond the problem by changing the exam system for students. Overall, MoEYS and schools try to accomplish the objective 1.2 in ERP “Most vulnerable children have access to distance learning opportunities” (MoEYS, 2020a). They make an effort to bring students back to schools, but motivating students and their parents remains a task to solve.

4.1.3. Overwork

During the pandemic, teachers had to manage for students' health care and online learning. As the class changed to online learning, school work and the time for class preparation increased. They had to spend more time working compared to before COVID-19. I asked teachers whether their work increased during COVID-19. They answered:

We have to do a lot and we have to prepare more lessons for the student because we have to prepare for like a Google class or something and even now. Because I worry that COVID-19 comeback and have some problem like we have to continue online, so I have to create the group in Telegram. (B5)

Since the outbreak of covid-19, I found that we have a lot of work to do with technology using. Teacher had to spend more time in besides teaching we have to use the telegram to inform any information to our parents or sometime. (A2)

Teachers use online for administration work for student attendance and preparing for online class. They insisted that they don't have free time because of teaching and administration work. It makes teachers exhausted. These responses show that they have to spend more time for online class, paperwork, and delivering information.

I work more before. I don't have a time for myself because I don't teach student but I need to do administration to my director. I have a lot of work. (A3)

I have more work to do. For example, like the student worksheet. I have to correct it by online on the computer. So it made me difficult. I have to prepare lesson. Before I teach online. (B8)

We have to go to school once [and] we have to go to completely report to the school about how many the number of students and they join our class. (A4)

Some teachers became a ICT teacher because they know how to use internet, Zoom, and Google more than other teachers. Most ICT teachers were young English teachers because they can understand English pages and instruction. They had to teach other teachers how to use the internet and provide online class through many platforms. If teachers do not receive the teacher training programs, other teachers have to teach them. It adds one more work on teachers. Soeung & Chim (2022) also revealed that overwork is one of difficulties in teaching, and teachers get more work during COVID-19. In addition, the pandemic adds mores work because of social distancing such as washing hands and spraying alcohol. These are all the tasks that teachers have to manage.

4.1.4. Teacher Training

Sustainable teacher training is essential to improving capacity of teachers. The government's role is clear: to train teachers for quality education. According to Stromquist (2018), the government needs to be more honorable to their commitment for quality education and to ensure empowered teachers. Before the pandemic, MoEYS provided opportunities of Teacher Professional Development such as 'short course workshops, cluster based technical meeting, and school based technical meetings' (MoEYS, 2019a). During the pandemic situation, adequate teacher training is important for teachers. They need government training on how to use online platform and provide online classes. Before COVID-19, Cambodian teachers did not know how to use Zoom or Google platforms for teaching, but teachers now can use platforms for class. A2 said that before COVID-19 20% of teachers know how to use ICT, but now they know a lot. Also, A1

responded that “Some of them now know how to use Zoom or Google meet in teaching as well, but not all teachers do”. Even though Cambodian teachers didn’t know how to use Zoom and Google, most of teachers can use at least Telegram for teaching. There are several teacher training and workshops for teachers. I asked that how many trainings were provided to teachers. MO answered:

Many times of online training course and further coaching and mentoring to schools. The Department of Information and Technology has trained tens of thousands of teachers in using digital technology for online managing and teaching. The Ministry has also collaborated with partner organizations to develop App for study and conduct joint studies on rapid needs assessment and education needs assessment. (MO)

According to MO, the MoEYS provided several trainings, and 10,000 teachers were trained among about 90,000 teachers. Thus, I asked whether teachers received the programs or training from MoEYS. They answered:

We have like the program the workshop for it. And sometimes we have the short time for learning about ICT. So those teacher they will help the other teacher who cannot use it. (A4)

During COVID-19, most of Cambodian teachers, they don't know how to use the internet, and also they are not like good at using computer. But after covid-19, they improve a lot because the Ministry of Education provide them with how to teach the student by using like Zoom or a google meet and also how to use a computer. (A5)

There is a short training course for teachers to learn how to create classroom how to teach and share to students. For me, I

join to study a short training course how to create how to use a classroom. (A3)

During Covid 19, the Ministry of Education developed a number of training courses on distance learning, the use of information technology programs, and the introduction of diverse teaching methods for teachers for teachers to use to teach students. The training has 1 or 2 times in a year. The duration of the training can range from 2 days to 5 days, depending on the curriculum (B7)

Along with the MO's answer, several training and workshops were implemented to teachers for online education. The government helped teachers to have capacity for ICT. Based on the participants, in both areas, 70-80% of teachers in schools can use online platforms for teaching. Thus, I asked what kinds of programs were provided from MoEYS or government. They answered:

The government also ministry try to make workshop about introduce how to use zoom, how to use link, how to use telegram. (B4)

The Ministry of Education or the school taught us how to use technology to teach online classes. We know how to open online classes. (B6)

Some teachers attend several programs or workshops, but the training were mostly workshops. The MoEYS usually provided workshop about how to use platforms. In addition, A2 joined three workshops: "Setting Benchmarks for SDG4.1 of Grade 6 National learning Assessment" (Phnom Pheh, 17-22 May 2021) was delivered in English and Khmer, "Assessment and examination team workshop" (22, 25, 26 Feb 2021) was delivered in

English, and “Pilot report of optimizing assessment for all” (Kampot, 25-26, Feb 2020) was delivered in Khmer. The followings are detailed information of which B4 attended.

- Subject-based training: once a month (3 hours). It's about the update of teaching progress in English subject and sharing new methodologies of distant teaching.

- ICT teacher training: twice a month (3 hours). It's the training about ICT tools to be utilized for E-teaching such as the use of google package-account, form, spreadsheet. After this training, ICT teacher is expected to deliver this new knowledge to the colleagues at school.

- E-test: weekly/biweekly (2 hours). It's about the update of the new policies and how to run the standard test for students in every school in Phnom Penh and how to key in the data. (B4)

B2 answered that “I had participated many workshops for online class during COVID-19. Teaching Methodology (in school, in cluster school, and MoEYS), short courses in SEAMEO program, Digital resolution with England University, ICT smart classroom, APEC, South Korea were some”. Based on the response, the teacher training and workshops contents are about how to utilize online platform. The teachers were provided programs not only from MoEYS, but also from other NGOs, Government, and International Organizations. Cambodia received support from external donors. There are many interested in improving Cambodia education. Besides the training that participants responded, there are other teacher training programs. The MoEYS implemented STEPCam initiatives supported by Global Partnership for Education (GPE), and UNESCO. STEPCam aims to strengthen the competencies of teachers in primary schools (UNESCO, 2020d). It is a three-year initiative and focused on

supporting teachers in their professional development, in-service training for teachers, using new teaching techniques. It is seen that STEPCam supports the long-term objectives of the MoEYS in the ESP 2019-2023 because it desires to improve quality education. Also, the STEM Teacher Training Center (STTC) provided online training for enhancing their learning in Science, Technology, Engineering and Mathematics (STEM).⁶ It was supported by MoEYS and the Korea International Cooperation Agency (KOICA). STTC conducted online Zoom classes on STEM ICT, mathematics and science subjects with Cambodian national school teachers amid COVID-19 pandemic where classes were not available offline. Cambodian teachers can learn on the STTC mobile application for free. MoEYS also funded US 82,077 among US 2.9 million on teacher training and workshops in secondary education during 2020 from International Development Association (IDA) of World Bank (MoEYS, 2020c). However, teacher training and workshops get the least budget among Goods, Civil works, Consultant service, and incremental operating costs.

I asked how teachers get information about teacher training or programs. Mostly, teachers get information from schools. The school principals announce the information of training in telegram if the program is provided from MoEYS. If there are some trainings from other country, teachers have to apply by themselves according to B5. These are the response of teachers.

Actually, the MoEYS had made an announcement approved by the officer who are in charge of each section and then sent to school principals. And then he or she informs to all available teachers that are interested, if the announcement for all. (A2)

⁶ Soco, R. M. (2021, April 23). Online STEM training for Cambodian teachers. *Khmer Times*. Retrieved 3 June 2022, from <https://www.khmertimeskh.com/50843641/online-stem-training-for-cambodian-teachers>

It is announced in Telegram group. Normally when there are any new training courses sent from MoEYS, the school principal forwards it to the teacher's telegram group. (B4)

The school mandated training sessions were announced in the school Facebook group and some programs were announced on the MoEYS Facebook page. (B6)

However, not all teachers can attend teacher trainings. The MoEYS select two or three teachers from each school. Mostly, ICT teachers participate in the teacher training. Teachers who do not attend the programs have to learn from ICT teachers or teachers who know how to use platforms. They are not professional ICT teachers but are volunteers because they know how to use technology.

We have few teacher who are volunteer. So three that teacher are assigned to teach computer and then they have the ICT ability better others so this three teacher sometimes they communicate with the ministry. They learn something new and then they share with other teacher. (A6)

In each school, there should be one or two IT teachers to participate in specific trainings trained by MoEYS directly. For the schools that do not have IT teachers, the school principal selects one or two teachers who has some existing knowledge of ICT or is good at English to join the training course. (B4)

We have like computer teacher or ICT teacher. They try to keep all the teacher how to use Google form, how to use Google meet, how to prepare some work through online like this. the computer teacher try to train the teacher at school. we do it by our own. Like the school principal the management team at

school try to help the teacher as well. (B5)

Moreover, other teachers answered that they did not get any teacher training from government or school. I asked A1 whether there were teacher trainings provided by government, but A1 strongly answered “No, There's no support from government. Just teachers help each other in order to catch up with what the situation back now. They have no official training. It is not provided in school.” So, I asked whether there is any training or workshop A1 participated. A1 answered that “I was selected to join an online workshop which was about how to design 6 kinds of tests. It lasted 11 days”. The reason why A1 did not participate in teacher training was that the training was provided for director or office staff only. The teacher recognizes the teacher training as workshop, so they usually attend the workshop. The other teachers responded that they study by themselves.

We just learned by ourselves by YouTube. They didn't get teacher training from government. They just taught themselves.

The teacher teach teacher. we don't have any training. (B8)

The interesting points is that English speaker has more chance to participate in teacher training. One of the teachers said that teachers who can speak English are more likely to attend the training. I asked why English speakers have more possibilities to participate in teacher training. Teachers responded:

The teacher who can speak English usually gets a chance in teacher training course because they are willing to join. They also know how to use computer as well. (A1)

Older teachers don't know how to use computers. Sometime document or sometimes slide have English. If don't translate to Khmer language. They don't understand how to do how to use

how to create.(A3)

Some trainings are conducted in English and some are in Cambodian [language]. (B5)

This is because some teacher trainings supported by other countries are delivered in English. If teachers do not know English, it is hard to participate in training. English speaker teachers can learn fast because platforms use English. B4 answered that English is obstacle to learning how to use platforms for old teachers. Even though training is conducted in Khmer, English speakers can participate in more training because they are selected in schools.

To sum up, some teachers are aware of the training information, and they participate in programs provided by MoEYS. However, other teachers did not have programs because ICT teachers take the programs more. The objective 4.3. is strengthening distance learning programs for teachers to ensure continuous learning (MoEYS, 2020a). MoEYS have implemented many programs for teachers, but it is important to provide for all teachers. If the training was not provided to all teachers, the technical gap will be greater between English speakers and non-users and urban and rural areas.

4.2. Material Resources

4.2.1. Teaching and Learning Materials

One of the problems of teaching during COVID-19 was lack of materials. I asked to teachers what they get for learning materials and where they can ask for help. They responded that:

For learning materials, we can use from the previous time that we had produced. But if we lack of some, we will ask from school that we get only some. (A2)

Textbook, teacher guide. We got some amount of money to buy ink, marker and like administer two books just that. So if I need more learning material I have to buy on myself. (A6)

I could only get support available at school like paper, poster or small amount of copies. (B4)

To deal with the lack of learning materials, I try to categorize which I need the most and less and sometimes, I use my own money. I also request some materials from school. School can only provide in a small amount or some materials. (B5)

Most teachers answered that they ask the school for learning materials. Some teachers responded they can get learning material from school. However, they can get only basic materials like some ink, a maker, a book, and some fee. Most teachers said that they cannot get enough learning materials. In terms of learning materials, there are no difference between urban and rural areas. Some primary schools spend zero school budget in textbooks and basic materials.⁷ The respondents answered that they all get a small number of learning materials from schools. Even though they can ask school for learning materials, B2 feels stressed because the process is complicated. Teachers have to write what they need, why they need it, and how they will manage it. Also, it is hard to receive the materials even if they ask for it. Thus, teachers usually make the material by themselves. When I asked what they need for learning material, B6 answered that “I need modern technology like internet, computer, slides, electronic speakers.” Teachers want to get several computers, printers, and projectors in school for online learning. It is difficult for teachers to obtain learning materials and devices for online education because of lack of school budgets. Some

⁷ Open Development Cambodia (ODC). Primary School Budget in 2021. Retrieved 2 June 2022, from <https://opendevelopmentcambodia.net/social-accountability/primary-school-budget/primary-school-budget-in-2021/>

teachers strongly expressed that they get small amount of learning materials.

I don't get any material from the ministry or from the school. I just only buy myself. I get nothing for that. I hope that the Ministry of Education they also provide several maybe four or five laptop to our school for the teacher. So they can borrow it to work to use it for teaching online. Two or three marker per year the markers the provides only that but just only for the early year. It's a small thing. (A4)

I don't get enough because for example like computer we have to have by ourselves. (B8)

In my school we get less. For the Ministry of Education they provide best on the Next Generation school so much. it is where it is the most prioritized School in Cambodia. (A5)

A5 responded that the government support is focused on the ‘New Generation School (NGS)’. NGS is similar to Cambodian Charter School, an ‘autonomous’ public schools to improve educational quality in a new reform by the MoEYS in 2014.⁸ This project provided 59 modernized classrooms, 25 science labs, 21st century libraries, and 5 ICT labs with Counseling Services, Electronic Assessment, Software-based Learning unlike general public schools. I asked MO that “What kinds of support were provided to teachers for distance learning to students during school closures?”. MO answered:

Interventions such as distance and online tutoring, learning materials and resources were developed in a variety ways, such as videos, worksheets, YouTube, TV shows, continue to support

⁸ Kampuchea Action to Promote Education (KAPE) Homepage. Retrieved from http://www.kapekh.org/en/what-we-do/16/?pro_id=20. KAPE is a NGO that implements the New Generation School Initiative (NGS) with direct funding from MoEYS.

the school operation budgets, and distributed the computers and tablets to the target schools.

MoEYS supported computers and tablets to target schools even though other teachers responded there was no digital devices support. I asked that “What is the target schools? Do target schools mean ‘New Generation School’? What are the criteria for determining the target school?” MO said that:

Besides the New Generation School, The Secondary Resource Schools (SRS) was the target schools in the Second Upper Secondary Education Sector Program (USESDP-2), loaned from ADB. There are two computer laps in the resource Centre.

As A5 answered that “Some school get the amount of teaching material and some schools they get less.”, I asked that what is the criteria for distribution of MoEYS school budget support. According to the MO, the budgets for schools are defined through the size of school, especially, the number of children. In Open Development Cambodia homepage, 106 primary school revenue and national budget revenue for 2021 are presented.⁹ In this data, the highest national budget revenue is 137,640,000 Riel in Kampong Chhnang province and the lowest revenue is 6,690,700 Riel in Kampong Chhnang province. Most schools were provided around 10,000,000 Riel.

Even though the national budget support is different depending on the number of students, most of the primary schools were supported less than primary schools in NGS. The NGS were provided with lots of national support compared to general public schools. MoEYS and its external partners had invested over US 8.5 million to NGS since 2015. Among the

⁹ Open Development Cambodia (ODC). Primary School Budget in 2020. Retrieved 2 June 2022, from <https://opendevelopmentcambodia.net/social-accountability/primary-school-budget/primary-school-budget-in-2020/>

investment, US 7.4 million (87% in total) came from the government (MoEYS, 2020b). MoEYS supported US 250 thousand in primary schools and US 1.4 million in secondary schools in 2020. There are 10 NGS (Primary: 4, Secondary: 6) sites and 5,722 (Primary: 1,833, Secondary: 3,839) students in four provinces and Phnom Penh in 2020 (MoEYS, 2020b; Chea & Chen, 2021).

It shows that targets schools get more materials than other schools. The support tends to be provided in urban areas because most NGSs are located in big towns or cities. Moreover, NGS provided lots of support for schools and teachers. The NGS central office supported schools to provide online class with online platforms and standardizing automated school management software (MoEYS, 2020b). Teachers in NGS were provided with trainings such as initial training, mentoring, in-service training, International Study Trips, and professional learning communities (Donaher & Wu, 2020).

One of the target schools in USESDP-2, as MO mentioned above, was provided with computer labs. The USESDP-2 was funded by the Asian Development Bank (ADB), and it has 53.5 million US dollars budget (MoEYS, 2022a). It supported 50 Secondary Resource Schools, and 87 network schools since 22 September 2020.¹⁰ These schools are located throughout all provinces in Cambodia. MoEYS provided digital devices to project schools. It makes unfair distributions of resources. Even though MO answered that additional on-wheel tablets and computers were provided to other schools who request proposal, few general public schools can receive compared to project schools.

In rural area, access to digital device is even harder. Digital devices such as computers, tablets, and cell phones are essential for online education.

¹⁰ Kampuchea Action to Promote Education (KAPE) Homepage. Retrieved from http://www.kapekh.org/en/what-we-do/16/?pro_id=45

However, there are some teachers who have no computer and phone. I asked how teachers provide online class to students if they don't have digital devices. They answered that there are no computers for teachers in school, so students have to use TV or Radio programs. One of the serious problems of online education is that there is no financial support for online class. The teachers have to prepare their own devices and pay for the internet fee. It gives more pressure to teachers.

We also have a lot of trouble with online learning. Some of them don't even have the laptop (B4)

They don't supply us the equipment the technological equipment to use. For example, I use my telephone. I also use my old computer to teach online and the school that's not have any technology piece for us teachers, and I also have to pay for the internet connection as well. So that means the teacher contributes. (B6)

I asked MO that “Many teachers want learning materials for an online class such as computer, and mobile devices, but why is it not supported well?”. MO answered:

Covid 19 pandemic appeared unexpectedly while the budget for school operation was planned and allocated. For the urgent needs such as computer and mobile devices were not available because it was the huge amount of budget of these materials for all schools throughout the country. By the way the proposal for new items like the electronic equipment require a longer process since budget plan, negotiation with the ministry of economy and commerce, the procurement procedure. Furthermore, the financial policy of MoEYS has not yet allowed the schools to purchase the electronic equipment by themselves.

MO responded that digital devices were not provided to teachers because it needs negotiation with ministry of economy and commerce. As MoEYS has not allowed the schools to buy electronic equipment, teachers have no way to have digital devices except from MoEYS. Thus, the appropriate support is needed to teacher in general public schools. As MoEYS approved US 859 million for budget¹¹, I asked that “What did MoEYS support first during COVID-19?”

The urgent need such as mask, alcohol, thermometer, camera stabilizers, wifi-adapters, phone cards for the teachers. (MO)

Even though MO answered that MoEYS provided WiFi adapters, phone cards, MoEYS spent more money on health products because the COVID-19 situation was severe. The participants of this study answered that they did not get digital devices and fees. Support for enough learning materials and digital devices was not the priority. This is the reason that teachers have to prepare learning materials and devices for teaching. The government has passed the responsibility of preparing for online education to teachers. I asked what MoEYS supported to solve the problems who didn't have computers or cellphones. MO answered that Cambodia does not have the internet infrastructure to cover the whole country so collective learning by a small group was organized at specific locations that had access to cell phone internet. The solution for teachers was organizing a small group because of lack of budget in the remote area. Teachers had to visit students' houses to teach them.

4.2.2. Access to Internet

Both urban and rural area had difficulties of access to internet in

¹¹ Kimmarita, L. (2020, December 1). Ministries prioritised in draft budget. *Phnom Penh Post*. Retrieved 2 June 2022, from <https://www.phnompenhpost.com/national/ministries-prioritised-draft-budget>

schools. Some schools had internet, but it could not be used in classrooms. Teachers insisted that they need stable network because it is one of basic elements when they provided online class in school. Teachers need to pay for stable internet to deliver class to students. Supporting internet fee is needed for teachers. UNICEF (2021) interviewed with over 15,000 students, teachers, and parents on the impact of school closures and COVID-19. Among the respondents, 78% had access to smartphones and 57% had access to television (UNICEF, 2021). The percentage of access to internet is not high in Cambodian society. When I asked about the difficulties in teaching during COVID-19, most teachers answered that they have trouble with low speed and access of internet.

<Urban>

Some of students they have no their own smartphone or internet connection. So it's hard for student who join me regularly. (A1)

For me, I spend more time to work and sometimes internet is slowly. I am pressured or stressed because I sit in front of my computer every day every time morning until evening. I can't go anywhere. For me, it's difficult. (A3)

It's very tough. We have to spend more by ourselves like more money to spend on the internet. And connection is not that good that sometimes make us feel like really pressure. some students they are lacking of connection. So it's very hard. And the worst thing is that the outcome of certain is very low compared to offline class. (A6)

The students rarely attend the class because they don't have digital devices. Commonly, teacher answered that they had to spend more time and money for online class. They also feel pressure because of online teaching.

The difficulty in rural area is similar with urban area. Most of the problems are slow internet and a lack of devices.

<Rural>

We have an online class, [but] we didn't have a very clear very fast internet sometime when we want to share to the students. (B3)

When we study on Zoom, maybe 50% of the students only join in. But the rest they just say they don't have phone or internet connection. They have no money to building their phones like that. (B4)

The big problem is like internet connection or the some students don't have the phone or computer and some student don't join the class.(B5)

Some children unable to have regular internet access the education television channel and radio programs. During the distance learning process, the learning process is difficult. Some students living in poor service areas need to find a suitable place or come to school if necessary (B8)

For those students, teachers gave the worksheet for students. Teachers care about the children's learning during pandemics.

On the day, the student came to school to get the worksheet weekly from teacher, the teacher explained the lesson material to those who couldn't have access to distant learning.(B4)

MoEYS has a plan to cooperate with Cambodian DTV Network Limited for installing satellites in rural areas for students and teachers to

access free internet (MoEYS, 2020a). However, the digital support is insufficient to reach all children in Cambodia to make distance learning more accessible.

4.3. Human Resources

4.3.1. Salary

According to Fukao (2016), the Cambodian teachers were not satisfied with the working environment and living salary because the salary level was as low as that of factory workers. Some teachers are satisfied with the current salary because they think it is higher than before. I asked what the teacher salary is for living.

Now we got so we get salary higher than the previous time. (A1)

The salary is enough, so we have to manage about our salary.

But if you have a family it may be not so easy for you to control.

(A2)

However, most teachers thought that teachers' salary is low, and it is not enough for living. That's why all the teachers have two jobs. Most teachers work in public schools and in private schools. They work in private schools as part time teachers. They think teacher salary should be increased. Even though the government has increased salary every year it is not enough for teachers. Along with the Teacher Policy Action Plan, MoEYS strives to increase teacher salaries and the number of potential teacher candidates and to improve teacher preparation and teacher upgrading programs (MoEYS, 2019a). Teacher salaries were between 500,000 and 1,200,000 Riel in 2015, but teacher salaries were increased to between 1,200,000 and 2,100,000 Riel in 2020.¹² The teachers are not satisfied with the current salary.

¹² Post Staff. (2020, November 3). Education ministry's reform strategies to improve the quality of teachers. *Phnom Penh Post*. Retrieved 2 June 2022, from

Sometimes I want to know why my government don't pay my attention to teacher. sometime foreign teacher teach at Cambodia have high salary then public school teacher. Sometime I communicate with a foreign teacher. They got higher salary. If I compare knowledge or compare experience, it's sometimes similar. (A3)

It's too small to survive. that's why I have to take multiple jobs here and there because we are worried about our stomach and about our health as well.(B6)

A3 teacher addressed that even though the knowledge and experience is similar, foreign teacher has higher salary. A foreign English teacher can earn \$1,000 - \$1,200 per month in 2015.¹³ It shows what Cambodian society values in teacher jobs. Low salary comes from lack of respect and value in the society. A4 teacher explained that salary is low even when the price of commodities are high. According to Cambodia Independent Teacher Association (2011) report, teachers' salary in Cambodia is much lower than compared to Thailand and Vietnam.

Let's compare to the other country that nearby like Thailand or Vietnam. Actually the price of their product is lower than my country and the salary of the teacher also higher than us. So they are easy for their living but for Cambodian teacher it is so hard for living in situation. So if we cannot find another job or another teaching class, it will be difficult for us to support our financial problem. (A4)

<https://www.phnompenhpost.com/national/education-ministrys-reform-strategies-improve-quality-teachers>

¹³ Gamlam, R. (2015, April 14). Salary expectations for teaching English in Cambodia. *Gooversea*, 14 April 2015. Retrieved 2 June 2022, from <https://www.gooverseas.com/blog/salary-expectations-for-teaching-english-in-cambodia>

It is shown in salary that the government does not value teachers. I also asked to MO “Why do you think teachers' salary are lower compared to neighboring countries?”. MO answered that teachers’ qualification is one of the main causes of teachers’ salary. The MO thinks that most teachers in Cambodia have low capacity. It seems that MoEYS recognized the teacher who has low ability in teaching. This perception led to lowering value of teachers. Even though the Cambodian government increased teachers’ salary every year, it was stopped because of COVID-19. I asked whether it cause an increase or decrease of salary to teachers. They answered:

The previous time the government try to increase salary for teacher from one year to one year. Yeah, but now because of the covid-19 they stop for a while. I'm not sure when they will do more. (A2)

Salary was increased two times a year like in in January and in April. But there's no increase since 2020. This year, they start to increase again. (A6)

From 2020 to 2021, there was no change in salary. Teachers' salaries went up two times a year, but they answered that the teacher's salary did not increase after COVID-19. MO answered that the salary is going to go up this year. I asked that “Why didn't teachers' salary increase during the COVID-19?”. MO answered that the proposal to increase the salary was not available because it is needed to be agreed by the Ministry of Finance and Commerce. Among 28 ministries, five ministries have been allocated of the \$8 billion draft national budget for 2021. These five ministries were selected by the government to spend money to establish the Rectangular Strategy Phase IV in the pandemic. In the draft budget, \$859 million for MoEYS was approved.¹⁴ Even though Rectangular Strategy Phase IV prioritized the

¹⁴ Kimmarita, L. (2020, December 1). Ministries prioritised in draft budget. *Phnom Penh*

human resources in quality education, education budget was not prioritized in the pandemic. When I asked what the most urgent goals were during COVID-19, MO answered policy of health and study, gathering the children to school, digital learning and teaching, and following the standard operation procedure. These goals focus on delivering education to students. MoEYS concentrated on providing education rather than responding to teachers' needs. It shows that MoEYS did not prioritize the teacher centered policy.

4.4. School Governance

4.4.1. School Policy

MoEYS implemented actions to respond to negative impact of the pandemic and delivered key instructions, guidelines and directives to the whole country. The following table shows the response of MoEYS against COVID-19 in the education system:

[Table 3] The Response of MoEYS

Month/2020	Instructions
January	- Inform the threat of COVID-19 and the adoption of good hygiene practice
March	- Close schools in Siem Reap and Phonm Penh - Call for a school closure for all schools later
April	- Announce the implementation of distance learning and e-learning in all educational levels.

Post, Retrieved 2 June 2022, from <https://www.phnompenhpost.com/national/ministries-prioritised-draft-budget>

June	- Announce the guidelines on e-learning at teacher training institutions
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(MoEYS, 2020a).

Under normal circumstances, school starts in November and ends in August of the following year. (B7)

For academic duration in 2020-2021, the school runs from November to October. The delay is due to the school opening and closure during COVID-19. For academic duration in 2022, the school runs from January to October. (B4)

For 2021, the school started from January to the end of October. For 2022, the semester started in January and it will end in October. (B6)

Normally, semesters in Cambodia starts in November and ends in August and instruction days are about 200 days (UNICEF, 2022). However, the COVID-19 changed the school schedule and closed schools. Cambodian schools were closed for more than half the academic year period from 2019 to 2021 (UNICEF, 2022). The students and teachers need to adapt to this change. Since the pandemic has emerged, Cambodia's academic year started in January.¹⁵ MoEYS started to provide distance learning at all school levels. They announced the strategy and guidelines for online learning. At the beginning of the close closure, it was an unexpected change.

Before COVID-19, we teach four subject a day. Social study, science, math and Cambodian language, but now we teach only two subject we focus on only two subjects. Because we think

¹⁵ Dara, V. (2021, January 11). 2020-2021 academic year commences. *The Phnom Penh Post*. Retrieved from <https://www.phnompenhpost.com/national/2020-2021-academic-year-commences>

that these two subjects are important. (A1)

We study only Khmer language and mathematic in each class during the covid-19. (A2)

After schools were closed because of COVID-19, all children studied from their homes. The subjects in primary school were narrowed from four subjects to two subjects. They focus on the core subjects for the effectiveness of class until 2022. It was the government policy to narrow the teaching subjects. In March 2020, classes were provided only online, so they provided classes through Zoom or they sent the lesson files through Telegram. However, blended online learning were implemented since the situation got better. Classes were divided into two groups because MoEYS policy stated that up to 25 students can study in one class for social distancing. The school divided classes into two or three groups depending on the number of students. One group come to school on Monday, Tuesday, Wednesday, and the other group come to school on Thursday, Friday and Saturday. Rest of the students learned through Zoom or telegram.

Our ministry asked us to put only 20 to 25 students make sure they have social distance but the number of students at my school there are a lot so we don't have enough class. That's why the school principal divide into two group. (A4)

The students divided into two groups. I talk thorough the zoom application. I delivered the lesson by using both Telegram and zoom. I keep in the school for group A student and I open Zoom for Group B who are learning at home. (A1)

Since 2020, we started students into like two sheet and we limit the number of students to only 15 to 20. One class study online and half class study on offline. (B4)

4.4.2. Government Policy

Cambodian county has interested in the education sector and announced the policy report such as Cambodia’s Education 2030 Road Map (MoEYS, 2019b), and Education Strategic Plan 2019-2023 (MoEYS, 2019c). As COVID-19 pandemic spread in Cambodian, educational institutions need to be closed to protect children and teachers. MoEYS decided to close all schools in Cambodia on 16 March 2020. 13,482 schools were closed, and 3,210,285 students and 93,225 teachers were affected (MoEYS, 2020a). MoEYS announced the Cambodia Education Response Plan to COVID-19 Pandemic (ERP) to solve the problems and to reset the priorities of the plan based on the Education Strategic Plan (ESP) 2019-2023. The ESP 2019-2023 focuses on two mid-term policy priorities:

1. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
2. Ensure effective leadership and management of education staff at all levels. (MoEYS, 2019c).

In this vein, the five education reform pillars were identified for effective implementation such as “Implementation of the Teacher Policy Action Plan, Review curricula and textbooks and improve learning environments, Enforcement of inspection, Improve learning evaluations to meet national, regional and international levels, and Higher Education Reform” (MoEYS, 2019c). However, these priorities in education were affected by COVID-19, a threat to achieving ESP 2019-2023 objectives. To mitigate this risk, MoEYS wanted to focus on Digital education reform and developed four objectives to support managing teaching and learning in the COVID-19 crisis (MoEYS, 2020a). Followings are the four objectives and outputs:

1. Staff and students are able to continue remote teaching and learning

safely

2. Students and education staff return to education institutions safely

3. Staff and students are able to teach and learn in an adaptable learning environment

4. MoEYS systems at national and sub-national levels have increased resilience

MoEYS presented an implementation plan including objectives' activities and an implementation budget. They also stressed inclusive and quality education and effective management of education staff. It shows that the quality education for all and ensuring education staff are prioritized objectives in the Cambodian education system. It is important how these objectives ensued an education in a crisis. MoEYS planned to focus on Digital education, EMIS, Policy, Curriculum Development, and Teacher Training based on the policies and reforms in ESP 2019-2023. The education budget by law was 431,205,300,000 Riel, but a 15.2% was decreased in education budget (UNICEF, 2021). The budget was revised to 365,696,550,000 Riel which is 84.8% of the previous budget. The total budget is \$31,485,824 from June 2020 to December 2021 (UNICEF, 2021).

In addition, the Cambodian government published the Safe Operation of Schools in the Context of COVID-19 to support school principals and teachers (MoEYS, 2020d). It shows a brief explanation of COVID-19 and key principles for the operation of school and preparation for school reopening (MoEYS, 2020d). This paper addressed that 'Health and safety, learning and teaching, inclusiveness, well-being' are key principles of the reopening of schools. The instruction and checklist were provided to respond to COVID-19 and the reopening of schools. As shown above, many strategies and policies were published in an effort to respond to difficulties in the education system. Then, we need to explore how the policy is implemented and the support is provided at all education levels.

Chapter 5. Discussion and Conclusion

5.1. More Educational Responsibilities on Teachers

The impact of COVID-19 made serious loss of learning and opportunity of education (Corlatean, 2020). Not only students but also teachers suffered a lot in the chaotic educational crisis. The MoEYS announced various policies to respond to the problems in teaching and learning (MoEYS, 2020a; MoEYS, 2020d). Even though many reports and policy changes were delivered to teachers, teachers adapted and found ways to provide education. The teachers had no time to prepare so they had to learn as they tried to adapt to the new situation. There are several responsibilities that are imposed to teachers.

First, teachers protected the loss of learning. At the beginning of 2020, schools were closed. Many governments stopped the traditional education and changed to online learning (Daniel, 2020). Thus, MoEYS also has made efforts to provide online learning programs to students. However, it is not delivered to all students due to the lack of infrastructure and financial problem. As shown in the literature review, technical problems is one of the challenges in distance teaching in developing countries (Talidong & Toquero, 2021). The poor students couldn't have access to online classes because they do not have TV, mobile phone, or computer. If the students cannot access Telegram or Zoom, teachers have to personally give homework paper to students. They have to manage students who do not

attend the class by themselves. This finding aligns with previous studies in that MoEYS's formal platforms did not reach all students because some parents do not have smartphones, and internet connect is weak (Sothy, 2021). They had to find a way they can help students' learning. Cambodian teachers tried to solve the problems by themselves.

If students do not come to schools during blended classes, teachers contact directly to parents. They try to manage the problems at first. The teachers are responsible for student learning in class, and this is a pressure for teachers. The teachers can ask for help from the school to contact students and their parents, but teachers took action first by giving worksheets and lessons to students and contacting the parents. The teachers think that some parents did not consider the learning of students. When the teachers contact parents, they did not respond to teachers. Some parents are not cooperative with teachers. It shows the position of teachers.

Second, the teachers were charged with a lot of work. Most teachers have more than two jobs. They have worked in various areas before COVID-19, so they were busier with new school works during COVID-19. They worked from Monday to Saturday. The teachers have few free times, so they cannot spend time doing what they want to do. A3 answered that "I don't have a time for myself". Preparing for online classes and administration work put more burden on the teachers. As mentioned in the literature review, the teachers have challenge to prepare online learning class because of the sudden transition to online teaching (Talidong & Toquero, 2021). Moreover, they were not ready to implement online classes because some teachers did not know how to utilize the online platforms for teaching. The teachers answered that only 20 to 50 percent of teachers could use the Internet or computers in schools before COVID-19. Especially, old teachers lacked ICT skills compared to young teachers. Previous studies have shown that Cambodian teachers had to adapt to new teaching method

by integrating distance learning (Sothy, 2021). They learned online teaching method by each other and program and implemented distance learning. The blended learning also has problem because students cannot study well in online class. It slows the class schedule because teachers have to explain it once more for different groups of students. It takes lots of energy and time for teachers. There is lack of support to solve these problems. It reveals the low treatment on teachers in the education sector. The schools should manage the workload for teachers. The schools need to understand the difficulties and improve the situation of teachers. Previous studies have shown that when teachers have more than two jobs, enthusiasm and professionalism for the teaching profession decrease, causing the quality of education to decrease (Kim, 2017). The teachers get tired easily and lose their motivation for teaching. Along with new tasks because of COVID-19, teachers lose their free time to take a rest. The governments should perceive the situation of teachers and ensure the proper schoolwork for teachers.

The difficulties caused by COVID-19 imposed more pressure and stress on teachers than before. They tried to manage online class operations, students' participation with lack of Internet and other excessive tasks. Along with new tasks because of COVID-19, teachers lose their time for them. Teachers were responsible for not only teaching children, but also preparing all the resources for education. They took action first and the most for ensuring the education. It shows that they tried to do their best to overcome the crisis.

5.2. Did Cambodia Education Ensure Quality of Education?

It turns out that the Cambodian government has a lot of interest in the field of education through according to the various documents and policies issued. The Cambodian government prioritizes the development of education quality and human resources. Thus, it is meaningful to look at

how the quality of education was implemented with teachers during COVID-19. UNESCO (2004) suggested a framework for understanding education quality. Quality education framework categorized sectors that make quality education. The elements in enabling inputs are teaching and learning process, material resources, human resources, and school governance.

The teaching and learning process contain the elements that related with operation of class such as the teaching method, management of students, teacher training, and overwork. During COVID-19, MoEYS provided teacher training, seminars and workshops. Most teachers participated in short workshops for teachers. They mostly learn how to use the internet or platforms, but these were short programs provided once or twice. Some teachers personally participated in teacher education provided external organizations. The teacher training has limits to deliver to all teachers. Several teachers were selected, and the other teachers had to learn from the selected teachers or other teachers in schools. This finding aligns with previous studies in that Cambodian teachers gained ability and knowledge for online class through self-study or learning from their peers during the COVID-19 (Phal et al, 2022). All teachers in schools cannot have a chance to participate in training. Most ICT teachers in schools know more about how to use the computer and can speak English. The ICT teachers were selected to participate in training by MoEYS because they can understand more than other teachers. In addition, some trainings were provided in English, so teachers who cannot speak English had no opportunities for training. It is important to provide all Cambodian teachers if the government cares about teachers. The opportunities for teachers should be ensured for their teaching and quality education. I suggest that the governments and MoEYS make efforts to provide the broad distribution of teacher training. Even though peer can teach other teachers, more

professional education is necessary. The teachers need adapt training to strengthen the online learning. It has benefits for continuing quality online learning in the future.

In addition, it was revealed that materials resources were not provided well. The teachers made the learning materials, and there is little to no budget. Most teachers were provided with basic materials such as ink, marker, book, and fees. Some teachers did not even receive class textbooks. This is because schools did not distribute budgets to learning materials. The teachers have to care for the preparation for students' learning and spend money for learning materials. Even though the teachers ask the school for learning materials, the process is complicated and there is a low possibility to receive such as enough basic materials for students and school computers. The school shifted its responsibilities to the teachers. Moreover, there are unfairness on the government budget between general public schools and project target schools. Even though project target schools such as NGS and SRS were provided with financial support from other donors, MoEYS focused on these schools. Equal support for public school is necessary, even MoEYS want to develop the specific schools. It widens the gaps between general public schools and target schools.

Moreover, infrastructure for online learning was not prepared. Low access to internet was a problem on the online learning. According to MO, Cambodia does not have the internet infrastructure to cover the whole country. The stable internet access is basic elements for online education. However, both the urban and rural areas do not have access to internet in schools. Thus, the teachers have to spend their money for internet fee, and there are no additional support fees from schools or the MoEYS. It is not an appropriate treatment to teachers because the government is delaying support to teachers on online education. Even though the teachers' salary did not increase during COVID-19, the government imposed internet fees to

teachers. They cannot get financial support for teaching, so it gives the burden for teachers to provide online classes by using digital devices. The teachers had no choice but to pay the money for students. Cambodian government was not ready to provide stable infrastructure for online class. Previous studies have shown that the digital infrastructure should be promoted for online learning, especially, in the countryside by making standards for infrastructure in Cambodia (Sothy, 2021). The government should find way to ensure standards for infrastructure. It will ensure the stable network connections and access to online leaning platforms in Cambodia.

The human resources include expenditure to teachers and education sector. Salary is one of indicators to examine the human resources. The Rectangular Strategy Phase IV sets human resources development as a priority and focuses on Quality Education. However, the MoEYS did not value in teacher salary even though teachers have to be treated well for quality education. Most teachers in Cambodia have more than two jobs. It reduces the commitment to teaching. A3 also insisted that even though the knowledge and experience is similar with foreign teachers, they are paid less than foreign teachers. It decreased the motivation and satisfaction of Cambodian teachers. The teacher salary did not increase during COVID-19. The MoEYS cut the budget for teachers' salary in crisis. Even though the MoEYS set the priority for support teachers, there is gap between policy and practice. The MoEYS spend money in other areas of education rather than for teachers. Previous studies have revealed that if the teacher' salary is low compared to other professions, it undermines the reputation of teaching (Goldstein, 2019/2015). Low salary has the possibility of decreasing the status and value of teachers in Cambodia. The appropriate teacher salary is important because it decides the position of teachers. Also, high salary will increase motivation and self-improvement. It can develop the quality of

education because teachers can spend more time preparing classes and teaching method. The MoEYS have to ensure the budget for teachers because teachers have important role in quality education.

There was a gap between the plan and actions of MoEYS. The Cambodian government tried to support for teachers as shown in the response plan. However, it has not been implemented as emphasized in the policy. Therefore, the basic need for teachers to ensure quality education was not satisfied. Teacher training, learning materials, infrastructure, and financial support for teachers need to be developed for quality education. Cambodian teachers were not treated well in education sector during pandemic. The governments and MoEYS should perceive the problems that threaten the quality of education and pursue to mitigate the consequences of the COVID-19.

5.3. Conclusion

The purpose of this study is to examine the challenges and understand the situations of Cambodian teachers and identify the problems that decline the quality education during pandemic. The research question is what the difficulties of Cambodian teachers are have experienced. This study begins with the questions about what kind of difficulties Cambodian teachers faced in crisis. I tried to find out how the government treats teachers when they emphasize the importance of human resources. MoEYS's ideal plan was ensuring teaching and learning, achieving education staffs and students to teach and learn in an adaptable environment for quality education (MoEYS, 2020). According to findings, teachers experienced the difficulties in teaching and they need to manage the challenges in online teaching. The research findings were analyzed by quality education framework. The challenges and situations in teacher training, learning materials, infrastructure, and financial support for teachers were described. In

discussion, the educational responsibilities imposed on teachers were explained. Also, I analyzed the elements to support teachers with a quality education framework to check how Cambodia ensured quality education during COVID-19.

Many wars in Cambodia caused the collapse of education. In this situation, the government has tried to achieve quality education for everyone. The educational plan has been announced and a lot of external help has been received. This study tried to find out how the government support teachers when it emphasizes the importance of human resources. Overall, the MoEYS made a lot of efforts to support teacher during COVID-19 situation. However, support for teachers was not a priority compared to other policies in education. This shows the position of teachers in Cambodia education system. The support of MoEYS for teachers are insufficient because teachers were not prioritized in practice. The Cambodian government should work harder to narrow the gap between policy and the field. The treatment within the education system will not be different from the treatment in society. It was revealed how society perceived and treated teachers. The reason Cambodian teachers want to become a teacher was their love for children and mission for raising human resource for country. I hope the Cambodian society value teachers and treat as important people in the country. There is increasing demand for the quality of teachers as ‘the quality of education cannot exceed the quality of its teachers’ (Clarke, 2018). The quality of education can be improved only when the teachers and their status are valued properly. The development of education cannot be fulfilled when there is an insufficient support on teachers. Therefore, the quality of education can be increased only when the value and status of teachers are increased. I hope the Cambodian society value teachers and treat them as important as they emphasize in their plan.

There are three implications of this study. First, this study helps to

understand the impact of COVID-19 on Cambodian teachers. After the pandemic emerged, there are many kinds of research on the impact of COVID-19 on students and strategies for education were conducted (Chowdhury & Jomo, 2020; Daniel, 2020; UNESCO, 2020a). As explained in the literature review, there are few research on teachers' situation. Some study explored the impact and challenges of COVID-19 on teachers (Corlatean, 2020; Duraku & Hoxha, 2020; Tadesse & Muluye, 2020). However, there is little research on Cambodian teachers. This study provided the process of impact of COVID-19 affected to Cambodian teachers and how they tolerate the problems. Governments can recognize the problems and difficulties of teachers when an educational crisis occurred. The government and teachers can be ready and learn how to respond to similar difficulties. Second, this study analyzes the difficulties with the 'Quality Education Framework' to identify the state of quality education. It helps to understand the current situation in Cambodia and find the problems to be improved. It is one indicator to check the implementation of quality education policy in Cambodia. It shows the response of the Cambodian government and how the government supports teachers. There is a gap between policy and practice, so research to find the solution to reducing the gap is needed. Third, it can be used as data to compare the situation and treatment of teachers with other countries. As the role of teachers is emphasized in education, it is necessary to research teachers' experiences and the situation in an educational crisis. The research helps to understand the situation of developing countries' teachers and know what kinds of support should be provided to teachers. I suggest comparing and studying the impact of COVID-19 on teachers in other Southeast Asian countries.

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ICT experts. *Environmental Science and Pollution Research*, 1-7.

Appendix

Appendix 1. IRB Approval letter

심의결과 통보서

수신

연구책임자	이름: 김주희	소속: 사범대학 협동과정 글로벌교육협력전공	직위: 석사과정
지원기관	해당없음		

과제정보

승인번호	IRB No. 2204/002-007		
연구과제명	코로나-19 발생 이후 캄보디아 교사에게 미친 영향에 관한 질적 연구		
연구종류	면담(FGI 포함), 학위 논문 연구		
심의종류	재심의		
심의일자	2022-04-06		
심의대상	설명문 및 동의서 또는 서면동의 면제사유서, 재심의 답변서, 모집문건		
심의결과	승인		
승인일자	2022-04-06	승인유효기간	2023-04-05
정기보고주기	12개월		
심의의견	<ol style="list-style-type: none"> 1. 심의결과 제출하신 연구계획에 대해 승인합니다. 2. 연구자께서는 승인된 문서를 사용하여 연구를 진행하시기 바라며, 만일 연구진행 과정에서 계획상에 변경사항 (연구자 변경, 연구내용 변경 등)이 발생할 경우 본 위원회에 변경신청을 하여 승인 받은 후 연구를 진행하여 주십시오. 3. 유효기간 내 연구가 끝났을 경우 종료 보고서를 제출하여야 하며, 승인유효기간 이후에도 연구를 계속하고자 할 경우, 2023-03-05까지 지속심의를 받도록 하여 주십시오. 		
검토의견	계획서 검토의견		
	동의서 검토의견		
	기타 검토의견		

2022년 04월 06일

서울대학교 생명윤리위원회 위원장



Appendix 2. Research Questions

<Teacher>

	List of Questions
Personal Background	<p>1. Where do you work? A. Urban area B. Countryside</p> <p>2. What is the school level you are working for? A. Primary school B. Lower secondary school C. Upper Secondary school</p> <p>3. How long did you work as a teacher?</p> <p>4. What subject are you teaching?</p>
Teaching Profession	<p>5. What motivated you to work as a teacher?</p> <p>6. What do you think are the advantages and disadvantages of teaching profession?</p> <p>7. Do you have any responsibilities in school?</p> <p>8. What is your the highest education level?</p>
Before COVID-19	<p>9. What was difficult as a teacher before the outbreak of COVID-19?</p> <p>10. How did you respond to these difficulties?</p> <p>11. Was it a problem that the teacher could solve individually solve?</p> <p>12. Before the outbreak of COVID-19, what did you think should be improved in the Cambodian teacher working environment?</p> <p>13. What was the government and school support for teachers before the outbreak of COVID-19?</p>
	<p>10. What has changed in school and classroom since COVID-19?</p> <p>11. How did the poor student take the class?</p>

<p>After COVID-19</p>	<p>12. What different tasks or roles have emerged since the outbreak of COVID-19?</p> <p>13. What was difficult about being a teacher after the outbreak of COVID-19?</p> <p>14. How are you responding to these problems?</p> <p>15. Has there been any change in the government's education policy since the outbreak of COVID-19?</p> <p>16. How was the government's policy or regulation delivered?</p> <p>17. How can you ask for help if you need support from the government or school?</p> <p>18. Is there any education or program provided to teachers after the outbreak of COVID-19?</p> <p>19. Is there any additional support you think is necessary for teachers in the educational field after the outbreak of COVID-19?</p> <p>20. Did you receive government support for health products?</p> <p>21. Where do you receive learning materials?</p> <p>22. What do you think should be improved in the Cambodian teacher working environment after the outbreak of COVID-19?</p>
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List of Questions

1. What is your position in the MoEYS?
2. What kinds of support were provided to teachers who provide distance learning to students during school closures?
2. How many times of educational programs for online classes were provided to teachers?
3. Did MoEYS provide equipment and tools to ensure an adaptive learning environment for teachers?
4. If you didn't have enough budget for education, what field do you usually use the budget of the Education? What field of education did you support first during COVID-19?
5. What is the MoESY's support to solve the problems of teachers who had difficulty in online classes because they didn't have computers or cell phones?
6. What is the MoEYS's effort to lower the dropout rate during the COVID-19?
7. Why didn't teachers' salary increase during the COVID-19? Which area did MoEYS support rather than teacher salary?
8. What were the most urgent and important policies and goals in education during COVID-19?

Additional Questions

1. You said that target schools were provided the on-wheel tablets and computers. What is the target school here? Do target schools mean ‘New Generation School’? What are the criteria for determining the target school?
2. If public schools were provided with different budgets, what are the reasons? What are the criteria?
3. Where did the MoEYS share the teacher training announcement? How can teachers get teacher training information?
4. Did all the teacher training take place in Khmer?
5. Some children are unable to have regular internet access to the education television channel and radio programs, how MoEYS support the students?
6. What kinds of support were provided to teachers who provide distance learning to students?
7. What efforts did the Ministry of Education make to know the needs of teachers and schools?
8. How was the teacher policy action plan implemented, one of the priorities of the education reform?

국문초록

코로나-19가 캄보디아 교사에게 미친 영향에 관한 사례 연구

서울대학교

대학원 글로벌교육협력전공

김주희

1990년대 이후부터 국제사회는 평등하고 양질의 교육을 제공하기 위한 노력을 지속해왔다. 모두를 위한 교육 (EFA), 새천년개발목표 (MDGs), 지속가능개발목표 (SDGs)과 함께 국제사회의 교육 목표가 실천되었다. 그러나 코로나 바이러스감염증-19 (코로나-19)가 전 세계로 퍼지면서 모든 나라의 교육은 부정적인 영향을 받게 되었다. 교육 시스템에 큰 위기가 찾아왔고, 인프라와 재정이 부족한 개발도상국에는 더 큰 위협이 되었다. 이 연구는 캄보디아 교사들은 위기 상황 속에서 어떤 어려움을 겪었고, 어떻게 대응받았는지에 대한 궁금증으로부터 시작되었다. 본 연구에서는 코로나-19로 인한 교사들의 어려움, 교사들에 대한 정부의 지원 등을 통한 이해를 바탕으로 캄보디아 사회 내 교사들의 상황을 보여주하고자 한다. 연구의 목적은 위기 상황을 통해 캄보디아 교사가 겪은 어려움과 교육의 질을 위협하는 문제들을 드러내는 것이다.

연구는 사례연구를 통해 진행되었다. 교사 인터뷰와 교육부 공무원 인터뷰를 통해 데이터를 수집하였다. 주된 데이터는 캄보디아 교사의 인터뷰이다. 연구결과는 인터뷰 자료와 보고서들을 통해 구체화하고, 분석되었다.

본 연구를 통해 발견할 수 있는 결과는 다음과 같다. 첫째, 캄보디아 교사들의 공통적인 어려움은 온라인 수업 운영과 적응, 학생 관리, 적절한 인터넷 제공 부족, 과도한 업무가 있다. 코로나 19를 통해 발생한 어려움은 이전보다 교사들에게 더 많은 부담과 스트레스를 부과하였다. 교사들은 이러한 어려움을 극복하기 위해 노력하였다.

둘째, 캄보디아 교사를 위한 예산 지원, 교사 교육, 급여의 지원이 부족했다. 일반 공립학교 교사들을 위한 학습 물품 지원이 부족했다. 교육부에서 교사교육을 제공하였지만 모든 교사들이 참여할 수 없었다. 영어로 의사소통이 가능한 교사들이 교육을 받을 가능성이 많았다. 영어가 가능한 교사들이 다른 교사들에게 알려주는 방식으로 온라인 수업을 위한 교육이 전달되었다. 다수의 교사들에게 기본적인 지원의 필요성이 드러난다.

셋째, 교육부의 지원은 제시된 계획과 차이가 있었다. 교육부는 코로나 대응 계획을 발표해 교사 지원에 대한 강조점을 드러냈다. 계획에 나온 것처럼 교사교육, 온라인 교육지원이 이루어졌다. 그러나 교사들에 대한 공평한 예산 지원, 기기 지원이 부족하였다. 또한, 교사들의 필요를 위한 지원보다는 보건 물품에 대한 지원이 우선순위가 되었다. 따라서 교사 월급의 인상이 이루어지지 않았고, 교사들은 학습 자료와 함께 재정적인 어려움을 겪게 되었다.

캄보디아는 다양한 교육 정책 발표와 함께 교육 위기에 대응을 위한 노력을 하였다. 그러나 정책에서 강조된 만큼 현장에서의 실천은 아직 부족하다. 본 연구의 결과는 캄보디아 교사가 위기 상황 속에서 겪은 어려움을 보여주었다. 캄보디아가 강조하는 교육의 질 제고는 교사를

통해 이루어질 수 있다. 따라서 교사에 대한 사회의 인식 변화와 함께
그들을 위한 적절하고 공평한 지원과 대우가 실천되어야 한다.

주제어: 영향, 코로나-19, 교사, 교육의 질, 캄보디아

학번: 2020-26677