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The Integration of Technology in Teaching English in the 21st Century Education: A Case Study at Preah Sisowath High School, New Generation School

A Mini-Thesis
In Partial Fulfilment of the Requirement for
Master's Degree of Education in Mentoring

Chea Chanponna

February 2021

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The Integration of Technology in Teaching English in the 21st Century Education: A Case Study at Preah Sisowath High School, New Generation School

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February 2021

មូលន័យសង្ខេប

ការអប់រំនាសតវត្សរ៍ទី២១ មានការផ្តោតសំខាន់ខ្លាំងទៅលើប្រព័ន្ធបច្ចេកវិទ្យាដែលអាចជួយសម្រួលដល់ការបង្រៀន និងការរៀនភាសា។ បច្ចេកវិទ្យាដើរតួនាទីយ៉ាងសំខាន់ក្នុងសកម្មភាពផ្សេងៗរបស់ថ្នាក់រៀន និងជួយលើកកម្ពស់ដំណើរការបង្រៀន។ ទន្ទឹមនឹងការវិវត្តចម្រើនរបស់បច្ចេកវិទ្យា ថ្នាក់រៀនបែបប្រពៃណីត្រូវតែមានការផ្លាស់ប្ដូរ។ អាស្រ័យហេតុនេះ ការសិក្សាស្រាវជ្រាវបែបគុណវិស័យនេះមានគោលបំណងសិក្សាទៅលើទស្សនវិស័យរបស់គ្រូបង្រៀនភាសាអង់គ្លេសចំពោះការបញ្ចូលបច្ចេកវិទ្យាទៅក្នុងការបង្រៀន បញ្ហាប្រឈមដែលពួកគាត់ជួបប្រទះ និងដើម្បីស្វែងរកនូវអត្ថប្រយោជន៍នៃការដាក់បញ្ចូលបច្ចេកវិទ្យាក្នុងការបង្រៀនភាសាអង់គ្លេសដោយជ្រើសយកករណីសិក្សានៅវិទ្យាល័យព្រះសីុសុវត្ថិជំនាន់ថ្មី។ ដើម្បីសម្រេចគោលបំណងនៃការសិក្សានេះ គ្រូភាសាអង់គ្លេសចំនួន៦នាក់ នៅសាលាគោលដៅនេះត្រូវបានអញ្ជើញចូលរួមសម្ភាសអំពីបទពិសោធន៍និងយោបល់របស់ពួកគេលើបញ្ហានេះ។ អ្នកស្រាវជ្រាវបានប្រើឧបករណ៍ស្រាវជ្រាវមួយដែលហៅថា Simi-Structure Interview ដើម្បីធ្វើការស្រាវជ្រាវ។ ថ្នាក់រៀននិងមិត្តតាមប្រព័ន្ធអនឡាញចំនួន ២ ត្រូវបានសង្កេតដើម្បីផ្ទៀងផ្ទាត់លទ្ធផលនៃការអនុវត្តការបង្រៀនដោយប្រើបច្ចេកវិទ្យារបស់គ្រូ ថាតើព័ត៌មានដែលបានមកពីការសំភាសន៍នោះមានសុពលភាពនិងអាចទុកចិត្តបានដូចការឆ្លើយតបរបស់អ្នកសម្ភាសន៍ដែរឬទេ។ កម្មវិធី NVivo ត្រូវបានប្រើដើម្បីវិភាគទិន្នន័យ។ ការរកឃើញពីករណីសិក្សានេះបានបង្ហាញថាបច្ចេកវិទ្យាត្រូវបានប្រើនៅក្នុងកម្រិតមួយដែលគួរឱ្យពេញចិត្ត។ ជាងនេះទៅទៀតគ្រូមានឥរិយាបថវិជ្ជមានចំពោះការប្រើប្រាស់បច្ចេកវិទ្យាក្នុងការបង្រៀនរបស់ពួកគេ។ លើសពីនេះទៅទៀតពួកគេមានសមត្ថភាពគ្រប់គ្រាន់ក្នុងការប្រើប្រាស់ឧបករណ៍បច្ចេកវិទ្យា។ ការវិភាគទិន្នន័យក៏បានបង្ហាញពីបញ្ហាប្រឈមមួយចំនួនដែលអាចរារាំងលទ្ធភាពនៃការបញ្ជ្រាបបច្ចេកវិទ្យាព័ត៌មានវិទ្យាក្នុងការបង្រៀនផងដែរ។ លទ្ធផលនៃការសិក្សានេះត្រូវបានសង្ឃឹមថានឹងអាចផ្តល់នូវព័ត៌មានជាក់លាក់ដល់នាយកសាលា និងអ្នកបង្កើតគោលនយោបាយសិក្សាដើម្បីពិចារណាធ្វើឱ្យប្រព័ន្ធបច្ចេកវិទ្យានេះកាន់ប្រសើរឡើង និងបន្តឲ្យមានការបណ្តុះបណ្តាលចំណេះដឹងផ្នែកបច្ចេកវិទ្យានេះឲ្យកាន់តែច្រើនដើម្បីភាពជោគជ័យនៃការបញ្ជ្រាបបច្ចេកវិទ្យាទៅក្នុងការបង្រៀនភាសាអង់គ្លេស។

ABSTRACT

Education in the 21st century give much more emphasize on technologies that facilitate teaching and learning languages. Technology plays major roles in the classroom activities and enhance the teaching process. Concerning the development of technology, the traditional classroom where the teachers stand in front of the classes and give lecture using whiteboard or blackboard for the whole session must be changed. Consequently, this qualitative research study aims to investigate the English language teachers' perspectives toward technology integration, the challenges that they encounter and to identify the benefit of technological application for teaching English at one NGS school. In order to accomplish the objectives of this study, six English language teachers at the case study school were invited to interview about their experiences and opinions on this matter. The researcher used a research tool called Semi-structured interviews to conduct the research. Two virtual classrooms were observed in order to verify the outcome of the online teaching practices whether the information is as valid and reliable as the interviewees' responses. ANVivo Application was used to analyze the data. The findings from this case study revealed that ICT tools are used on the satisfactory level by the teachers. Moreover, the teachers possess an acceptable positive attitude towards the use of technology in their teaching. In addition, they seem to have competence enough toward the utilization of ICT tools. However, the analysis of the data revealed some challenges that might hamper the possibility of integrating ICT in teaching. The results from this study are hoped to provide insight to the school directors and policy makers to consider improve the ICT applications and trainings for the success of integrating technology in the English classrooms.

Keywords: *Technology Integration, 21st Century Education, Inter-relation, Teachers' perception*

SUPERVISOR'S RESEARCH SUPERVISION STATEMENT

TO WHOM IT MAY CONCERN

Name of program: Master's Degree of Education in Mentoring

Name of candidate: **Chea Chanponna**

Title of thesis:

The Integration of Technology in Teaching English in the 21st Century Education: A Case Study at one NGS High School

This is to certify that the research carried out for the above titled master's thesis was completed by the above-named candidate under my direct supervision. I played the following part in the preparation of this thesis: guidance in research problem development, literature review, methodology, data analysis, and discussion finding.

Supervisor (Name): …………………………………….

Supervisor (Sign): …………………………………….

Date: …………………………………………………

CANDIDATE'S STATEMENT

TO WHOM IT MAY CONCERN

This is to certify that the thesis that I "**Chea Chanponna**" hereby present entitled: "**The Integration of Technology in Teaching English in the 21st Century Education: A Case Study at one NGS High School**"

for the degree of Master of Education major in mentoring at New Generation Pedagogical Research Center is entirely my own work and, furthermore, that it has not been used to fulfill the requirements of any other qualification in whole or in part, at this or any other University or equivalent institution.

Signed by (the candidate): …………………………………….

Date: ……………………………………….…………….

Countersigned by the Supervisor: …………………………………

Date: …………………………………………………………….

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To my worldly mom and dad, thank you for all the love, support, compassion, and the constant encouragement you have for me especially during my weakest times. Without your inspiration, I might not be the person I am today. Thank you for bringing me up to be a better individual. A specially thanks to my dear little daughter for being the best gift for me. She makes me know that I can be a good mother and still follow my dreams if I am committed.

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TABLE OF CONTENTS

List of Abbreviations

EFL : English as a Foreign Language

ELT : English Language Teaching

ESL : English as a Second Language

ESP : Education Strategic Plan

ICT : Information and Communication Technology

MoEYS : Ministry of Education Youth and Sport

ODP : Open Development Cambodia

TPACK : Technological Pedagogical Content Knowledge

CHAPTER 1: INTRODUCTION

1.1.   Background of the Study

Twenty-first century teaching is no longer about the four walls of the classroom where the teacher's role in the students' language learning was the key, the source of all knowledge and the model for the language. As we are entering the fourth industrial revolution, Cambodia needs to be ready for it. One of the spheres affected by this revolution is education. "Education is the movement from darkness to light" (Bloom, 1992), and Cambodia is still in the shadow. A new report by a UN agency suggested that by 2025, Cambodia will be expected to graduate from its Least Developed Country (LDC) status, and it has made some progresses in furthering its development (Gaudemar, 2016). Kan Channmeta, Secretary of State at the Ministry of Posts and Telecommunications indicates that the ministry plans to transform the country into a digital economy and by 2023 most citizens will be able to use digital tools and modern technology to enhance their lives. (Manet, 2018) . He further states that in order to achieve its goal of keeping up with its fellow Asian member countries, the ministry will focus on developing students' abilities in key areas within Information and Communication Technology (ICT), which will accelerate the development of the technology sector in order to achieve its goal for keeping up with its fellow Asian member countries.

The Education Strategic Plan (ESP) 2019-2023 also prioritizes technology within its policies and strategies for five years reform implementation (MoEYS, 2019). The same document also states that "The major proposal is to integrate ICT into a tool for teaching and learning, and to share knowledge across the whole education sector, equip students with knowledge and skills on ICT to transition into 21st century employment." (MoEYS, 2019, pp. 60-61). The ministry aims to use ICT tools and e-resources for increasing the

efficiency and effectiveness of teaching and learning in teacher training centers, schools and other educational institutions by using ICT tools and e-resources.

As the education system in Cambodia is currently experiencing a revolution due to the new ESP emphasizes on the integration of technology in the education sector. Many things including teaching and learning materials as well as teaching methodologies are being modernised and replaced. Consequently, the idea of teaching with technology is having a huge impact on education and the way of teaching and learning, and the English language teaching curriculum is no exception. Therefore, to accelerate this transition to ICT, MoEYS has made its ICT in Education policy in order to significantly expand ICT services in the country (MoEYS, 2018). These developments provide an opportune time for MoEYS to reform and modernize the education sector and deliver world class education, including ICT competencies, to all Cambodians.

1.2.   Statement of the Problem

A research by World Education (2012) suggested that in Cambodia, computers are not well integrated into classroom learning and teachers are not well-trained to use or maintain computers, which then stand idle. As a matter of fact, many teachers in Cambodia still have limited capability to gain the advantages of applying technology in their teaching and thus are unable to meet the ministry policy guidelines which aim to integrate digital education in schools.

To prepare teachers to be ready for this digital era, teacher education programs should explore opportunities for teachers to experience teaching pedagogies using ICT (Leung & Pui, 2017). Thus, the requirement of expertise for teaching and developing digital resources are starting to have an impact on the success of students' academic performance. However,

since the new ESP 2019 released, there hasn't any studies investigated on the issues of how ICT being integrated in the English language classroom.

1.3. Research Purposes

Regarding to the issues mentioned above, this study aims to explore the inter-relationship between the integration of technology and English language teaching. It examines the teachers' and learners' experiences in the use of ICT tools. As a result of this study, we can clearly recognise whether there is enough empirical evidence for the need to integrate technology in teaching English. Therefore, this paper aims to propose possible solutions for using ICT resources to underpin the growth of English Language Teaching (ELT) for the sake of achieving the policy guidelines set by MoEYS.

1.4. Research Objectives

These research paper aims to:

1. Identify the benefit of technological applications and resources, and how teachers might integrate technology in their classroom.
2. Investigate English teachers' perspectives on the integration of technology in teaching English.
3. Recognise the possible challenges and barriers teachers may face when applying the use of technology.

1.5. Research Questions

In order to achieve the objectives of this study, the three specific research questions as the following:

1. How does technology be integrated in teaching and learning English?
2. What are the teachers' perceptions on the integration of technology?
3. What are the challenges involved in integrating technology in the classroom?

1.6.   Significance of the Study

This study will offer some benefits to educational stakeholders such as the target teachers, the school principals and other English teachers who intend to integrate technology in their teaching. This study will also provide evidence of the efficacy of technology in teaching English language. Moreover, it will come up with new ideas on how to use technological tools effectively and suggest useful applications of ICT in ELT settings.

1.7.   Operational Definition of Key Terms

Technology Integration

The term **technology** is broadly defined in this study which refers to many different devices and uses. **Technology integration** refers primarily to the use of other technological tools in order to enhance and support English teachers in their teaching. The technological tools include software that can be used to develop or support online lessons or courses, hardware, social media, and other systems used to facilitate and promote teaching quality and active classrooms. According to (Gilakjani, 2017), technology integration refers to the way teachers use technology to support their teaching and reshape those activities more effectively.

21st Century Education refers to the digital age in which technology is used in order to benefit the teaching and learning process.

Inter-relation refers to the relationship between technology and English language teaching. This study suggests that English teachers will have to develop expertise in using technological tools as well as teaching in order to generate positive language learning experiences for their students. As suggested by Molčanová (2017), "Technology will never

replace teachers, but a teacher who cannot teach with technology will be replaced by another one who can."

Teachers' perception refers to the teachers' thoughts or images toward the use of technology in their teaching. The finding from this study will reveal useful information regarding teachers' real situation in applying technology in their classrooms.

1.8.   Summary of the Chapter

This chapter described the background of the study and the problems being addressed. There were three research objectives and three research questions used for conducting this research. The researcher also discussed the research purpose, significant of the study and explained some definition of the key term used in the study. The next chapter will review about the existing research finding and theories related to the topic being studied.

CHAPTER 2: LITERATURE REVIEW

2.1. Technology in the Context of New Generation School

The policy guidelines for new generation school states that the objective of the NGS is to emphasize ICT literacy for both teachers and students. The teachers are expected to have high performance of digital literacy and are to be evaluated based on their ability to integrate ICT in their teaching. Students are also expected to make the greatest use of the school's ICT resources effectively in their study and also to develop the twenty-first century competencies in order to prepare them to contribute productively in the future workforce (MoEYS, 2016). As the NGS Policy Guideline states that "the use of technology as a key element in the New Generation Schools that include not only access to hardware but also student usage of new educational software that will enhance teaching, learning, and assessment (e.g., Literatu, 3D classroom, etc)" (MoEYS, 2016). The NGS schools are equipped with modern technology and facilities in order to develop a modern and efficient learning environment. During the speech on the Teacher's Day on Monday, October, 5th 2020, H.E. Dr. Hang Chuon Naron emphasized that in order to improve digital education, MoEYS decided to choose a number of schools to implement the New Generation Schools. Recently, during the COVID-19 pandemic, MoEYS have also established a center for digital education at Preah Sisowath High School (NGS) to develop e-leaning program for sharing new teaching pedagogies and making video conference about the use of ICT for solving problems in Cambodia.

2.2. The Growth of Technology Use in Cambodian Context

Technology has become more and more popular especially during the COVID-19 pandemic which has changed the education forever. While countries are at different points in their Corona Virus infected rates, worldwide there are more than 1.5 billion children in

192 countries affected by school closures due to the pandemic (UNICEF, 2020). With this unexpected shift away from school in most part of the globe, most governments around the world did not allow the social distancing to be the barrier to continuity of promoting education for all and try to adapt the online education projects. In Cambodia, all the 13,300 schools have been closed since March 16th, and every stakeholder have been seeking for the distance learning opportunity in order to help children continue their education (UNICEF, 2020). Obviously, online education is not a very new concept for the public It has taken roots in Cambodia for many years since before the education reform. The government and MOEYS have promoted digital education for years but seems to have slow progress; however, after severely hit by the eruption of the Corona Virus, all the private and public schools immediately move all learning to online platform.

According to the report by UNICEF Cambodia states in May, 2020 that in order to respond to the education crisis UNICEF is working closely with MoEYS to establish distance learning assets, including videos, e-learning lesson, and other resources to broadcast through various social media platform, TV and radio, in order to reach every child in Cambodia. As a result, the evidence shows that e-learning lessons video are being watched on all channels (UNICEF, 2020).

There has been a tremendous growth of the Internet and Technology across the country. The report by The number of internet users in Cambodia has grown quickly and by May 2020 made up 90 percent of the population and the number of fixed internet subscribers increased by 33 percent to 1.51 percent of the kingdom's population (UNESCO, 2020). This technological evolution of humankind is an essential part of integration to digital society.

2.3. Theoretical perspectives of Technology

When we talk about technology in teaching and learning, the word 'integration' is used. With technology being a part of our everyday lives, it is time to rethink the idea of integrating technology into the curriculum and aim to embed technology into teaching to support the learning process. It is an essential part of the teachers' profession through which they can use it to facilitate learners' learning. As suggested by Eady and Lockyer (2013), technology becomes an integral part of the learning experience and a significant issue for teachers, from the beginning of preparing learning experiences through teaching and learning process. Shyamlee and Phill (2012) also supported the view that language teaching method has been changed due to technology. The researchers continued that the application of technology helps learners learn on the basis of their interests. It also satisfies both visual and auditory senses of the learners.

2.3.1. The Advantages of Digital Tools in ELT

In light of many prior studies which have been implemented to find out the answer to the key issues toward the integration of technology, most of them have shown the importance of using digital technology in EFL classes. Students have learned new skills that go beyond traditional school knowledge (Abbasova & Mammadova, 2019; Chaaban, 2017; Cote, 2018; Solano, 2017) . Many technology advocates argue for the inclusion of a more sophisticated set of "21st Century skills" in the curriculum in order to promote economic development. They claim that the use of ICT can support the learning of such skills as technology literacy, information management, communication, working in teams, entrepreneurialism, global awareness, civic engagement, and problem solving (Kozma, 2005).

The advantages of using technology in teaching English were reported by many studies. Many findings have proven that the use of computer technology has a positive effect on the level of achievement of ELT (Lai & Kritsonis, 2006). ICT tools help attract students' attention, facilitate students' learning process, improve the students' vocabulary and promote meaningful learning environment (Yunus, Nordin, Salehi, Embi, & Salehi, 2013). The integration of social networking services in teaching English helps broaden students' knowledge, increase their motivation and build confidence in learning (Yunus, Salehi, & Chenzi, 2012). In addition, according to Grant et al. (2015), the use of educational technology helps develop positive themes include improving ownership, enhancing administrative work, increasing motivation, and professional development.

2.3.2. Issues and Challenges of Technology

Although technological evolution of humankind is an essential part of integration to the digital world, it requires the help of teachers who can facilitate learners' learning process. According to Richardson (2011), the biggest challenges to adopting the use of new technologies were hardware incompatibility, complexity; language barriers; the lack of electricity, computers, Internet access, and of practice for trainees; and the inability to understand the advantages of these technologies. In many cases, teachers are left to their own devices and the level of awareness of the usage of ICT among teachers is generally limited. As suggested by Grant et al. (2016), technology enable students to explore their study in a variety of ways more than before its cooperation, but the emergence of new technology into instruction can be overwhelming especially for the novice teacher.

Ungar and Alkakay (2011) reported that the highest TPACK score was found for Pedagogical Content Knowledge (PCK) and the lowest score for Technological Knowledge (TK). This result indicates the well-reported gap between teachers' feelings of control in

the content they teach, as opposed to feelings of helplessness and loss of control when they implement technology in their teaching. In addition, despite the wildly accepted benefits of ICT in foreign language learning, prior research has pointed out that in many of today's language classroom, learners are frequently exposed only to traditional teaching methods and instructional materials (e.g language course books) and have little or no opportunity to engage with digital learning tools. (Kessler & Bikowski, 2010).

2.4. Types of Technology to be Used in ELT

At present, educational institutions look for teachers who have a good command of English and ability to use innovative technologies for teaching to satisfy the need of an e-society (Sarmiento & Zuniga, 2017). The traditional classroom where the teachers stand in front of the classes and give lecture using whiteboard or blackboard for the whole session must be changed concerning the development of technology. According to Patel (2013), technology applications provides so many alternative ways for making teaching interesting, more productive in terms of advancement and has considerably changed the English teaching methods.

According to Abbasova and Mammadova (2019), there are some digital devices and the importance of their usage in English Language classes such as audio video recorder, video presentations, online dictionaries, speakers and booths with electronic devices, high speed internet and personal laptops. The application of multimedia help makes the use of print text, film, and internet which give the opportunity for learners to collect more information and explore varies types of materials to support and interpret

2.5. Teachers' Perceptions Toward the Use of Technology

The key element in the change process is the teachers. Fulkerth (1992) explains, "the most important component in a change process is not an innovation itself, but the beliefs and practices of the people who are affected by it". Ungar and Alkakay (2011, pp. 299-300)

states that, "the successful implementation of technology in education relies mainly on the teachers' attitude toward it". The same study also suggests that the teachers' attitude toward change was positive, and the fact that the highest scores in the attitudes towards change index were found for the behavioral attitudes clearly indicates the readiness of teachers who participated in the implementation project to actively work for creating change. Abbasova and Mammadova (2019) suggest that "language teaching and the use of digital technologies are interconnected and can be considered as an inseparable part of language learning process" (p.369). The same study also indicates that the younger generation teachers consider digital technology to be really beneficial for English language teaching, they understand and boost the idea of technology in ESL classes rather than the older generation teachers, since teachers of the new generation have grown up with digital technology and it is woven into their lives.

2.6.   Summary of the Chapter

This chapter reviewed some literature related to the issues being addressed. There were some discussions of the use of ICT in NGS context, the growth of technology uses in Cambodia, some theoretical perspective of technology such as the advantages of digital tools in teaching and some challenges the teachers may encounter during integrating them in the classroom. The chapter also included the description of some common types of technology to be used in ELT and some discussions about the previous studies on technology use in ELT classroom. Finally, the chapter finished with some discussion about the English teachers' perceptions toward the use of ICT in their teaching. The next chapter is going to explain the methodology used for conducting this study and ways for collecting and analyzing date.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. Research Design

The researcher aims at a more comprehensive view in order to interview the teachers of English about their perspectives toward the integration of technology, its benefits, challenges and barriers, and how they integrate technology in their teaching. Therefore, in order to examine the information and to capture the teachers' and learners' experiences using ICT as instructional aid in the classroom, qualitative methodology is being utilized. According to Mills and Gay (2016), qualitative methods are used in order to gain in-depth understandings about the way things are, why they are that way, and how the participants in the context perceive them. It is the narrative and visual data from the collection, analysis, and interpretation of comprehensive investigation. Furthermore, the same authors also explain that in qualitative research design, case study design is the appropriate way when the researcher focuses on a particular phenomenon and intends to involve in a deep and thorough understanding of the data collection (Mills & Gay, 2016). Accordingly, a case study research design will be adopted in this study since it is mainly focused on the selected school sample and a specific population.

3.2. Sample Size and Sampling Technique

A non-probability sampling technique is used in this case study since it tends to focus on a small sample size and intends to examine a real situation of the target group, not to make statistical generalize to the wider population. More specifically, purposive or judgmental sampling is used in order to provide important information that cannot be obtained from other choices. Therefore, all the 6 teachers of English subject were invited to participate in the interview in order to answer to the research questions. Since the case under study represent not only the teachers, but rather the dynamics of the classroom environment; therefore, in order to make qualitative findings more accessible for

application in practice, the researcher also conducted 2 virtual classroom observations in Grade 9 and Grade 12 students for the purpose of exploring real world practice of using ICT in the classrooms.

3.3. Research Instrument

As a qualitative research study, the researcher used a research tool called Semi-structured interviews to conduct the research. According to Cohen and Crabtree (2006), semi-structured interviews are the informal and unstructured interviewing that help the researcher to develop a deep understanding over the case study being investigated and allow the researcher to explore relevant Semi-structured questions. Moreover, the interview process starts with broad and more general questions to specific ones in the order to reveal the matter of course during the exploration of this study and it gives the interviewer more freedom to examine the issues. This research instrument usually preceded by observation in order to get a strong evidence over the information from the interview. Therefore, the face to face interviews, the questions quid and the addressed issues in this study are smooth and take good shapes as the interview and the observation unfold.

The research included open questions and question guide under four main themes as follow:

1. The benefit of technological applications and resources, and how teachers might integrate technology in their classroom.
2. The English teachers' perspectives on the integration of technology in teaching English.
3. The possible challenges and barriers teachers may face when applying the use of technology.

3.4. Data Collection Procedure

In order to enhance validity and reliability, this study made use of two methods and a variety of data collection techniques. The data were generated into two phases.

Phases 1: Due to the current situation during COVID-19 pandemic, the data were collected in two different ways. First, the researcher conducted the face-to-face interviews with 3 teachers of English subject who are able to come to school. Second, the researcher conducted the interview through Zoom Meeting application. The data collection procedures started with open-ended questions, then interviewers use further questions to probe into different topics. Each interview lasted for about 30 minutes and the questions were asked in both English and Khmer in order to gain a clear understanding and precise information. The study focused on this area of population because this research topic requires detail information from each individual and demand deep understanding of both the topic under the study and the research objectives.

Phases 2: Observation of lesson sequences. There were only two classes from grad 9 and grade 12 selected to conduct the observation because since the school reopening after the COVID-19 pandemic, there were only grade 9 and grade 12 are allowed to come back to school.

3.5. Data Analysis

Once data is collected, the next step is to go from a mass of data to meaningful insights. The researcher converts raw data which made up of audiotape and transcripts into a meaningful and readable resources. There are three steps of data analysis (Dudovskiy, 2019). The first step is developing and applying code that represent themes using NVivo Application. The second step is identifying themes, pattern, and relationship. And the third step is summarizing the data.

3.6. Ethical Considerations

This study will be conducted by putting great attention on confidentiality and anonymity. Moreover, the permission from the target school will be granted to conduct the research. Each participant will be sent a letter of participation identify the researcher and the contents of the study. The participants are prioritized to choose a convenient time for the interview. The interview will not ask for the names of respondents in order to respect anonymity of each individual. Moreover, the respondents have the right to skip any questions at any time during the interview.

3.7. Scope and Limitations

There are few limitations of this work should be noted. This study mainly focusses on the English teachers' perspective over the integration of technology in their teaching. However, the study about the students' perspective is needed for future research. Moreover, the terms of technology integration in this study refers to the general use of the applications, website, and social media to serve for teaching English, which are not focused on the specific use of each types of digital tools. Furthermore, this research study is mainly focus on the specific case of the teachers of English at the target school. Therefore, the result from this study cannot be generalize to any other cases or fields. Instead, the finding from this study would be suggested for future implementation.

3.8. Summary of the Chapter

This chapter describes the specific procedures used for conducting the research. It is a qualitative research method and a case study research design. The total population sampling techniques is used and there were totally 6 participants in this study. For the research instruments, there were Simi-structure interview, voice recorder in the phone, and NVivo software. For the data collection procedures, first the researcher sent the consent forms to the school director and the teachers. There were 3 face-to-face interviews and 3 online interviews, and each interviews last for 30mns. There were also 2 virtual classrooms observation. There were three steps for the data analysis, first was developing and applying code using NVivo Application, second was identifying themes, pattern, and relationship and third was summarizing data. The next chapter is going to discuss the result from the interview and the virtual classroom observation.

CHAPTER 4: RESULT AND DISCUSSION

This study aimed at providing rich and in-depth description of how technology can be integrated in the English language classroom. In this chapter, the researcher summaries the key ideas and the research findings which encompassed of the main themes covered in the research questions. This is followed by the discussion with the prior research related to the study being investigated. The chapter begins by describing the classroom context along with the description of the current case study school policy. During the course of data analysis, the results of the interviews, focus group discussion, and video footage from the recorded lessons began to emerge into different themes. Although these themes are discussed individually, it is acknowledged that they are complimentary, interrelated and overlapping. The themes are presented here according to the categories outlined below. In order to preserve the anonymity of the teachers, they are referenced as the following pseudonyms: Participant A, Participant B and so on.

4.1. Description of the Data

During the data analysis process, various themes and common threads gradually emerged. The data were carefully verify using an iterative approach before categorized into different themes. For instance, the video recorded lessons were observed several times using the interview transcribe to look for the confirmation of the specific classroom activities. The themes that appeared are mainly related to the three research questions.

Research Question 1: How does technology be integrated in teaching and learning English?

One of the main interests of the study was to investigate how the teachers apply technology in their teaching. The result from the interview showed that all the participants

use technology in their teaching most of the time. The most common technological tools are LCD projector, Computer, Phones, Power Point, and other applications and websites such as Google, YouTube, X-reading, Kahoot, Telegram and Messenger. Moreover, since the school locked down, all classrooms have moved to online class which meant that the teachers and the students use technology 100% for pursuing their curriculum.

As one participant stated that, "In fact, we use ICT a lot in our teaching. In our classroom has one LCD projector for showing slide or video resources. Moreover, during Covid-19, since April until now we are teaching through technological tools and some applications such as Telegram, Facebook Messenger, and sometimes we join meeting by using Zoom. So, meaning that we use technology 100% for teaching."

Suggested by another participant included that: "Technology is used every day before Covid 19 and now during Covid 19 we use even much more. The program that we use the most is Extensive Reading. The second program is Kahoot. At NGS, we have enough teaching materials, LCD projector, we use Power Point and YouTube for showing and teaching students. And we also have more programs for playing games and so on."

Furthermore, 5 participants are from the normal public schools and they admitted that they rarely or never use ICT tools in teaching at all due to the lack of teaching materials, poor internet connection, and the classroom environment.

"At previous school I never use any technology because we don't have projector and computer. We only have whiteboard and marker. When teaching listening, I just read for them."

"In my previous school, I didn't use ICT at all. I taught through the materials that we have in the classroom such as marker and whiteboard. We didn't have speaker so when teaching listening, I read for the students. I have created some groups chat for them too, but most of the students didn't have smart phones and the internet was not good. So, it was not active."

"At the previous school, we didn't have LCD projector and speaker we have to buy by ourselves."

"At my previous school, I used ICT tools sometimes but only some students can follow. For example, I used Google test and only some students could do because they didn't have phone. They have to borrow phone from their friends. Besides, every lesson had to write on the board."

There was only one teacher who had experience teaching at the university before teaching at NGS claimed that there is no different between NGS and at her previous work place because there were enough teaching materials just like NGS: "I use technology in my teaching but I don't think it is a modern technology because it is just normal that everyone uses it. The use of Power Point, LCD projector, or the use of some website for helping our teaching- it is just simple. I used to teach at the university and there is no different because the school has LCD projector and other things just the same. The only different is university level and high school. But if we compare with high school, NGS is more modern."

> **Participant A:** *"All the contents of the lessons, listening, writing, speaking. It depends on the teachers whether how much time and effort they spend preparing for their work. Related to teaching with technology such as showing pictures, videos, ... they are more interested and enjoy with their learning. They study very fast and easy to understand and remember the lesson longer."*
>
> **Participant B:** *"Yes, err...almost all the contents but sometimes speaking we don't often use because speaking we can put the topic on the board. Then, we assign the students to discuss in group. After that, we call them randomly to express their ideas for everybody. I think the students here are smart. Whatever we assign them to do, they learn very fast and seem to be very active. From one stage to another, they have more time to practice than the teacher explanation which is more students center approach. Their results are very good. When I assign homework for them, most of them get high score 8-9-10. Few students only that get 6 or 5. And they rarely fail the test."*
>
> **Participant C:** *"Mostly the lesson related to practice reading. They improve a lot and they enjoy that way than just follows the textbook. They are very active, pay attention and engage a lot in each activity. Most of the students are very good at ICT even better than me. Sometimes when my*

computer errors, students can help me. The result of their study is very good, but there are still students fail the test because the students' ability is different."

Participant D*: "Mostly related to listening and reading, especially extensive reading Another one is when I review lesson, I use game such as Kahoot for them to play. With technology students learn faster. Especially searching for the information. We just assign the topic for them and can search for the information and can present to the class. Sometimes, I just drop the topic for discussion in their chat group and they will be preparing for the next class. For extensive reading they improve a lot. They read a lot. Some students can read 6-7 book in just an hour. When we teach wit technology, it is interesting. When we show them pictures, they understand faster than what we tell them."*

Participant E: *"Mostly when I focus on teaching grammar. I need to use technology to search for other supporting materials such as exercise for them to practice. For extensive reading they improve a lot. They read a lot. Some students can read 6-7 book in just an hour. When we teach wit technology, it is interesting. When we show them pictures, they understand faster than what we tell them.*

Participant F: *"Err… I think all the contents can be taught with ICT because more or less students enjoy learning that way than just sitting passively listen to the teacher most of the time. However, the challenge is that we don't have much time to prepare the lesson and materials."*

The result from the interview has concluded that technology can be integrated with all the contents of the lesson. The students seem to enjoy learning with the aid of ICT tools and their result are also very good.

Research Question 2: What are the challenges of technology integration?

The teachers were asked to indicate the challenges they faced during the use of ICT when teaching English. Through a thorough modified of the two-round data analysis process (the interview transcript and the online classroom observation), the finding from this study identified seven challenges within technology use in English language classroom such as poor internet connection, no electricity, technical error, time consuming, less confident, creating online resources, and the inadequate amount of training. The research by Richardson (2011), also revealed similar issues regarding the challenges to adopting the

use of new technologies in teaching such as hardware incompatibility, complexity; language barriers; the lack of electricity, computers, Internet access, and of practice for trainees; and the inability to understand the advantages of these technologies.

The result from the interview revealed that all the teachers have different greatest concerns over the use of ICT in their teaching and each participant has their own possible solutions over those problems.

> **Participant A:** *"The greatest concern is when the electricity cut off. The class was noisy before I can control the situation and turn to study the lesson in the text book."*
>
> **Participant B:** *"I have problem with making video lesson. For example, it is difficult when I made mistakes and don't know how to edit. So, I have to take a video again. Another problem is when my computer error I cannot fix it. The only solution is I need to approach ICT teacher."*
>
> **Participant C:** *"The greatest concern for me is I'm not confident with the use of ICT. Here, I received the training related to the use of Google Classroom, create test and lesson in NGS Mobile. And recently I received the training about wiki school also but I'm not yet know and not yet try."*
>
> **Participant D:** *"The most concern is the electricity cut off. When we prepare everything and when we arrive in the class there is no electricity. So, we have to find other things to teach. Sometimes students can go to x-reading because it doesn't need electricity."*
>
> **Participant E:** *"The challenge is that I know only the things that I already know and the things that I don't know are still don't know. There is no update. In fact, there are many modern ways but we just don't know. One more is the Internet service is not good or the electricity cut off and we waste times when it doesn't work properly. Another challenge is time constraint. We need to spend a lot of time preparing and researching. The greatest concern for me is when I use try other kinds of technology, I have to explain them how to use it first. So, it sounds like I am teaching them how to use technology rather than the content that I planned to teach"*
>
> **Participant F:** *"My greatest concern is when the computer error or cannot connect with the projector. It's a waste of time trying to fix these problems. Sometimes, I can fix it but sometimes cannot. So, I have to be flexible to find other ways or lesson to teach. However, I have wasted lot of times already."*

The result from the interview also concluded that the participants have less concern with the students' ability over the use of ICT because they are very good at ICT and familiar with studying with ICT. They seem to enjoy studying with ICT rather than just focus mainly on the contents in the textbook and their results are very good.

Regarding to the respondents' answer over their greatest concern when integrating ICT in their teaching, 5 participants claimed that they have received a lot of training related to the use of ICT tools and the use of some applications and it is very useful for their teaching. Except one trainee who used to teach at the university level claimed that the trainings were not enough:" For me I think the trainings are not enough. Everything that I know mostly come from my previous training or the experiences that I have before."

Research Question 3: What are the teachers' perceptions over the integration of technology?

Concerning the third research question, findings of this study demonstrates that all the respondents seem to have a positive attitude toward the use of ICT as teaching aid in their classroom. They have the intention to integrate technology in their teaching significantly more once teaching is back to normal. They motivated this by claiming that the use of technology in teaching helps them a lot such as writing lesson plan, finding resources, engaging students' attention, communicating with students, and helping students learn faster. This finding was supported by a research by Ungar and Alkakay (2011) which found that the teachers' attitude toward change was positive and the highest scores in the attitudes towards change index were found for the behavioral attitudes clearly indicates the readiness of teachers who participated in the implementation project to actively work for creating change.

> **Participant A:** *"First, I felt complicated and worry that I couldn't do it. But I never gave up and tried to learn more by attended the training. And*

now I'm ok and the students are happy to study when I used ICT for teaching them rather than just follow the textbook. The training that I used to have were very useful, but I wish to have more chances to be trained related to the use of modern technology."

Participant B: *"Er... I like it almost 90%. I like teaching with technology more than without technology. I like it because it helps me a lot such as writing lesson plan. Before I use hand writing and it take time and the letter is not good. So, the use of Microsoft Word, Excel, Power Point can help me a lot".*

Participant C: *"For some programs such as power point… is ok. But for the first time I was not confident with some applications such as Wiki School, Extensive Reading, or Kahoot, but now I'm ok. The students enjoy studying with ICT because it is fast and fun. There are some pictures and interesting things to show them rather than what we just talk and explain them. I think ICT is very helpful for our teaching, but when we use too much it can be passive with the students. So, we need to be active with our students too. ICT is important and even I don't know much but I'll try to study more. I can improve my knowledge and help my teaching even better. So even though it is hard, but to teach better we have to try".*

Participant D: *"3 years ago, it was hard for me. I didn't know how to apply my teaching with LCD projector, computer, phone and hard to teach and complicated. I felt writing the lesson on the board and let them discuss and take note is easier because I didn't need to prepare much. But now when I go to teach without computer I cannot teach. If I don't have a computer, I cannot call students' attendance, I need to show my lesson on the slide. When I write the lesson on the board, I feel not comfortable".*

Participant E: *"I think it is very good. First, it helps students learn faster, easier to understand, and remember the lesson. When we don't apply technology in teaching, they feel bord and don't want to study. And the result is very good. The most successful for English team is x-tensive reading."*

The result from the interview also concluded that the teachers are willing to learn and wish to have more opportunities to be trained and use modern technological tools for teaching as there are some responses claimed that the way they integrate ICT presently are just simple and not as modern as other countries during this digital world.

4.2. Lesson Observations

Since the school locked down, classes were moved to online platforms. This section presents the online classroom observations of the two English teachers from two different levels, one form lower secondary level and another from higher secondary level. Although

several aspects of reliability are ensured and discussed in this paper, it is essential to emphasize that this study was conducted in a critical situation during the pandemic with limited time and high workload for the teachers. Taking this context into consideration, the researcher used some observation checklist to evaluate whether the outcome of the online teaching practices is as valid and reliable as the interviewees' responses. The observation procedures were divided into three phases:

Phases one: Pre-Observation

The researcher contacted the individual teacher to ensure the possibility and to confirm permission for the observation. There are some briefly explanations about the purpose of digital online observation and request permission for recording the video for further use during the data analysis. The teachers provide the lesson plan and some information about the classes.

Phases two: Observation of the Lesson

The researcher received the link to enter the online classroom with microphone and video muted mode, and observed how the teacher and the students used online activities during their classes. The lessons were recorded in order for the researcher to view during data analysis process. The teachers reassured the researcher that the observed lesson were the teachers' typical online lesson with various online activities in the class.

- The classes were conducted 100% online. The teachers used zoom platform for running the lesson. The lessons were showing on the screen with some highlighted tools for explaining the students. The teachers also used some application such as Extensive Reading program, Power Point slide presentation….

- The teacher started the lesson just the same as real classroom practices such as greeting the students, checking attendant, discussing some homework, and reviewing the lesson.

- The teachers have some classroom rules for controlling students. For example, if the teacher called the students' name for two times and if there is no answer the students will be absent during the session.

Phases three: Observation Feedback

The researcher negotiated some private comments and confidential setting for the observation feedback using online discussion through Telegram. The teacher explained some difficulties that they encountered during the lesson the same as what they have already raised during the interview.

4.3.   Summary of the Chapter

To sum up, after synthesized the result from the interview and the virtual classroom observation, there was significantly suggested that technology plays a crucial role in language teaching especially during the Covid-19 pandemic. The teachers seemed to have a very positive attitude toward the integration of technology in their teaching. Although, they encountered many challenges and barriers but those were not the problem that stop them from applying ICT. In contrast, the individual teachers, school director, minister and all the stakeholders are trying even harder to explore variety of ways to help deal with those challenges. The next chapter is going to discuss more about the conclusion of this study and some recommendations for further practice.

CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.1. Conclusion

To sum up, the findings from this study concluded that all the English language teachers at the case study school tend to depict a positive attitude toward the integration of ICT in their teaching. Technology has been adopted in the ELTs classroom in a variety of ways. The ICT tools at the target school environment were designed and utilized effectively. The utilization of digital presentation and display tools such as presentation, audio file, videos, documents, chart, and other information are used properly. Moreover, the use of online activities such as video call, group chat, discussion board, and online research tasks had a positive effect on the students learning outcome. The most common type of technology used were computers and tools like overhead projectors are available in the classroom.

Although, teachers have got some trainings and possess skills in operating those technology tools; however, it is claimed that even though the trainings are a lot, but still not enough. The training related to the use of modern technology and new ways of integrating ICT are needed because the current way of teaching is just simple during this 21st century world. Moreover, the information gained from this study also provided that the challenges with integrating technology such as poor internet connection may result in teachers' avoidance of using ICT and failed to offer students the learning experiences with technology. To conclude, there should be more actions that should be taken to promote the use of ICT in teaching English.

5.2.   Recommendation

Since this study mainly focus on the 6 English teachers' perception and challenges of integrating ICT in their teaching, further research should explore more specific on the students' perception toward the use of ICT with their learning. Moreover, the continued research should include a larger sample size and conduct some real classrooms observation.

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APPENDIX A: QUESTION GUIDE FOR TEACHERS

Part 1: Biographical Data

Name: _____ Age: _____Gender: _____

Position: _____ Number of years working as a teacher: _____

1. How many years have you been a teacher?

2. How many years have you been teaching at NGS?

3. What is your highest level of schooling?

3. What is your role in this school?

4. How many hours do you teach per week?

5. What grade are you teaching?

Part 2: Technology Integration

I. How does technology be integrated in teaching and learning English?

1. How often do you use technology as part of you teaching?

2. During your work at your last school, how often did you use technology as part of your teaching?

3. Would you please identify the kinds of technologies you have used in your instruction?

4. Please describe some of the contents in the lesson that require the use of technology.

5. Please explain the process that you have to prepare before applying technology in your teaching.

6. Please explain the students' progress during you were applying technology in your teaching.

7. Please explain the students' results after you have applied technology in your teaching.

II. What are the challenges of technology integration?

1. When you use technology in your teaching do you feel there are certain barriers that do not allow you fully implement technology into classroom instruction?

2. What is your **greatest concern** for integrating technology into the classroom?

3. What is your **least concern** for integrating technology into the classroom?

4. How do the barriers you discussed in question 1, affect your ability to implement technology in classroom instruction?

5. What can be done to help solve the barriers that may prevent you from successfully integrating technology?

6. Recall a time when you may have encountered a barrier to integrating technology into instruction. How did you handle this issue?

7. Does the amount of training you receive sufficient for the technology integration in your classroom?

III. What are the teachers' perceptions over the integration of technology?

1. Are you comfortable using technology in the classroom? Why or why not?

2. Are students enjoy and receive your technology use in the classroom? Does it seem important to them?

3. What is your idea over the use of technology in the classroom? Why?

4. How can technology training be made more beneficial and help eliminate barriers?

5. Is there anything else you would like to add about technology?

APPENDIX B: OBSERVATION FORM

Observation Checklist: (darkens bubbles that are observed)

○ Participant demonstrates continuous use of technology throughout classroom instruction.

_____

_____

○ Participant demonstrates confidence while using technology for classroom instruction

_____

_____

○ Participant seems to be knowledgeable about using technology.

_____

_____

○ Participant seems to be easily frustrated while using technology for classroom instruction.

_____

_____

○ Participant was able to troubleshoot if problem occurred while using technology.

_____

_____

○ Participant is able {to answer questions students may have about using technology.

_____

_____

Empowering educators with ethical and evidence-based practices