COLLEGE STUDENTS' BEHAVIOR INTENTION AND INFLUENCING FACTORS ON E-LEARNING PLATFORM OF HIGHER EDUCATION IN PHNOM PENH CITY, CAMBODIA

By

PHON SOPHAL

A Dissertation Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy in Teaching and Technology

Graduate School of Business and Advanced Technology Management

ASSUMPTION UNIVERSITY OF THAILAND

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APPROVAL

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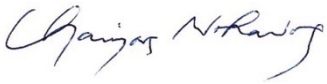

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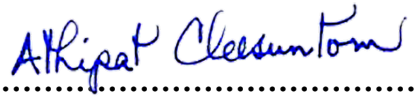

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ABSTRACT

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Name: PHON SOPHAL

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A new era of education in Cambodia is being inaugurated via e-learning, offering access, flexibility, and cultural relevance never before possible. Investments in digital infrastructure, instructional materials, and digital literacy initiatives become essential as the nation grows to guarantee that the advantages of e-learning are experienced across every element of society. The path Cambodia is taking to become a digitally empowered education system is evidence of the transformative impact of e-learning in developing countries. This study aimed to explore the perceptions of undergraduate students regarding the Microsoft Teams e-learning platform in a public institution in Phnom Penh, Cambodia. The research also sought to assess students' perspective about Microsoft Team for e-learning platform in the context of Unification of Theories of Acceptance of Usage Technology-2 (UTAUT2) framework. These aspects included performance expectancy, effort expectancy, social influence, facilitating conditions, price value, habit, trust, behavior intention, and satisfaction. The study focused on understanding the levels of trust and satisfaction that undergraduate students had in using Microsoft Teams for teaching and learning.

In this study, a total of 476 undergraduate volunteers participated in the study. The research utilized structural equation modeling (SEM) for hypothesis testing. Notably, the study identified a significant finding: Satisfaction did not mediate the relationship between Trust and Behavior Intention.

The variables that exhibited a statistically significant influence on Behavioral Intention were Habit ($p < .001$) and Social Influence ($p < .05$). Additionally, Trust demonstrated a statistically significant influence on Satisfaction ($p < .001$). These results offer insightful information on the variables affecting undergraduate students' opinions and adoption of the Microsoft Teams e-learning environment in a public university. This study advances knowledge on how students' behavioral intentions and satisfaction in the setting of e-learning are influenced by trust, habit, and social influence.

The influence of habit on behavioral intention, with a p-value of less than 0.001, underscores the importance of routine and familiarity in students continued use of Microsoft Teams. The habitual integration of the platform into their academic routines signals a positive trend, emphasizing the impact of consistent usage patterns on sustained behavioral intention. Social influence, with a p-value less than 0.05, emerges as another influential factor shaping students' behavioral intentions toward Microsoft Teams. The support and influence from peers, instructors, and the broader academic community contribute significantly to the platform's acceptance and adoption. Moreover, the statistically significant influence of trust on satisfaction, with a p-value of less than 0.001, emphasizes the critical role trust plays in shaping students' satisfaction levels. Trust in the platform, its security measures, and its reliability directly contribute to a positive and satisfactory e-learning experience. These results collectively advance our understanding of the complex dynamics influencing students' perceptions and behaviors in the context of e-learning.

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Throughout this scholarly pursuit, the accomplishment of this dissertation represents the result of collaborative efforts and invaluable assistance from numerous individuals who have been significant in molding this investigative journey. It is with deep gratitude and appreciation that I, the researcher, would like to extend my heartfelt acknowledgments to those who have contributed to the successful realization of this dissertation. First and foremost, I express my sincere thanks to my esteemed program director, Asst. Prof. Dr. Thanawan Phongsatha, who has unwavering commitment with inspiration and best advisor, scholarly guidance, and insightful feedback throughout the entirety of this research process, with her expertise, encouragement, and constructive critiques have been instrumental in refining the scope and depth of this dissertation, making it a more robust and meaningful contribution to my dissertation. I am also profoundly grateful to Dr.Satha Phongsatha who has suggested research methodology, whose dedication to academic excellence has provided a conducive environment for intellectual growth and exploration of research analysis, and Dr. Athipat Cleesuntorn for the great encouragement and advice.The resources, facilities, and scholarly atmosphere have been instrumental in facilitating the research endeavors that culminated in this dissertation. I also would like to convey my appreciation and gratitude to Dr. Naree Aware Archwarin and Dr. Laura M. Brahmakasikara who had guided me in my Ph.D. path with their sincerity and patience. With their expertise and valuable insights have enriched the intellectual discourse surrounding this research. Their constructive criticism and guidance have been indispensable in shaping the methodology, analysis, and conclusions of this dissertation.

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TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ABBREVIATIONS	EQUIVALENCE
AI	Artificial Intelligence
ACC	Accreditation Committee of Cambodia
ASEAN	Association of Southeast Asian Nations
BI	Behavioral Intention
BELS	Blended E-Learning System
COVID-19	Coronavirus Disease 2019
CMS	Course Management System
EE	Effort Expectancy
E-Learning	Electronic Learning
FC	Facilitating Conditions
GAFE	Google Apps for Education
GPL	General Public License
HEIs	Higher Education Institutions
HM	Hedonic Motivation
HB	Habit
IoT	Internet of Things
ICT	Information and Communication Technology
ICHEI- UNESCO	International Centre for Higher Education Innovation of Unesco
IT	Information Technology
KOICA	Korean International Cooperation Agency
LMS	Learning Management System

LCMS	Learning Content Management System
MoEYS	Ministry of Education Youth and Sport of Cambodia
MOOCs	Massive Open Online Courses
MT	Microsoft Team
MOE	Chines Ministry of Education
OECD	Organisation for Economic Co-operation and Development
PE	Performance Expectancy
PV	Price Value
PU	Perceived Usefulness
PEOU	Perceived Ease of Use
RULE	Royal University of Law and Economics
RGC	Royal Government of Cambodia
RQ	Research Question
RO	Research Objective
SDG	Sustainable Development Goal
SAP	System Analysis Program
SI	Social influence
TAM	Technology Acceptance Model
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UTAUT2	Unified Theory of Acceptance and Use of Technology-2
VLE	Virtual Learning Environment

CHAPTER I

INTRODUCTION

E-learning platforms for higher education have become an important tool for delivering educational content and facilitating learning experiences in the digital age. These platforms, which are often integrated with learning management systems (LMS), offer a wide range of resources. Including multimedia lectures Interactive quizzes, discussion boards, and virtual classrooms which can be accessed anytime, anywhere with an internet connection (Al Lily et al., 2019). The platform helps universities and colleges expand access to education. Supports a variety of learning styles and promotes lifelong learning which is one of important thing for new generation currently. It also supports individual learning paths. Adaptive assessment techniques and real-time feedback mechanisms promote student engagement and academic success (Sangra et al., 2015) as higher education institutions continue to embrace online and blended learning formats. E-learning platforms therefore play a key role in enhancing the quality, flexibility, and comprehensiveness of education delivery. E-learning is seen as a new phenomenon in higher education in the whole of Cambodia during the last two decades, while Cambodia is developing strategy planning related to information and communication technology (ICT) for higher education institutions. It had never happened in the history of education in the nation. In Cambodia, online learning isn't common, and there are numerous issues when it comes to executing this learning mode in the education system (Heng, 2021).

Likewise, in nations around the world, teaching has been mainly in-class or in-person-based or traditional classes which bring student interaction much better than online classes. Some advanced developed country has accepted and already applied e-Learning in the last decades, which makes them confident with e-Learning to higher education institutions both public and private. The developed countries are successfully

implementing the E-learning system besides realization of its massive benefits (Salloum et.al., 2018). In truth, COVID-19, widespread Cambodia, constrained higher education educators to apply e-Learning or separate learning for instructing and learning. On March 13, 2020, it critically reported school closures to avoid the spread of the infection within the community throughout Cambodia (MoEYS, 2020). As of June 2020, the Ministry of Education, Youth, and Sport of Cambodia (MoEYS) reported to all higher education institutions that they should proceed with online learning within the modern term (MoEYS, 2020). A few colleges and universities have rapidly adjusted blended learning strategies, whereas other higher education institutions (HEIs) took weeks to switch to online learning for the remaining weeks of the term or semester (Javier et al., 2021).

On the other hand, the fourth industrial revolution continues to shape the global economy, education system adaptation, and workforce in all countries around the world. Currently, the developing country like Cambodia is facing uncertainty over how to prepare young people for a new future of work and for the adaptation and adoption of Industry 4.0, including e-learning, especially new generation with technology in teaching and learning. Of course, the fourth industrial revolution is fundamentally changing the way we live, work, study, teach, and relate to one another from different perspectives and different backgrounds in life. It is really characterized by the conversion of developing innovation breakthroughs, covering wide-ranging areas such as artificial intelligence (AI), which people start to use for their daily work, mechanical autonomy, robotics, and the internet of things (IoT), Information Communication Technology (ICT), online learning, e-learning platforms, autonomous vehicles, 3D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing, to name a few. In particular, the e-learning platform in higher education institutions in Cambodia is still new in terms of orientation and implementation in teaching and learning.

The world has become more complex and competitive in various sectors, driven by rapid changes in technology and, in particular, 21st century skills such as the use of digitalization update tools, education material support, education system updates with new technology integration, and various e-learning platforms. That is why it is critical for Cambodian students and teachers to consider how to prepare for e-learning on a specific platform for their studies. Furthermore, the COVID-19 pandemic has changed the education system in Cambodia forever, not just after the COVID-19 pandemic. It is showing that the world after COVID-19 will require higher digital skills, online applications, e-learning platforms for education, and digitalization adaptation for young people and university students. Of course, the digital education is now is one of top priority and most of education institutions are applying and set their priority to consider in strategic planning. According to Minister of Education Youth and Sport of Cambodia, H.E Dr.Hang Chuon Naron, had address in 24th August 2022 that Cambodia has moved 10 years ahead of time in the use of technology in education by transforming COVID into opportunity and higher education institutions were able to apply e-learning during Covid-19 and continue use e-learning or online learning in their own institutions. Therefore, digital education focuses on: (i) improving existing digital platforms, and establishing digital and remote education centers, (ii) producing instructional videos for core subjects, and create e-learning system, (iii) integrating the use of technology into teaching and learning, (vi) developing digital infrastructure in schools, such as digital room, Learning Management System; and (v) implementing digital education programs such as coding, app, robotics, etc (Naron, 2022).

Of course, the information and communication technologies bring a lot of opportunities to the higher educational settings in Cambodia, especially during the pandemic, when it was a chance to allow students and teachers to adopt new technology

of online in teaching and learning. New technologies in education are applied in many ways in Cambodia higher education, institutional, both private, and public. One of such technologies in higher education institution in Cambodia is the e-learning or distance learning, which allowed both lectures and students to engages with online teaching and learning by using Zoom, google classroom, google meet, and Microsoft team for the platform of usage in online classes. On the other hands, tools of social communication are included to use for sharing and communication related to the online classes. According to Sopheap (2020), many teachers in Cambodia use social media and online tools to teach and share information with students because their university doesn't have a specific Learning Management System (LMS) or e-learning platform. They use platforms Like Facebook, Telegram, and Google Classroom to interact with students**,** share documents, have discussions**,** and offer learning opportunities (Sopheap, 2020).

As modern technology has been productizing and introducing many and diverse technological tools for education since the mid-20th century, those materials have been used for comforting teachers and students. New ways of teaching and learning have been employed and easy for teachers and students, e.g., video, recorded lecture, virtual classroom, pre-recorded presentation and online classrooms, which are usually used in most advanced developed countries and many developing countries too. Cambodia is one of the developing countries in the region that has been tied to adopting digitalization in its education system at different levels, especially during the COVID-19 pandemic, which is an opportunity to shift education online. However, none of these teachings and learning officially introduced worldwide and substituted the traditional class learning, the in-person or in-class learning at all. In the 21st century, university students must also adopt technology in learning and teaching with flexibility, leadership, initiative, productivity, and social skills since new technology in learning and teaching at universities cannot be

separated from these attributes. Higher education in Cambodia must give attention to innovative teaching and learning methods in order to prepare for the Global Citizens for Education. For Cambodia in particular, there was not familiar with e-learning, online learning or distance learning until the outbreak of the COVID-19 which existed in December 2019 and has affected Cambodia since January 2020, since then the Royal Government of Cambodia through Ministry in charge of education allowed to have e-Learning and demanded education institutions in all levels up to university to have policy on e-Learning or distance learning and submit documents to the Ministry in charge of education especially to Ministry of Education Youth and Sport of Cambodia (MoEYS, 2020) to have approval before online platform class can be operated. Heng (2021) said that educational institutions have to switch to online learning because of the current situation. Even though learning through the internet is not new, the switch to online learning has brought about big problems for education all over the world, especially in places like Cambodia where there is a lack of resources. Schools, teachers, and students in Cambodia were not prepared for this sudden change from traditional teaching and learning methods (Heng et al., 2021).

The quality, inclusion and equity in education for Cambodia higher education institutions are very important before, during and after the Covid-19 pandemic. There are taking role as significant considerations to include all Cambodian people with opportunity to study in Higher Education institutions. The Government of Cambodia has recognized the importance of Higher Education and has taken a number of steps to expand access. According to Cambodia's Minister of Education, H.E. Dr. Hang Chuon Naron, the capacity of a nation's human resources in 21st century skills, including the strategic use of Information and Communication Technology (ICT), is what drives a nation's competitive advantage. Such capabilities facilitate the transformation of the national economy from

the trade of commodities to the trading of high-end knowledge-based products and services by assisting citizens in producing new information and translating this knowledge into novel applications for our society (MoEYS, 2022). The Policy for Higher Education Vision 2030 in Cambodia states that the MoEYS will use e-Learning to support the delivery of education services to all sub-sectors in education for students as well as for institutional human capacity development and lifelong learning. Higher education institutions in Phnom Penh City are the focus of efforts to implement and improve the standard of instruction through e-Learning platforms. Meanwhile, Cambodia has effort to develop and applied ICT as well as e-Learning in education with the gradual growth step by step. However, the rapid change of digital or technology in education for Cambodia higher education needs time to develop and training for human resources. In fact, e-Learning is still new for Cambodia; perhaps the most important resource required to accomplish these objectives is skilled human capital with e-Learning knowledge and orientation. While Cambodia is making an effort to fill this demand by conventional methods, this may not be the best or most efficient solution. E-learning has been proposed as a substitute strategy that can get around many of the difficulties in reaching marginalized pupils. The number of students who have access to online learning is still low (UNESCO, 2020), despite the Ministry of Education, Youth, and Sport's (MoEYS) efforts in Cambodia to provide these opportunities by disseminating video lessons via television and other online platforms like the MoEYS Facebook page, YouTube channel, and e-learning website to promote new ways of teaching and learning to all students throughout Cambodia (UNESCO, 2020). According to the Ministerial Forum in 2018, Moscow, the Federation of Russian, the Global Dialogue on ICT and Education Innovation Toward Sustainable Development Goal 4 for Education, and UNESCO 2019, there has been a significant and rapid change in the way that all students receive

educational content since the turn of the 20th century. Previously seen as experimental, the use of the Internet and web-based teaching resources is now seen as an essential component of the overall teaching-learning process. In order to satisfy the needs of students with all types of disabilities, including those who have visual impairments, the utilization of digital technology for remote learning and networking, as well as web-based teaching and learning techniques, is promising (Jiang et al., 2019).

Obviously, higher education students in Cambodia have begun to use new technologies for the study of their related skills or majors since last few years, especially online classes or e-Learning since 2019. We can consider that currently e-Learning is regarded as an important tool in the teaching and learning in higher education, both public and private institutions. It is encouraging the use of modern technologies in education, innovative approaches to teaching and learning, and the development of positive habits among college students. It is extremely concerning that the technological divide between those who can use technology and those who cannot is growing (Jiang et al., 2019). Most students in higher education are using new technology in their learning, but the gap in knowledge or awareness of technology usage is still a big gap, especially for poor students and those who come from remote areas in Cambodia. Even though, most students and instructors are familiar with new integration of technology in Cambodia education system currently (2021) but some specific platforms and innovations of usage are very significant for both students and instructors to be aware.

Technology for education in the twenty-first century includes Moodle, NEO, Microsoft Team (MT), and other platforms such as massive open online courses (MOOCs), which are open source for technology in education in online or e-learning. Instructors in higher education see MOOCs as a way to connect with more students from a variety of backgrounds (Watson et al., 2016). Supporters of MOOCs argue that they can

help both students and teachers (Hew et al., 2014), increasing the amount of knowledge available to students, reaching more students, and enhancing the reputations of teachers (Zhu et al., 2018). In the field of education, where advances in teaching and learning are frequently reported in university news releases or scholarly publications, the public discussion that followed this MOOC was rare (Siemens et al., 2014). Therefore, the use of modern technology in the educational system, specifically for e-learning platforms, must be better understood by both students and teachers. This is especially true for higher education institutions in Cambodia.

1.1 Background of the Study

Since the middle of the 20th century, Cambodian higher education has had many ups and downs as a result of political concerns and the country's protracted internal civil war. As Cambodia is one of country under colonize from French and most of education system remain using French system in education. After colonialism ended, higher education in Cambodia faced significant obstacles, particularly during the civil war and the Khmer Rouge era, when education was completely eliminated. According to earlier research, Sok (2018) stated that the education system was neglected during French colonization and that it wasn't until 1953, when Cambodia gained its independence, that it started to develop a higher education system. This process intensified in the 1960s before the nation descended into civil war in the early 1970s (Sok et al., 2018). During the Khmer Rouge era (1975–1979), the subsector was completely eliminated, and it was afterwards reconstructed mostly by a very limited group of educated Cambodians. Only eight public HEIs and about 10,000 postsecondary students were present in Cambodia in 1991. Low staff pay and qualifications, along with inadequate or nonexistent equipment, plagued libraries, laboratories, and other teaching and research facilities (Leang et al., 2019).

As it worked to reconstruct its educational system in the 1980s and early 1990s, Cambodia initially did not place a significant priority on higher education. The provision of elementary education was being consolidated. An increase in general education graduates during the late 1990s has resulted in a rise in demand for higher education. In order to meet this demand, a policy initiative built on the idea of public-private partnerships was introduced. The first private higher education institutions (HEIs) were founded in 1997 as a result of this approach. Since then, particularly since the middle of 2000, the number of private universities has significantly expanded, reaching 64 by 2014. Additionally, fee-paying courses were launched in public HEIs. On the one hand, this development has increased the opportunities for a sizable group of students to further their education, but on the other, it has brought to light the significant and complex challenges that the entire higher education system and specific universities, both public and private, have to deal with during this period of rapid growth. Although the Accreditation Committee of Cambodia (ACC) was established in 2003, the management of higher education in the nation is still challenging and requires clarification and strengthening across several key dimensions, including the strengthening of institutional and organizational capacity. To handle the rapid expansion of the last ten years and to foresee what will be needed to manage it in the years to come, it is most necessary to increase human capacity in the sub-sector. As a result, there is now widespread access to higher education in Cambodia, radically changing the country's higher education environment. In 2014, there were 39 public HEIs, up from 8 in 1997, and there were more than 200,000 students enrolled in higher education, up from less than 10,000 in the early 1990s.

Additionally, the congress and policy 2019–2023 presented by the Ministry of Education, Youth, and Sport of Cambodia state that between 2014 and 2018, the number

of HEIs expanded from 110 to 125 and up to 133 (02 February, 2023), with 49 of them being public and 84 being private. Along with the capital city of Phnom Penh, these were spread throughout 20 provinces. The number of students enrolled dropped from 249,092 to 211,484, a 15% decline. The number of lecturers climbed from 8,953 to 12,539 (a 40% increase), while the number of education workers in higher education increased from 11,362 to 16,167 (a 42% increase). In 2018, there were 1,947 lecturers with bachelor's degrees, which is equal to 15.5% of all lecturers; 8,751 academics with master's degrees, which is equal to 69.8% of lecturers; and 1,090 lecturers with PhDs, which is equal to 8.7% of lecturers. Based on this incremental development and update from MoEYS, it is clear that Cambodia is growing and paying close attention to working together to reverse years of decline and stagnation in the model field of technology in education.

In fact, the 21st century is often regarded as an era of technology, especially in Cambodia, which is one of the few developing countries to integrate technology into education, specifically e-learning in the higher education system. On the other hand, technology today plays a very important role in our lives, not just for study in economics but also for daily living. The world changing in technology with digitalization is seen as a foundation for growth in Cambodia, with great opportunities for development for higher education students to adopt e-learning for lifelong learning. Furthermore, the technology, especially e-learning, makes our work and study much easier and less time-consuming in our daily lives, even busy with work and still access study through e-learning. On the other hand, the Ministry of Education is collaborating with the Unesco-ICHEI's International Centre for Higher Education Innovation to diversify higher education by adding more programs with a digital focus. The government's strategy for the development of the digital economy in Cambodia includes the digital education initiative. The scheme will focus on digital education enhancement through networking and

exchanging digital knowledge. The ministry aims to achieve its fourth sustainable development goal to deliver quality education**.** The Ministry of Education, Youth, and Sport of Cambodia's spokesman, Dr. Ros Soveacha, said they have plans to enhance digital education by using ICT applications as teaching and learning aids. "It aims to ensure that all Cambodian students graduate with knowledge and skills that will help them continue their studies and work professionally." The effort also includes the establishment of an International Institute of Online Education in partnership with at least 10 higher education institutions in Cambodia (mostly state university in Phnom Penh city). Through this announcement, e-Learning and ICT orientation have applied and workshop orientation had conducted to target Higher Education in Cambodia. One way to improve remote learning and the country's gross enrollment rate is through the use of e-learning. Due to the fact that modern technology has made it easier to create and implement e-learning, it has become a popular paradigm in education (Cidral et al., 2018).

Many earlier studies, particularly those conducted during the pandemic from 2019 to 2021, focused on identifying and determining the acceptance of online learning, distance learning, and e-Learning usage in Cambodia's higher education system. These studies mention a variety of factors that led to the adoption of e-Learning in teaching and learning. There are various terms used in relation to online learning as the field and related technology tools continue to develop. The terms "e-Learning," "online learning," "distance learning," "blended learning," "mobile learning," "digital learning," and "hybrid learning" are among them. Despite the fact that all of these terms refer to the use of technology for learning, the ways in which students actually carry out this activity vary very slightly (Heng et al., 2021). On the other hand, it appears that no specific platform is being used or that the technology for online learning has been fully developed. The

demand for more on-the-job training has increased the appeal of e-learning around the globe, and some high-performing businesses even perceive traditional teaching as inadequate to meet the ongoing development needs of their workforce (Cheng et al., 2012).

Knowledge transfer may be facilitated by information systems like e-learning, but their effectiveness ultimately depends on how well they integrate into an existing environment (Padilla et al., 2008). There have been issues with underuse ever since the advent of electronic and digital learning, including mobile learning. Often, this is because systems fail to meet users' needs or expectations (Padilla et al., 2008). E-learning also frequently fails in the absence of adequate support systems, as evidenced by the high attrition rates that are observed in universities when the necessary human feedback is not provided (Nielson, 2011). However, if we take a close look at the previous researchers in the process of using e-Learning platforms with the use of e-learning in Cambodia, we find that even during the COVID-19 pandemic, higher education was still restricted to journal articles and thesis studies. Information orientation and training for both students and teachers are still in the progressive phase. Meanwhile, some private and public higher education institutions in Phnom Penh have been applying e-Learning in their institutions since the last few years already. Of course, Cambodia education consider technology has proved its value in higher education and in applied many areas of teaching and learning especially during the pandemic, but how is the effectiveness, efficiency, quality, and acceptance for both students and instructors in the new technology usage. Through all reasons with historical of education as well as political background, especially development growth of Higher Education with e-Learning application in Cambodia. That is why, this research is very interesting to do more on "Perspectives on an e-Learning Platform for Higher Education in Phnom Penh City, Cambodia".

1.2 Statement of the Problem

Based on the reality of Cambodia conditions, developing countries like Cambodia are not able to use fully e-Learning or unable to get full benefits of e-Learning in Higher Education with new awareness and orientation yet. To develop and apply the new approach to teaching and learning, it could take time and money. The inability of Cambodia to profit from e-learning has prevented many people from pursuing higher education, improving their knowledge, and changing their way of life. While seeking to implement fully working e-Learning systems, certain higher education institutions in Cambodia are unable to reap the rewards. Since e-Learning systems are now necessary, several developing nations like Cambodia must spend money to buy them but are unable to accomplish their intended objectives. Furthermore, it appears that neither students nor teachers have a complete understanding of how to use the e-Learning platforms for higher education in Cambodia.

Costa (2012) asserts that a variety of terms, including e-learning systems, learning management systems (LMS), course management systems (CMS), and virtual learning environments (VLE), are used to characterize educational computer applications. These systems allow students to access course materials in a variety of formats (text, image, sound), as well as communicate with instructors and/or peers through message boards, forums, chats, video conferences, and other means. These platforms offer a selection of customizable features that enable the development of online courses, subject-specific pages, work groups, and learning communities. Along with the pedagogical component, these systems contain a number of functions for recording, observing, and evaluating student and teacher activities, allowing the management of the contents over the Internet (Costa et al., 2012).

An e-learning platform, under Piotrowski's methodology, is a system that offers integrated assistance for six distinct activities: creation, organization, delivery, communication, collaboration, and assessment.Technically speaking, there are various kinds of LMS, some of which are open-source (like Moodle) and others of which are commercial (like Blackboard or WebCT). Regardless of the kind, numerous studies have shown that adopting e-learning platforms has significant benefits; nonetheless, implementing them presents some difficulties for institutions and requires careful consideration of the technological platform. Since e-learning requires strong self-motivation and time management skills, most Cambodian students are left to fend for themselves during their learning activities without anyone constantly encouraging them to do better. In fact, the majority of researchers in Cambodia have not yet addressed specifically the issue of e-learning in higher education, but according to some lectures and professors who teach online courses in e-learning, they have expressed strong opinions about some of the issues. Most of Cambodia students who study in Bachelor Degree, especially first year and second year (also during COVID-19 experiences) not able to attend class regularly and not able to submit homework or assignment on time because of system and knowledge of using system in e-Learning, and self-commitment.

E-learning assessments are new for both students and instructors in Cambodia higher education system because of learning management system (LMS) and willingness of lectures or professors to follow up with students. On the other hand, some researcher and teachers themselves who teach in Phnom Penh city, Cambodia mentioned that online students are more likely to cheat on exams than on-campus students because they take exams on their personal computer or tablet in their own setting. Furthermore, most students (years 1, 2 and 3) are not able to submit their work through the system in the e-Learning platform (Google Classroom or Microsoft Team) because of their limitation of

technology usage, so they try to take photos and send them to WhatsApp or Messager or Telegram to the teacher. That causes a lot of problems with their study and assessment methods. However, the problems provided by the adoption of online learning have been significant, particularly in the rural area of the country, in the setting of Cambodia, which is characterized by low resources, including technology and human resources (Heng et al., 2021). Heng (2021) states that when it comes to the standard of education, innovation capability, competitiveness performance, global talent competitiveness, and scientific publications score, Cambodia is near the bottom of the list in Southeast Asia (ASEAN Post, 2020). For instance, according to the Global Talent Competitiveness Index (Lanvin & Monteiro, 2020), Cambodia is rated 117th out of 132 nations. Out of 132 nations included in the Global Talent survey, the country's information and communication technology (ICT) infrastructure is ranked 100th, while its technology use is 94th.

In fact, the doubts in quality assurance in effective tools in e-Learning of lecture and learning are high consideration. Most of the tools for lecture are not much effective for students because most universities are using free platforms to access for teaching and learning (Google Classroom, Zoom, Telegram, and Microsoft Team). Most student got bored and not able to follow the system as well as attend classes online by zooming meetings. On the other hand, large number of students per class is very difficult to manage the class online, both video conference or zoom class and google classroom management. The majority of university students in Cambodia, both in urban and rural areas, who have received their e-Learning, online learning, or distance learning are paid for their mobile internet access, and most of their enrollment is via mobile, which is why most students find it difficult to study, find it difficult to attend class regularly, do not understand clearly, do not have proper guidance, and do not follow up on study activities in a timely manner, which is why some students drop out of school, especially during the

COVID-19 pandamic between 2020 and 2021. E-Learning is limited to certain disciplines and still not able to ensure quality education as a final product as similar as in-class learning. E-learning in universities will reduce its effectiveness and divert it from its goals since Cambodian higher education is still learning how to use it for academic purposes. The goals should be established in advance by identifying the kind of knowledge that must be imparted to students and shared among them. Since it is crucial to implement e-learning in universities properly, these objectives can be decided by the professors at these institutions and the administration of the university. Based on the previous researcher's discussion and according to some professors of information technology and English from a public university in Phnom Penh, during online teaching during COVID-19, it was mentioned that most institutions were not able to use a proper platform and learning management system (LMS) in the course. It was very difficult, and the teacher was not able to teach as well as follow up on student performance. The course needs to apply a lot of practice, not just theory. So, it was a problem for teachers to teach and transfer knowledge to students through e-learning without a proper platform (they used Google Classroom and Zoom). Online learning options in higher education institutions in Cambodia, such as the use of social media networks and e-learning platforms, offer students creative ways to improve their educational experiences, particularly during the pandemic, but the issue is with the quality of education provided by e-Learning. According to Ramkissoon (2020), social media offers students learning opportunities rather than serving as a comprehensive instrument for social communication. The majority of HEIs, in contrast, continue to use conventional learning management systems (LMS). The incorporation of social media into educational systems, however, encourages student engagement and participation through collaborative learning (Ramkissoon et al., 2020). Therefore, to increase the standard of instruction in Cambodia's higher education

institutions, e-learning specifically needs to be used effectively on the platform with knowledge and a good orientation to e-learning usage for both professors and students.

1.3 Statement of Originality

The Microsoft team created scenarios at the Royal University of Law and Economics (RULE), a public university in Cambodia, on the basis of digital and interaction technologies as a target and content analysis for this research. In fact, this e-learning platform is new to all students. This means that Microsoft Teams is implementing e-learning for the first time at RULE for all students enrolled during and after the COVID-19 pandemic. It means the platform is not just online but offline as well. The Microsoft Teams platforms can be thought of as reading, ICT-based, and more. Microsoft platforms collaborate with infrared network resources, electronic books, interactive education, research initiatives, integrated learning environments, and evaluation. Microsoft Teams platforms are designed to help teaching personnel in specific technical and humanitarian disciplines, as well as university students studying at RULE, gain more knowledge, productivity, and performance from their training and coursework. The Microsoft teams' platforms that were used in RULE were intended to settle all students during the COVID-19 pandemic, but they are now being used for e-learning with students, both undergraduate and graduate. According to the current state of RULE, the Microsoft team platform necessitates practical expertise in higher education development and innovation, as well as proficiency with Microsoft Team platform technologies.

In spite of repeated instructions from the Ministry of Education, Youth, and Sports of the Kingdom of Cambodia, according to Dr. Tin Heng, Head Department of Information Technology and full-time lecturer at the Royal University of Law and Economics (RULE), one of Cambodia's public universities, the university did not know

how to release students to continue their studies for the first time during the COVID-19 pandemic outbreak in 2020. It is no different from other universities in Cambodia at the time of the spread of COVID-19 because the university's management, administrators, and professors did not fully understand the use of electronic systems in teaching and learning, especially online and e-learning systems. In fact, almost all universities offer education through Zoom, Google Meet, and other social communication tools to support students during COVID-19. For RULE, in collaboration with the Microsoft Team and with the approval of the Rector of RULE, the Microsoft Team has launched for all students to continue their studies. RULE created 25,000 to 30,000 accounts for all students individually in order to allow students to attend their classes during the pandemic. However, all professors can use Microsoft Team to form a team of students to create live classes, share video, record their video, and provide required assignments to both undergraduate and postgraduate students. In addition, the assessment of students or recording the presence of students is authorized by the professor for each class. In connection with this, many students and teachers continued to use the e-learning platform provided by the Microsoft Team in RULE after the Royal Government of Cambodia reopened the country in late 2021 and early 2022. As a result, the UTAUT2 model was used in this research.

1.4 Research Questions

The following study questions are based on the requirements of the Royal University of Law and Economics in Phnom Penh, Cambodia, for the construction of an e-learning system and platform.

RQ1: How do factors of Microsoft Team for e-Learning acceptance affect undergraduate students in a public higher education institution inside Phnom Penh city?

RQ2: What are the perceptions of undergraduate students regarding performance expectancy, effort expectancy, social influence, facilitating conditions, motivation, price value, habit, behavior intention, and satisfaction towards Microsoft Team for e-Learning in a public higher education setting?

RQ3: How do undergraduate students trust to use Microsoft Team platforms in learning and teaching in a public higher education institution?

1.5 Research Objectives

The research objectives are as follows, based on the problem and situation of a higher education institution in Phnom Penh, Cambodia, and leading from the research questions.

RO1: To identify the acceptance of the Microsoft Team e-Learning platform for undergraduate students at a public university in Phnom Penh, Cambodia.

RO2: To identify undergraduate students' perceptions of Microsoft Team in terms of performance expectancy, effort expectancy, social influence, facilitating conditions, motivation, price value, habit, behavior intention, and satisfaction toward e-Learning in a public higher education.

RO3: To identify trust of undergraduate students to use Microsoft Team platforms in learning and teaching in a public higher education institution.

1.6 Significance of the Research

The following points emphasize the significance of this study and the need for the development of e-learning and teaching with specific platforms in order to improve undergraduate student usage at a public university in Phnom Penh, Cambodia. In this twenty-first-century educational era, e-learning platforms are used not only for online education, but also to provide quality learning and teaching in a public higher education institution in Phnom Penh, Cambodia. In particular, the specific e-Learning platform is

the best tool to support teaching and learning in a public university in Phnom Penh city and can also be used as a course implementation guideline, an academic curriculum for a higher education institution, and instruction to enhance students' and lecturers' involvement with clear communication through the e-Learning platform. Furthermore, the findings of this study could help students and lecturers in a public university in Phnom Penh to improve their knowledge of using an e-learning platform and engage all students in a public higher education institution in the learning process via an e-learning platform, especially in accepting the importance of using an e-learning platform in a higher education institution.

1.7 Scope of the Research

Students' perspectives on the use of e-Learning would be carefully studied in a public higher educational setting in Cambodia. As a result, the main objective of this study was to explore and examine the factors influencing the acceptance of e-Learning based on the unified theory of acceptance and use of technology (UTAUT2), with an external factor of trust (TR) and satisfaction (ST) added as an extension to the UTAUT-2. In this study, a public university inside Phnom Penh city, Cambodia which have already implemented e-learning systems was chosen to select the participants for data collection and analysis. This study investigated the case study of undergraduate students from a public university in Phnom Penh who enrolled in the faculty of Informatics Economics in both semester of academic year 2022-2023 and have no previous research at this faculty. The UTAUT2 model in this study including seven factors: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value and behavioral intention (Tseng et al., 2019).

1.8 Limitations of the Study

As the focus is at a public university in Phnom Penh city, Cambodia, the result may not be able to generalize with other universities given that there can be difference in the context, such as technology accessibility, e-Learning platform, facilities, resources and other variables.

1.9 Definition of Terms

The definitions of terms presented in the research are briefly defined in Table 1.1.

Table 1.1

Definition of Terms

TERM	DEFINITION
Behavioral Intention (BI)	This is based on primary theory for all of the intention models we expect to behavioral intention. Determining the desire of a student in accepting E-learning is the main goal of BI items (Alia, 2017). While usage refers to the actual use of e-learning platforms for students' academic studies, BI reflects the extent to which students intend to utilize and continue to utilize these platforms (Zacharis et al., 2022).
E-learning	Learning that is aided and facilitated by the use of technology and information is known as e-learning. Any electronic medium, including the Internet, CDs, and downloadable software, can be included. It is education that is facilitated by technology and may combine traditional education or be totally online. Information exchange is more significant than technology. E-learning

	is sometimes described as a technologically supported technique for facilitating learning (Clark et al., 2016).
E-Learning Platform	A Learning Management System (LMS), a Learning Content Management System (LCMS), and a Set of Tools for distributing training materials and facilitating interaction can be seen as the three basic macrocomponents that make up an e-learning platform (Colace et al., 2003).
Effort Expectancy (EE)	The degree of ease that is associated with the use of the system. Latent variables related to effort expectancy are important to determine a person's intention. The term "effort expectancy" (TAM), which is similar to "ease of use," refers to the "degree to which system use is free from effort." Since people consider a technology to be more valuable when it is simple to use, effort expectancy is predicted to predict performance expectancy. As a result, incorporate effort expectancy as a predictor of both behavioral intention (BI) and performance expectancy (PE). (Zhou et al., 2010; Venkatesh et al., 2012).
Facilitating conditions (FC)	"Facilitating conditions (FC) " are the physical or behavioral characteristics in an environment that encourage a user to complete a task. In this design, the UTAUT has capitulated. The creator of the UTAUT model discovered that FC is a crucial factor that

	influences how information systems are used (Venkatesh et al., 2003). This refers to the level of technical help offered for utilizing new technology. The use of the E-learning system by students will be greatly and favorably influenced by facilitating conditions (Venkatesh et al., 2003).
Hedonic Motivation (HM)	Hedonic Motivation in the context of e-learning can be connected to learner engagement, playfulness with e-learning, learning method, the flow of the learning experience, and enjoyment (Barak et al., 2016). According to Brown and Venkatesh (2005), the delight or happiness that comes from using a technology determines the adoption of new technology.
Learning Management System (LMS)	An LMS is a piece of software used to administer, document, track, report, automate, and deliver educational courses, training sessions, or learning and development programs. An LMS is a well-organized collection of software that supports the complete online educational ecosystem because the learning management system concept originated straight from e-Learning (Ferdianto, 2019).
Performance Expectancy (PE)	Performance expectancy, which measures how much a person believes using a system would improve work performance, is often the best indicator of intention in UTAUT. According to Mehta et al. (2019), UTAUT2

	includes performance expectancy (PE) as a predictor of behavioral intention (BI) (Mehta et al., 2019).
Price Value (PV)	A user may find technologies more useful if the advantages outweigh the costs spent because price value is linked to a user's making a cost-benefit decision (Venkatesh et al., 2012). The advantages can be related to the extrinsic outcomes from learning, relating overall learning value to performance expectancy, while non-financial costs can include the time and effort needed to access e-learning around work priorities (Ain et al., 2016).
Social influence (SI)	As the "perception of group influence on an individual's decision," social influence is the pressure of a subjective norm. If relevant individuals in the company, such as managers, support the use of such technology, users may view the technology as more helpful to the organization in aiding the achievement of job-related goals. Previous literature has made the case that social factors have a propensity to predict performance expectations (Abdullah et al., 2016).
Trust (TR)	Trust can indicate a person's readiness to engage in behaviors that depend on software or software in order to execute a task; trust in information systems can be viewed as a workable term (Widjaja et al., 2019). In the context of e-commerce, e-learning, and online learning,

	trust can affect both intention to use and use behavior. For example, trust can affect whether online shops will keep their promises and commitments regarding their products and services, whether they will ensure the security of the transactions, and whether they will consistently remain trustworthy through their capabilities (Singh et al., 2017).
Satisfaction (ST)	Satisfaction is the act of fulfilling a need, desire, appetite and feeling gained from such fulfillment. Additionally, the technical design of the course is strongly persuading the students' learning and contentment through their course expectations, which in turn has a beneficial impact on the students' learning and satisfaction (Gopal et al., 2021). Individuals willingness to use a specific system can be considerably impacted by their level of satisfaction (DeLone et al., 2016). Students' degree of satisfaction with their online education has a significant impact on their decision to choose a particular platform for e-learning, and it also contributes to higher levels of learner excitement (Jakkaew et al., 2017).

CHAPTER II

REVIEW OF LITERATURE

2.1 E-Learning

E-learning has its roots in distance education, which was first recorded in 1728 and was practiced as "correspondence study" by Caleb Phillips (Holmberg et al., 2005; Kentnor, 2015). Maltz (2005) asserts that the word "e-learning" is used in a variety of contexts, including dispersed learning, online-distance learning, and hybrid learning. The demand for remote learning increased over time in response to teacher shortages, reduced administrative costs, and geographic distances (Maltz et al., 2005). Parallel to advancements in communications technology, distant learning continued to advance and evolve. E-learning, which replaced the earlier types of distant learning, emerged at the close of the 20th century as a result of the development of the internet. In order to develop knowledge and improve the effectiveness of learning, e-learning offers a variety of approaches that make use of Internet technologies (Kentnor, 2015). E-learning, which Wilson (2020) described as learning that is enabled electronically, can take many different forms. E-learning, often known as online learning or electronic learning, is the process of learning through electronic media and technologies. E-learning is described in plain English as "learning that is enabled electronically." E-learning typically takes place online, so students can access their course materials whenever they want. Online courses, degrees, and programs are the most typical forms of e-learning (Wilson, 2020). Aixia et al. (2011) describe an integrated e-Learning platform that uses revolutionary network technology as a teaching assistant and collaboration platform to implement online teaching and learning. It can offer network storage space and specific associated production tools for teachers and students, allowing them to organize teaching resources,

display their best course materials, and share learning experiences with one another (Aixia et al., 2011).

Incorporates information and communication technologies that are web-based, web-distributed, or web-capable. E-learning is also frequently referred to as online learning, online distance learning, or web-based learning (Arkorful & Abaidoo, 2015). In order to provide access to online learning and teaching resources, this process is known as e-learning. Any learning that is enabled electronically is what Abbad (2009) characterized as "E- learning" in its broadest sense (Abbad et al., 2009). In order to reflect many viewpoints, e-learning has been described in a variety of ways, including those that are educationally driven, technologically driven, delivery system-oriented, and communication-oriented (Smolag et al., 2016). Additionally, Caporarello (2014) described e-learning as a collection of models, techniques, and procedures for the distribution and facilitation of knowledge distribution and use, mostly through electronic means (Caporarello et al., 2014). To close the gap between requirements and preferences and overcome geographic obstacles, e-learning is the term for chances for individuals to learn on-demand based on Internet-based systems (Murillo & Velazquez, 2008). A further definition of e-learning is "the ability to deliver training and education via Web technology" (Terry, 2000).

In addition to providing a unique definition of e-learning as the conversion of conventional educational processes, products, practices, and outcomes to digital formats to make them more individualized, practical, interactive, communicative, and accessible, Kot (2017) claims that social media influence or support the learning process among students. As a result of this development, lecturers will no longer serve as the primary knowledge sources for students but rather as classroom facilitators (Kot et al., 2017). According to Benta (2014), using an e-learning platform improved student satisfaction

with courses and communication between professors and students. The fact that this method (in combination with the e-learning platform) significantly altered students' perceptions of homework and its significance in the educational process was another positive feature (Benta et al., 2014).

Wentling (2000) claimed that while e-learning depends on computers and networks, it is expected to advance into systems made up of a range of channels, including wireless and satellite, as well as technology like cellular phones. As well as courses, modules, and more compact learning materials, e-learning is also possible. Asynchronous or synchronous access options, geographical distribution, and a range of time constraints are all possible with e-learning.E-learning is the process of acquiring and applying knowledge that is primarily facilitated and disseminated by electronic methods (Wentling et al., 2000).

2.1.1 E-learning in higher education

The value of human quality in society and resources to organizations and national entities is reflected in the importance of quality in higher education institutions. The summit of the educational pyramid, which is higher education, has a significant influence on the country's educational landscape, particularly in terms of quality. Higher education today in the 21st century is clearly related to technology, especially digital education, to which students, professors, and administrators must pay attention to increase awareness; moreover, a specific e-learning platform is one of the important things that all institutions have to consider in the higher education system. As a result, it has a duty to the entire educational system as well as to society as a whole (Sanyal, 2001). Indeed, e-learning in higher education is now gaining traction with almost every higher education institution in the world, which recognizes the quality of training for higher education, especially during the Covid-19 pandemic (Alqahtani et al., 2020). Before the Covid-19, E-Learning was

used by many countries in the region as well as around the world in higher education institutions. E-learning is a method for facilitating and enhancing learning through the use of personal computers, CD-ROMs, and the Internet, and it is categorized as belonging to all countries that have the ability to use it, such as advanced countries, developed countries, and developing countries. Furthermore, e-mail, message boards, and team collaboration software fall within this category (Chatelier, 2018). Recently, there has been a lot of debate on the subject of online education in the USA and around the world. However, Maddux et al. (2005) found that there are now a large number of online courses and programs offered by HEIs, and e-learning platforms are oriented toward students for enrollment (Maddux et al., 2005). As mentioned above, the interaction between teaching and research in the field of e-learning must be examined in order to comprehend the relationship between universities and the ICT sector, which is important for e-learning processes (Katsikas, 2006). Further than these, all participants must work together for better understanding and awareness of higher education in e-learning, including stakeholders like employers, parents, and educators, and students must raise their expectations of graduates in computer literacy and e-learning (Johnson et al., 2006). Due to this, the majority of institutions have begun to offer computer literacy courses to all enrolled students; however, in order to produce graduates who are computer literate, it is crucial to choose the right course and e-Pedagogy with proper e-learning methodology (Nawaz et al., 2011a).

Integrating technology and lifelong learning is one of the aims and duties of higher education worldwide. Article 1 of the World Conference on Higher Education (1998) states that one's responsibility is "to contribute to the development and improvement of education at all levels, including through the training of teachers." On the other hand, the 2019 World Conference on Higher Education encourages all institutions

of higher learning to advance knowledge through research and offer adequate support for the plurality of new methods of teaching and learning that take advantage of technological advancements. Therefore, one of the duties of the higher education system should be to ensure education for all. Graduates from higher education can play a significant role in society by taking on leadership positions in the fields of research, teaching, consulting, and management, as well as by developing and applying new knowledge and innovations and offering analytical perspectives on development issues to both the public and private sectors (Sanyal, 2001). However, in practice, higher education has mostly focused on developing human resources for the modern economic sector, has benefited the social elites, and has produced elites. In addition, developing countries clearly need to develop human resources in all areas at the tertiary level, especially the ability to understand digital techniques in higher education.

E-learning or online learning, has proven to be extremely important to be implemented at all levels of education worldwide, notably for higher education, according to the experiences of the pandemic in 2019–2022. However, the COVID-19 pandemic, which was accompanied by certain difficulties and quality issues, led to the comprehensive application of e-learning in the majority of developing nations around the world. E-learning in higher education can be a good choice for students to enroll for their degree in the future, even though traditional classes still play a major role in running intuitions. Alyoussef (2023), stated that e-learning is anticipated to spread throughout higher education as a standard way of instruction and learning. Given the system's significance in fostering globalization and regional integration, emerging economies—which try to catch up to their counterparts in advanced economies—are actively accelerating their adoption and/or deployment of e-learning systems (Alyoussef, 2023).

E-learning and other ICT tools have the ability to revolutionize teaching and learning in a way that is disruptive to current practices and poses a challenge to the management and organization of higher education institutions. However, the expanding importance of e-learning in higher education, which is a new technique of teaching and learning in the twenty-first century, is highlighted by the increasing use of technology in daily life. Researchers from the area and around the world are currently very interested in e-learning (Vasconcelos et al., 2020). This is due to the fact that it has the power to reinvent education and increase the number of people it can reach. It has the ability to provide higher living standards by spreading education to a larger population. According to Navarrete et al. (2016), e-learning is currently a common practice in higher education (Navarrete et al., 2016). It is crucial that more students enroll in remote areas of the world, especially in developing nations, so that they have the chance to learn and adapt to a new style of teaching and learning in the twenty-first century through e-learning. Of course, knowledge and skills are crucial for higher education, and it is the obligation of higher education institutions to provide young people with opportunities to improve their skills and careers for the future. It eliminates the barriers to education posed by space and time and offers additional opportunities for people to learn (Moreira et al., 2017). Following the annual World Conference for Higher Education in 2015, e-learning has gained popularity among students looking to enroll. Consideration of how to apply for higher education in the twenty-first century has become a hot topic for some educators and university executives. Additionally, many higher education institutions in industrialized nations have incorporated new technology applications and e-learning platforms for their students' enrollments. As a result, e-learning is effective, efficient, affordable, and long-lasting (Abdekhoda et al., 2016). Due to the priority given to e-learning by most scholars, who are interested in learning more about e-learning platforms

and e-learning applications from many angles, it is a hot issue right now. It's a competition for academic study to develop additional theory and uncover some justifications for online education. E-learning is regarded by many academics as a digital revolution and a substantial advancement in education (Martnez-Cerdá et al., 2020). As part of the ongoing technological transformation, eLearning has begun to look for student enrollment happiness and acceptability. In general, many viewpoints and academic study continue to identify e-Learning as one of the education technologies that is well-liked by most students. It improves the learning process by offering a cutting-edge virtual environment and raising student satisfaction levels (Violante & Vezzetti, 2015).

E-learning was defined in 2005 by the Organization for Economic Co-operation and Development (OECD) as the use of information and communication technologies in a variety of educational processes to support and enhance learning in institutions of higher education. This includes using these technologies to supplement traditional classroom instruction, to learn online, or to combine the two modes. When it comes to e-learning or distant learning, it's important to keep in mind that, in addition to technological advancements and educational revolutions, students' perceptions must also change as a result of shifting attitudes toward technology. integrations to increase knowledge and abilities for optimal societal development. Online learning has had a significant impact on higher education globally as well as on the landscape of distance learning. It is now important to pay attention to the quality of instruction offered both in person and online and to leverage the latest technological advancements to educate, engage, and excite students in the twenty-first century (Kentnor, 2015).

2.1.2 E-Learning in advanced country

Countries with the most advanced economies are already highly developed in digital education at all levels. The most advanced nations in the world vary in their

rankings based on various factors, but their systems are becoming more technologically and digitally advanced, and the purpose of the majority of nations is to engage with their entire population. Furthermore, most developed nations have moved beyond other emerging nations in terms of education. To expand digitalization and technologies in education for all students, including those in underdeveloped nations, the world must adapt and strike a balance with the sharing of knowledge and information. However, the focus of e-learning platforms in developed or advanced nations like Germany, Japan, the United States, British, and some other countries in Europe must be adjusted to share and research for more relevant to apply. The technological revolutions of the twenty-first century, particularly the revolution of fourth, are playing crucial roles in the development of a nation as a tool for transformation into a model nation. The technological revolution is frequently used by advanced nations to advance their economies, education, e-learning, and other spheres of life. The ICT revolution is a component of a network of related revolutions that have been transforming Western culture over the past 20 years from a modern to a postmodern one. In addition, the ICT revolution is a component of several other revolutions that are transforming the educational systems of western nations, including some in Europe, the United States, and North America, from a modern to a postmodern state (Aviram & Tami, 2004). Kentnor (2015) claimed that because it offers more access and, in some cases, an economical choice, distant learning continues to play a significant part in American education. Advances in communication technology, including the Postal Service, spark transmitters, television transmission, the Internet, and the Web, have changed the face of education and given rise to a boom in remote learning. Online education is the fastest-growing type of distance learning and is valued at both conventional and non-conventional schools and universities (Kentnor, 20215).

The concept and advancement of technology in the educational system have been updated in emerging countries' economies, politics, and technical support of technologies throughout the past few decades. In terms of academic and technological advancement, China has advanced quickly from being a developing nation to a developed nation. Over the past ten years, researchers in various higher education institutions throughout China have begun to prioritize the integration of technology into their educational systems. As a result, every year arguments and plans for strategy are made with the goal of advancing technology in Chinese education. Wang (2018) claims that after more than ten years of development, China has made major strides in the development of e-learning in terms of infrastructure, resources, the number of students participating in e-learning, and market expansion. However, there is still much to be done in order to address the issues of teacher training, the sharing of e-learning materials, and the seeming disparity between the various areas and levels of commitment to e-learning on the part of the parties involved (Wang et al., 2018). In order to achieve the goal of enabling anybody to learn at any time and from anywhere, the Chinese Ministry of Education (MOE) (2016) said that a technologically cutting-edge system for ICTs in education, with Chinese features, will be built up in China. The world's advanced nations are currently competing with one another, each with a different perspective on economic growth and the standard of education in many sectors. Asian countries, including China, Japan, India, Singapore, and other Asian nations, have improved their methods of integrating technology into education, in addition to Europe and the United States. E-learning is also a top focus for educational progress. ICTs and new technology integration will be creatively incorporated into education in order to support comprehensive educational reform, advance student holistic development, and facilitate the innovative, balanced, and high-quality growth of education in China (MOE, 2016). Because of China's conventional

grading system, the government in China primarily supports e-learning, but school administrators, teachers, and students, especially those in the basic education sector that lack initiative (MOE, 2016). Teachers, professors, and students all need to accept and master new teaching and learning methods in developed nations like China. For educators to adopt and disseminate throughout the entire nation, the government has established numerous indicators, strategic actions, and training orientations for advancements in e-Learning technologies. The effectiveness of e-learning in China depends on an evaluation and incentive system that can motivate teachers' and students' endeavors (Wang et al., 2018).

Higher education institutions in developed or advanced nations are exploring using technology integrations with new methods of teaching and learning, particularly e-learning or distance learning, in order to have more funding for their academic programs. According to data from advanced nations, government funding for universities has been declining and HEIs are being forced to create income, as seen by the skyrocketing growth in online courses that HEIs are now offering in the majority of advanced nations (Maddux et al., 2005).

2.1.3 E-Learning in Developed Country

In the last two decades, most developed countries have applied e-Learning in their education system at different levels for formal education and any form of training. Of course, developed countries are always looking for the key components to further development in order to keep up with sustainable development in all areas of their country. In particular of education, it is very important for developed countries to strengthen techniques and technology to promote the quality of education, both digitalization and electronic for long time learning with citizen. The Japanese government has lately attempted a number of reforms in the higher education systems in Japan in an

effort to increase economic competitiveness in the knowledge-driven global economy. The majority of developed nations always place a high priority on educational quality as the foundation for national development. This is especially true of higher education, which in the 21st century has undergone significant digitalization and technological integration. In terms of quality, reputation, technology support for academic programs, and human resources, Japan is a role model for higher education in Asia. On the other hand, higher education in Japan has also adapted online learning to the country's educational system. Aoki (2010) said that in Japan, online learning programs are subject to different regulations than on-campus higher education programs. Universities and junior colleges make up the majority of the Japanese undergraduate postsecondary education system (Aoki, 2010). There were 765 four-year institutions as of 2008, of which 86 were national universities, 90 were public institutions, and 589 were private (MEXT, 2009). In other words, more than 75% of Japanese universities are private institutions. Online learning, distance learning, and e-learning were promoted by the government to the commercial sector and public institutions to apply to higher education in the last decades, according to prior research and the reality of the government in Japan. That is a crucial aspect of Japan's higher education system's effort to shift its focus from traditional courses to the use of modern teaching and learning methods. From 586 in 1996, the total number of universities has steadily increased over the last ten years, largely due to the rise in private universities. On-campus and remote learning programs are offered at 37 of the 41 universities, while distance learning programs are offered at four others (Aoki, 2010). As of 2001, according to Tominaga (2018), Japanese colleges were able to gain credits through asynchronous online learning. Since 2006, e-learning has been developing in Japan. However, few colleges in Japan have sufficiently arranged

for such professionals, which is a barrier to the growth of e-learning (Tominaga et al., 2018).

In fact, South Korea is one of the most developed countries in Asia too, the education and economy of this country have grown steadily from year to year. The launch of this country's e-education system has been running and developing for more than two decades, including e-learning systems in education and training. Since the previous two decades, the internet and e-learning have been used in higher education in South Korea as significant components of the shift from regular courses to remote learning. The rapid expansion of Korea's well-known ICT industry, according to Misko (2004), is closely tied to the country's e-learning development. The nation has achieved significant progress in establishing its ICT industry over the past forty years, but especially over the last ten years (Misko et al., 2004). Despite the fact that South Korea has been using e-education for e-learning systems for more than 20 years, recent events, particularly the COVID-19 pandemic, have shown that professors and undergraduate students have a limited understanding of the methods used in e-learning and teaching. There are various developed nations on various continents, including America, some countries in Europe, and of course Asia, that are considering the development of e-learning and distance learning in higher education, particularly in light of the COVID-19 pandemic. These nations should keep an open mind and be prepared to adopt technology in higher education generally and e-Learning platforms. Much depends on the instructors' proficiency with e-learning and the different tools that facilitate this learning. When the instructor makes it simple for them to do it and encourages them to do the same, students may intend to use e-learning. Baber (2021) claims that the severity of the epidemic has compelled students to learn in this way and that their adoption of e-learning platforms is the subject of investigation. Most undergraduate and graduate elements among the 375

South Korean university levels throughout the epidemic had a positive influence on the students' behavioral intention to use and accept the e-learning system. The future of e-learning in South Korea depends on the instructor's traits, attitude, competency, and engagement with and use of e-learning by students (Baber, 2021).

2.1.4 E-Learning in Developing Country

While advanced and developed countries have made significant strides toward integrating e-learning platforms in Higher Education, most of developing countries are also try to integrate e-learning in their higher education system. E-learning in higher education requires a lot of time and resources, particularly financial and human resources, in order to implement an e-learning platform. Of course, has made an effort to adapt and learn progressive while using an e-learning platform in the educational system in developing nations. This does not apply universally to all higher education institutions because certain universities in developing nations have already integrated e-learning into their academic programs and educational systems and received ministry of education accreditation for doing so. Instead, because of the financial crisis and the need for human resources, several other higher education institutions find it extremely difficult to do so. As a result, while evaluating the advantages of e-learning as a tool to improve the delivery of education, adoption hurdles should also be taken into account, particularly in developing nations. Agampornchai (2016) claimed that for many developing nations, online education is seen as a way to meet the growing demand for higher education (Agampornchai, 2016).

In particular, during the past two decades, the majority of developing nations have attempted to implement online education, also known as e-learning or remote learning, using the internet as their primary source to apply to all areas of national education. However, because resource requirements are the fundamental challenge for poor

countries, applying to all industries was difficult. According to Iqbal and Ahmad (2010), online education in Pakistan is marketed as "education for all" since it promises to connect with students who live too far from urban centers and cannot pay the expense of traditional higher education (Iqbal & Ahmad, 2010). In developing nations, issues with student comprehension and perspectives on e-Learning or online learning platforms exist in addition to issues with government finances and human resources. Additionally, all students generally still struggle with the support provided by the materials used in online learning. The usage of e-learning in Thailand is being slowed down by a number of issues, even though there are many encouraging signals. First, students claimed to have limited computer access and unpredictable Internet quality, particularly at home (Siritongthaworn, 2006). Many students said that they often use computers at school when access time is constrained and that many of them had trouble accessing online resources because the computers lacked the necessary software. Only 70.6% of schools outside the city have the facilities and resources necessary to be considered "e-learning ready," even though all schools in the Bangkok area claimed to be prepared. These schools are located outside of Bangkok, where Internet access is still extremely restricted and computer equipment is old. Pitchayakorn Lake's investigation into the key determinants of university students' attitudes toward a blended e-learning system (BELS) in Thailand in 2019 found that while students do not have statistically significant direct effects on their attitudes toward using BELS, building their self-confidence and inspiring them in a supportive environment will make them more effective and efficient in their studies. Students' attitudes regarding utilizing BELS may change as a result of this. Tools should be provided by teachers, who should also demonstrate them (Pitchayakorn, 2019).

Indeed, developing countries have taken care to expand and enhance the quality of education by increasing the availability of technological education systems for educators

with the need for time, human resources, equipment, and financial support. Unfortunately, a surprise for the world, especially for the poor developing countries between 2019 and 2021, is that almost every country in the world has been affected by the COVID-19 pandemic, which has had a devastating effect. in particular, really strong effects on developing countries, especially in the field of education. Due to a lack of access to the internet and devices for students and lecturers, most educational institutions in developing countries, including Cambodia, struggled to transform their traditional courses for the online environment. The new way of teaching online has required new orientation for both students and lecturers. Students' involvement in the online environment was hampered by their restricted access to appropriate technology, such as computers, webcams, and the internet, according to the Neuwirth (2020) report. Students in middle- and low-income nations do not have access to ICT gadgets, according to the researchers (Neuwirth et al., 2020).

Really difficult to put into words how challenging it is for developing nations to adopt e-learning, but in reality, we can see how tough it is for developing nations to deal with many difficulties during the COVID-19 epidemic, especially from 2019 to 2021 when all students must use online study. Many underdeveloped nations reported having trouble running the entire online learning platform from various perspectives. Even those universities that had already introduced e-learning prior to the lockdown found it difficult to abruptly move during COVID-19, and this was especially difficult for institutions that had no prior experience (Alqahtani et al., 2020). On the other hand, many researchers have confirmed that online learning, also known as e-learning or distance learning, has a very negative impact on students because of a lack of preparation and the fact that resources are scarce for both students and teachers. This conclusion is based on the actual

situation in developing countries during the COVID-19 pandemic between 2019 and 2020. Numerous students are thought to have been confined to their homes as a result of the COVID-19 outbreak. Students must use digital education in these circumstances and attend class on several platforms with very limited understanding of software or platform usage. A dependable and quick internet connection is one of the key prerequisites for remote learning. Due to the availability of computers and cellphones with high-speed internet connections for nearly all students and teachers in various locations in developed countries, access to the technological needs of online education is not a big issue in these nations but is very difficult for developing countries. In contrast, students in underdeveloped nations may discover that online courses are entirely or partially inaccessible because of a bad internet connection, and in many circumstances, students may remain locked out (Sangster et al., 2020).

Many students in developing nations, particularly those who reside in rural and underdeveloped areas, lack access to reliable and sufficient internet connections, which causes a number of issues with their academic performance. For instance, around 70% of Indian students attended online lessons during the city lockdown, with the majority using Android smartphones, but the e-learning digital platforms are incompatible with smartphones (Zarei et al., 2022).

2.1.5 E-Learning in Cambodia

One of the ASEAN nations in the process of developing is Cambodia. The COVID-19 pandemic had an impact there, especially from an education perspective. The majority of people in the remote areas of Cambodia are not accustomed to using online learning or e-learning in the educational system, so it was difficult for Cambodia to overcome these challenges. The education system in emerging nations has changed quickly, moving from traditional study to online learning, much like other nations around

the world. This makes it difficult for everyone to adapt. While the national strategy planning for education frequently mentions long-life learning, applies online learning, is in the process of developing an e-learning platform, and encourages all higher education institutions to digitalize education for the 21st century perspective, Cambodia is not yet fully implementing e-Learning in its educational system, not just during COVID-19 but before in the last two decades. Following the full establishment of peace in the entire world in 1998, Cambodia has a number of development priorities. Along with other areas given importance by the Cambodian government, such as commercial, tourism, and agricultural industrialization, a new approach to technology integration in education was also implemented at the same time. Because we require several resources and training for people who implement in the education sector, particularly for online or e-learning, it is difficult to alter everything at once. For the methodical growth of ICT in Cambodia, the Royal Government of Cambodia (RGC) launched the "Cambodian ICT Masterplan 2020" in 2014.

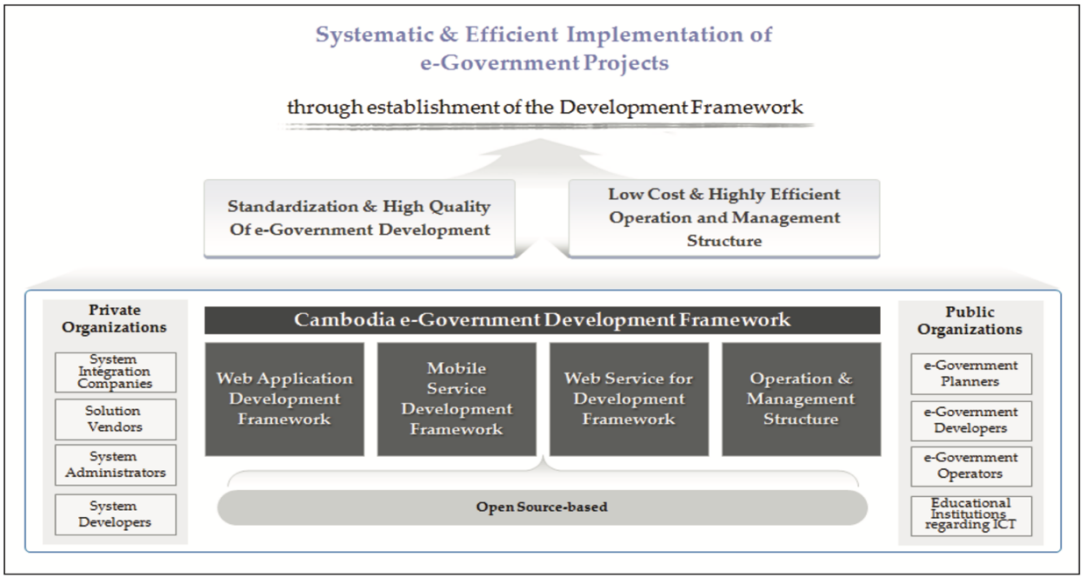
Each relevant ministry can immediately implement the project plans that are proposed in the detailed plan for digitalization in Cambodia. The long-term plan, which consists of "e-Tourism," "Educational Program Development," and "e-Commerce," is made up of the other three programs. Leading the charge towards educational digitization is the Ministry of Education, Youth, and Sport of Cambodia. Some inquiries and teamwork from the initiative to establish proper procedures for digitalization in Cambodia's educational system have been conducted since the last decade and are considered the main teams to disseminate information through books published, television, and workshop training to various target groups from various provinces across the entire country of Cambodia. That is really important to do, but going beyond that, the leadership of every higher education institution needs to be presented with certain

pertinent questions in order to build their institution's understanding of digitalization, specifically during Covid-19 pandemic between 2019 and 2021. Additionally, stepwise execution plans are offered for the marketing of each area specifically for education system related to ICT and digitalization integration. The Technical Development Framework for Cambodia e-Government (hereinafter referred to as "Cambodia e-Government Development Framework") is described by the RGC as a set of core code (class, interface) for developing the public information system, which is the collection of tools and instructions that supports the development and operation of systems in Cambodia (KOICA, 2020).

The results of earlier research and a few initiatives that were carried out in collaboration with the Cambodian government indicate that the school system in Cambodia has very little capacity to apply ICT and digitalization at all levels. This project's goal is to establish a structured and effective e-Government service operation. The plan's objectives are to standardize e-Government development, improve system quality, and establish a low-cost, high-efficiency operational structure in order to realize the goal. The analysis's findings on general concerns relating to Cambodia's emerging e-Government information systems are as follows: a lack of standardized and thorough development, a high reliance on other nations, and a lack of ICT funds. Low sustainability, low adaptability, and low efficiency are further technical issues with managing e-Government systems (KOICA, 2020).

Figure 1.1

Cambodian e-Government Development Framework's goals and schedule



Source: (KOICA, 2020)

E-learning in Cambodia, according to KOICA (2020), is the use of ICT applications to facilitate the delivery of educational materials to students and/or learners over the internet and at a distance. In other terms, e-learning refers to the electronic transfer of knowledge and skills across a network, the internet, DVDs, or other types of mass media. Other terms like online learning, virtual learning, distributed learning, network learning, and web-based learning are also used. In essence, they all describe educational procedures that use ICT to mediate synchronous and asynchronous learning and teaching activities. At the beginning of the Fourth Industrial Revolution, Corrado (2019) claimed that Cambodia must adapt to a rapidly changing environment, particularly if it hopes to fulfill former Prime Minister Hun Sen's plan for the Kingdom to become an upper-middle income country by 2030 and a high-income one by 2050. Cambodia has seen a tremendous transformation over the previous 20 years, moving from poor to lower middle income status in 2015 and aiming to reach upper middle income status by 2030. The educational system continues to lag. Due to the lack of confidence in Cambodian

higher education, the majority of families that can afford it send their children to study at colleges abroad (Corrado et al., 2019).

E-learning, online learning, and blended learning were actually relatively new concepts for Cambodian higher education institutions. The COVID-19 pandemic, according to Leng (2020), has had a huge impact on higher education institutions all over the world, especially in Cambodia. Due to the physical closure of campuses, digital technologies have been quickly used to maintain the delivery of education to students. No higher education institution was genuinely prepared for this unforeseen shift to online platforms and pedagogies, which has meant a leapfrog into a future of digital learning. The digitalization of education delivery has been said to have given rise to new opportunities for learning and teaching, despite the fact that COVID-19 has upended educational systems. This gives transformative opportunities for many higher education institutions in Cambodia, such as new learning paradigms or the second stage of the revolution in higher education (Leng et al., 2020). Additionally, COVID-19 has helped create an environment where blended learning can be implemented in regular classes. All parties involved, including MoEYS, educational institutions, teachers, and students, have invested in the essential technology tools that support online learning as classes shift online. For instance, many private colleges and universities have started using learning management systems; thus, after COVID-19, there will be more resources available for online or blended learning. Future ICT usage in Cambodian education will be strongly influenced by the infrastructure and experience built up during the COVID-19 crisis (Heng, 2020).

Technology-enhanced classrooms are the future of education in the context of Industry 4.0, where technology plays a major role in fostering socioeconomic innovation and progress. As Cambodia aims to increase its relevance and competitiveness in the area,

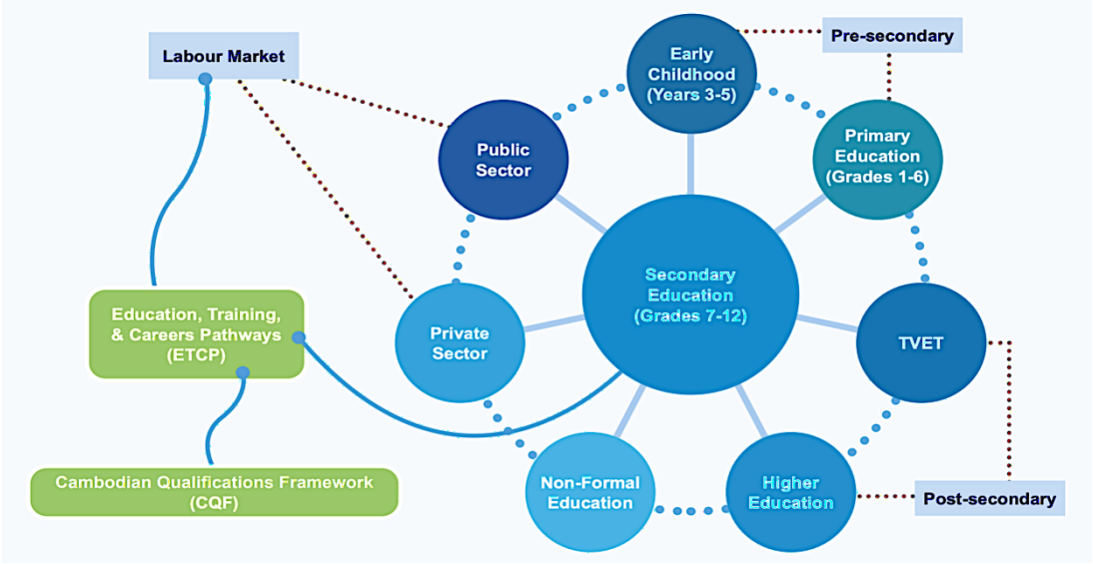
COVID-19 has provided a welcome chance to reevaluate education in that nation. The reliance on face-to-face classrooms and traditional teaching and learning methods is no longer effective or efficient in today's digitalized society, especially in light of technology improvements and the lessons acquired during the COVID-19 pandemic's disruptions. To ensure that the next generation of Cambodians can be taught to become a highly qualified and capable workforce, it is urgent to digitize the education system and improve its quality (MoEYS, 2018). Actually, Cambodia is the same as other countries in the world that have suffered from the COVID-19 into education system. It is not just Higher Education but from grades 1 up to 12 (MoEYS, 2020).

The responsibility for developing and carrying out policies, plans, and initiatives regarding youth, sports, and education in Cambodia lies with the Ministry of Education, Youth, and Sport (MoEYS). Guaranteeing that all Cambodians, regardless of their origin or geography, have equitable access to high-quality education is a crucial duty. To improve the quality and usefulness of education in the nation, the MoEYS works with a range of stakeholders, such as teachers, parents, schools, different ministries, and non-governmental organizations. The two primary education levels and secondary education are a basic education structure that must be recognized in order to comprehend the Cambodian educational system. The first six years of education, from grade 1 to grade 6, are included in the primary education level. Its main goal is to give students a solid foundation in fundamental disciplines like physics, math, social studies, and Khmer language. After completing their elementary education, students proceed to secondary school, which lasts an additional six years, from grade 7 to grade 12. The majority of Cambodians are aware that high school is comprised of grades 10 to 12, but secondary education is separated into lower secondary (grades 7 to 9) and upper secondary (grades 10 to 12) levels. In the high school years, student study including literature, physics,

chemistry, biology, history, geography, morality, English or French language, and vocational training, students receive more specialized instruction throughout these years of high school. In this sense, the MOEYS is particularly significant in forming the educational landscape of Cambodia, working to enhance learning outcomes, encourage lifelong learning, advance digitalization in the educational system, and get students ready for possibilities and challenges in the future (MoEYS, 2021).

Figure 1.2

Basic education structure of primary and secondary education with its relationships



Source: (MoEYS, 2021)

The Education Ministry started airing distance learning programs, or e-learning, on the National Television of Kampuchea and some cable TV channels for students in the capital and provinces throughout the country. In response to Prime Minister Hun Sen's during 2020-2022, he had order to support the education of all students in kindergarten, primary, and secondary school levels, which are temporarily closed to stop the spread of coronavirus, H.E. Hang Chuon Naron, Minister of Education, announced the beginning of the TV programs, and for higher education institutions, it was announced to prepare a pilot plan to apply for online learning or e-learning in contemporary (MoEYS, 2020). In

this instance, MoEYS made e-learning available to all students across the country, but there is still room for improvement in terms of participants' levels of knowledge and e-Learning's overall effectiveness. In fact, the Union of Youth Federations of Cambodia, in partnership with the Ministry of Education, Youth, and Sport (MoEYS) and E-School Cambodia, has introduced a free e-learning application that provides online learning opportunities for students in grades 1 through 12 in order to make education more accessible to students (RySochan, 2020). Additionally, RySochan (2020) claimed in the Phnom Penh Post that the e-learning program covers courses like math, literature in Khmer, and English for grades 1 through 6. For grades 7 through 9, physics and chemistry are added, and for grades 10 through 12, biology is added. Additionally, in order for pupils who are studying for the grade 12 national exams to keep track of their learning, an e-learning app was created just for them (RySochan, 2020). Through the MoEYS YouTube channel and Facebook page, teachers and students may stay in touch. MoEYS's introduction of e-learning to all Cambodian students is crucial; however, the learning management system is still underdeveloped and difficult for everyone to use. Khmer Academy is a Khmer e-learning platform that is trusted by the Ministry of Education, Youth, and Sports of Cambodia, according to reports on the Cambodia news website. In 2015, the Korea Software HRD Center created it. The entire website is in Khmer, making it simple to learn new information. Users, in particular students, can find a range of tutorials and documents covering subjects from K–12 to general knowledge, foreign languages, and basic or professional IT skills like computer basics, programming, networks, website development, and design (KhmerTime, 2016). Besides that, most previous researchers stated that not specific platform for e-learning has been nominated for higher education in Cambodia before Covid-19 and during the Covide-19. Instead, most higher education institutions in Cambodia were using many platform-based

management decisions to apply for their own institutions, both public and private. Due to the engagement in the processes of planning, generating methodology, creating a pedagogical environment, and installing media communication devices, it requires time and resources to fully develop and deploy e-learning. Kaing (2020) claimed that in order to deal with the effects of COVID-19, Cambodian HEIs have lately been compelled to create and deploy hybrid teaching and learning environments. In order to improve the caliber of online teaching and learning, it is critical to keep in mind that a technical support staff and learning infrastructure are necessary components (Kaing, 2020). This technical support staff needs to be personable, accommodating, and supportive. Therefore, each higher education institution should have a capable technical support team that can help with technical problems like setting up teaching and learning software, introducing LMS (like Moodle, Canvas, and Chamilo), and setting up school email accounts for both instructors and students to use for official purposes. On university campuses, the school email account should be used to access the internet and WiFi so that professors and students can converse, work together, and exchange information. To encourage self-study and research among students and faculty, a reliable internet connection should be made available (Kaing, 2020). In the particular condition of Covid-19 pandemic has forced Cambodia higher education to adopt new way of teaching and learning, which allowed teachers to teach online and using some learning management system with short time of orientation. Heng (2020) claimed that access to online learning platforms with learning management systems, a lack of digital literacy, and poor technological infrastructure are the main problems that teachers and students encounter when learning online. Additionally, the limited use of advanced online learning and communication platforms (such as Google Classroom and Zoom) and low levels of digital

literacy have caused stress, other psychological issues, and burdens for both students and teachers (Heng et al., 2020).

Simultaneously, the Cambodian government established the 7 Legislations 2023. The pentagonal strategy (Phase I) of the Cambodian government adopts five key priorities by adding "technology" while "people" remains at the top. In particular, the development of the digital economy and society is important to start with: first, building digital government and digital citizens; second, the development of the digital economy, digital business, e-commerce, and digital innovation systems; third, the building and development of digital infrastructure; fourth, trustworthiness in the digital system; and fifth, the development of financial technology. Strengthening the government in educational institutions requires improving the quality of science, technology, sports, and education (Pentagonal Strategy, Phase I, August 2023).

In fact, when Cambodia forced to apply online classes and e-learning because of the pandemic, almost all of university students in Cambodia know the new platform for their study online such as; Zoom meeting, Google meet, Google classroom, Microsoft Team, Moodle, and started to learn and apply Learning Management System (LMS). The COVID-19 epidemic, according to Meng (2021), has given students and instructors the chance to adapt to a new style of learning and advance their digital competence. Students in Cambodia now have the chance to increase their learning autonomy by using a wide range of digital platforms, thanks to online education. Additionally, students get the chance to learn how to set up study plans, plan lessons, and take charge of their learning strategies. More importantly, they can gain from this new way of learning because it can save time and money in ways that face-to-face learning would not be able to (Meng, 2021). However, Heng (2021) said that in the context of Cambodia, which is characterized by a lack of resources, including technology and human resources, the

problems provided by the adoption of online learning have been significant, particularly in the remote areas of the nation. They consist of electronic learning, online learning, distance learning, blended learning, and hybrid learning. Each of these terms refers to the use of technology for learning, but how students participate in that process varies only a little (Keng et al., 2021). Furthermore, without participation from teachers, students, or the Cambodian government, e-Learning or online learning cannot be properly implemented. In order to strengthen the educational system, Kaing (2020) claimed that individual institutions must participate in addition to having a strong political commitment and the readiness to act on that commitment. One way ahead is for the government to boost funding for education, support higher education staff capacity-building efforts, and invest in research and development to foster a culture of research and innovation (Kaing, 2020).

2.2 Learning Management System (LMS)

The learning management system (LMS) is a standard for many organizations and educational institutions in today's digital economy. In truth, the learning management system (LMS) is the e-learning industry's skeleton, if anything. An LMS enables users to evaluate student performance on courses, keep track of learners' progress in training programs, and give them access to an interactive learning environment. It gives institutions the platform and technology to educate students throughout the globe, businesses the ability to train personnel remotely, and businesspeople the ability to advertise their expertise to a large audience (Sander Tamm, 2021).

In terms of high and low LMS involvement levels, the students' behavioral engagement scores revealed a substantial difference, and their cognitive engagement scores also revealed a significant difference (Ümmühan et al., 2019). Of course, whenever we discuss e-Learning or online learning environments, it goes without saying that

students are expected to engage in online discussions, contribute by reading and clicking on the materials, log in to the system for their learning, and post their thoughts in chat rooms and online forums. Because it is crucial to measuring how well students are doing in their studies, all student learning progress occurs through student interaction in online or e-learning settings. In order for students to invest time in their online activities, there must be student engagement. In order to know what information they need and how to use it effectively, students are also expected to be information literate (Ümmühan et al., 2019). In this sense, an LMS facilitates online course management as well as traditional classroom e-learning activities. It is a web-based platform where online course components are put together and used to provide comprehensive learning solutions. An LMS should typically manage various data connected to the e-learning process. The ability to communicate data was once not possible because each LMS could only manage its own proprietary data format (Merino et al., 2006). LMS platforms can be used for a variety of purposes, including scheduling lectures, keeping an eye on students' activity, providing feedback, uploading course materials, and carrying out evaluations. Many colleges all around the world have adopted LMSs due to their capability to enhance instructional procedures. During the COVID-19 pandemic, institutions that have little or no access to LMS platforms struggled to offer distance learning to their students. Although some social networking sites, such as Zoom, Facebook Messenger, WhatsApp, and YouTube, may be employed, their obvious shortcomings would prevent them from ever serving as a viable alternative to LMSs (Aldiab et al., 2019). Different approaches exist for students to participate in and gain from the online learning environment. Accordingly, it would appear crucial to categorize students into distinct groups based on the similarity of their online behavior patterns and level of participation and to assess each group's engagement, information literacy, and academic success (Ergün et al., 2019).

In educational institutions or business organizations currently preferring to apply e-learning to develop capacity of staffs or provide academic program for students. According to Wilson (2021) stated on her writing that there are plenty of excellent options available of considering adding an LMS for institutions or business sectors such as; Moodle, SAP Litmos, Canvas LMS, Blackboard Learn, MOOC Platforms, Google Classroom, Open edX, and Talent LMS (Wilson, 2021).

2.2.1 Moodle Platform LMS

One of the first and most well-known open-source LMSs in the world is Moodle. Moodle commands a remarkable 65% of the LMS market in Europe, and although it is less well-liked in the US, it is still one of the most important LMSs globally. Most European institutions choose Moodle as their preferred LMS because it is open-source, free, and released under the General Public License (GPL). Similar to social networking sites, Moodle focuses on the social side of learning by facilitating interactions between students and their teachers. One of the most popular open-source e-learning platforms is Moodle, which allows for the building of course websites and ensures that only registered students may access their content. This platform enables information sharing between users who are geographically separated via synchronous (chats) and asynchronous (discussion forums) communication modes. Functionally speaking, it offers features that are simple to configure, enabling the construction of student evaluation processes (quizzes, online examinations, and surveys), as well as organizing their activities with their timetable, in addition to providing a wide range of supplemental resources (Alvelos et al., 2012).

2.2.2 Blackboard Learning Management System

The Blackboard Learning System is an industry-recognized software program that powers virtual learning environments, according to Subramanian (2014). Students and

staff can take part in classes that are provided online thanks to Blackboard, a web-based learning management system. The Blackboard Learning System, on the other hand, is a complete and versatile e-learning software platform that offers a full course administration system. We use the following attributes in our system, among others: using a simple approach to create courses. The wizard enables instructors to build up a course from scratch in a single, simple, step-by-step procedure. Teachers can update any aspect of the course using all course management systems. Teachers can upload articles, resources, assignments, videos, and other things to the course content. Dates for assignments, tests, evaluations, and surveys can be added to any calendar. This makes it possible for teachers to provide online quizzes and surveys with automatic scoring. The tasks can be published, and students can turn them in online. By choosing the times that their students can access certain content, discussions, tests, assignments, or other learning activities, teachers can design personalized learning pathways. In addition to supporting custom grading scales, grade weighting, item analysis, and different grade center views, the grade center also stores data on student performance (Subramanian et al., 2014).

2.2.3 MOOC Platforms

MOOCs are not the first attempt at online distance learning in the higher education sector, according to Belleflamme (2016). In addition to their adaptability and accessibility, which were made possible by the well-known Gutenberg invention, we can group their added value into three groups of benefits. First, MOOCs make it easier to adopt retrieval-based learning by giving students feedback through automatically graded exams and quizzes. Second, MOOCs have the potential to make the implementation of a student-centered learning experience easier because they are offered online. The Internet offers the ideal environment for moving in this direction, even if MOOCs are not yet ready to execute this personalization of the learning experience. The third benefit relates

to the application of evidence-based pedagogical techniques, which are simpler than in a conventional higher education setting. The key challenge with this method is separating correlation from causality when examining an educational practice and the selected learning result (Belleflamme et al., 2016). MOOC platforms are distinct LMS instances because they are also educational institutions. Businesses, institutes of higher learning, work environments that foster learning, and regular people eager to learn (Wilson, 2021) Massive Open Online Courses (MOOCs) first appeared about nine years ago, and according to Kiselev et al. (2020), they eventually revolutionized contemporary online education. MOOCs are still a very new type of online education; they constantly advance and change. MOOC platforms, which offer various pedagogical, personalization, and assessment techniques, are the driving forces behind the evolution of online education (Kiselev et al., 2020).

2.2.4 Google Classroom

An extremely popular learning management system is Google Classroom. One of the simplest learning management systems for creating, distributing, and grading assignments is Google Classroom. It is completely free to use, integrates with Google Drive so we can find all of our work in one location, and allows teachers and students to easily share files without having to exchange emails. Overall, Google Classroom offers a lot of benefits. Google Classroom is a good LMS option for most people who just require an LMS without all the bells and whistles, even though it may not be as powerful or feature-rich as some of the other options on the list (Wilson, 2021). According to Sudarsana et al. (2019), Google Classroom is a component of the online Google Apps for Education (GAFE) suite of digital productivity tools for instructors and students engaged in online learning and collaboration. Although this application can be downloaded for free, educational institutions must use it. Google Classroom is solely available at GAFE,

in contrast to the numerous well-known Google programs that are accessible to everyone, such as Gmail, Google Calendar, and Google Drive. This program offers a centralized location for interacting with students, offering feedback, and assigning assignments. A Learning Management System (LMS) made available to teachers by Google is called Google Classroom. With the help of this program, users can ask questions, give tasks, and connect with students all in one place. Google Classroom supports online learning for today's digital learners in a world that is becoming more and more digital. Like many recent programs, Google Classroom has a distinct appearance and feel (Sudarsana et al., 2019).

2.2.5 Microsoft Team

Microsoft Teams (Teams) enables real-time communication and collaboration, no matter where students are situated. Teams is a hub for all Microsoft programs, including One Drive, Stream, etc. This technological tool might be applicable to both the entire university and specific programs. Teams have been utilized in face-to-face, hybrid, and online classes in addition to business contexts. Teams has been integrated with Moodle, a Learning Management System (LMS), and going forward, all online lecturers at the institution will be expected to utilize it. A team will be automatically generated for a Moodle course once it has been enabled by a system administrator, saving the teacher time during setup (Poston et al., 2020). Microsoft Teams, the new chat-based workspace in Office 365 has been recently announced on 2 November 2016. Integrated with the Office applications, it is a new experience that brings people, conversations, and content together for an easy collaboration. Microsoft Teams is expected to be made available to the general public in the first quarter of 2017. Keep classrooms connected and entertaining by including students in virtual face-to-face interactions and activities or organizing a remote lunch. Both students and teachers can use it for free if they have a

working school email address. According to Arnab et al. (2021), stated that e-Learning platform is very important in e-learning with clear objectives such as; flexibility to connect with learners in learning process via online education, self-paced, anytime and anywhere learning, cost-effective that provided opportunities affordable cost, more fun with fun-loving and more resourceful, quality learning which enhances quality of teaching and learning, interactive learning that involve teacher-student interaction, more accession and exploration (Arnab et al., 2021).

2.3 E-Learning platform in Cambodia

For Cambodia to become a nation with a digital economy and a digital government, digital education with e-learning or remote learning is essential in the context of Industry 4.0, as all of these areas require a significant number of people to operate and manage all intelligent technologies (MoEYS, 2021). The situation of higher education in Cambodia has changed their perspectives in terms of strategic planning during and after the COVID-19 pandemic, especially with the introduction of new techniques in the teaching and learning of students, particularly online learning and e-learning, which have to be put into high consideration for life-long learning both for teachers and students. However, the Preah Sisowath High School in Phnom Penh, which is the most renowned high school in Cambodia, will become the site of a digital education center to develop e-learning programs during the COVID-19 epidemic in June 2020, according to plans by the Ministry of Education, Youth, and Sport. Furthermore, learning management systems (LMS) and other digital tools and technologies are used in digital education for both teaching and learning. It should be mentioned that some governmental and private educational institutions in Cambodia now employ the following curricula; first, a system of digital education based on formal education that uses electronic resources as a tool is known as "e-learning." Second, through distance learning, students

can obtain instruction for the development of the four aptitudes (wisdom, aptitude, physical fitness, and behavioral fitness) without having to physically be present or interact with the teacher. Third, additionally, several academic institutions relate blended learning and learning management systems to remote education programs (MoEYS, 2021). Currently, since 2021 the e-learning program is applying in Preah Sosowath high school and share video courses in different subjects through National Television channel. In fact, the program of e-learning had set but specific platform of LMS is still in the process of development for well know of using and apply to all student's lifelong study. The Ministry of Education, Youth, and Sport of Cambodia will create infrastructure for digital education to manage data for digital education, such as data centers, based on prior experiences in implementing e-learning programs and future analysis. In order to spread awareness of innovative teaching techniques, it will then develop instructional videos. Additionally, a digital forum for e-learning and education administration systems will be established, with an emphasis on the educational environment in Cambodia.

2.3.1 E-Learning platform for higher education institutions

According to a live video stream on the MoEYS Cambodia Facebook Page, on June 22, 2020, H.E. Dr. Hang Chuon Narong, Minister of MoEYS Cambodia, delivered a speech at the celebration of the Digital Learning and Distance Learning building that was going to be rebuilt at Preah Sisowath High School. He noted that digital learning is really important for Cambodia not only during Covid-19, but also after that as well. Blended learning will be used for our educational system with the support from Google classroom (Google Sheet) and other technology. Minister also talked about the percentage of students (3 million) throughout Cambodia as the participants to have smart phone only 30%, but other students can use it with friends as the group study with only one phone, another 30% expected for online TV education for more 30% while others can use self-

study. It should be noted that not only high school is going to upgrade for educational technology, but also some universities in Cambodia going for online education for their institution.

Since June 2020, higher education institutions in Cambodia, especially public universities, have adjusted to specific platforms for e-learning. Most higher education institutions used Google Classroom (Google Meet) and Microsoft Teams as a teaching and learning platform, with the help of other apps like Zoom Meeting, WhatsApp, and Facebook Messager to form different groups to share information and lesson recordings. In particular, the Royal University of Law and Economics (RULE) has applied Microsoft Teams as a platform to teach online classes and set up as a platform for e-learning for students in RULE.

2.3.2 Royal University of Law and Economics

The first institution of higher learning in Cambodia is the Royal University of Law and Economics (RULE). The Faculty of Law and Economic Sciences was first established in 1949 as the National Institute of Law and Economics, and in 1957 it was incorporated into the University of Phnom Penh. Regrettably, the university was shuttered from 1975 to 1979 under the Khmer Rouge regime and reopened as the Administrative and Judicial School in 1982. The school's name was changed to the Faculty of Law in 1992. The Ministry of Education, Youth, and Sport had responsibility over the institution until it changed its name once more to the Faculty of Law and Economics in 1994 and was included in the Royal University of Phnom Penh. The faculty was given university status in 2003, and it was reorganized as the Royal University of Law and Economics (RULE). By Sub-Decree No. 89 ANK/BK on July 27, 2007, RULE was designated as a public administrative entity. Aside from the English Language Institute, RULE currently has four faculties (the Faculty of Law, the Faculty of Public Administration, the Faculty

of Economics and Management, and the Faculty of Informatic Economics), three centers (the Center of Law Research, the Center of Economics Research, and the Research and Education Center for Japanese Law), and a Graduate Program. The Department of Information Technology of the Faculty of Informatics Economics of the Royal University of Law and Economics has invited Microsoft Teams to apply for the entire academic program during the COVID-19 pandemic in 2021.

2.3.3 Faculty of Informatics Economic

The Faculty of Informatics Economics at the Royal University of Law and Economics (RULE) has two programs to provide bachelor's degrees for undergraduate students in informatics economics and information technology. Both training programs for bachelor's degrees are science majors in RULE, which is able to provide student's knowledge and skills related to economic theories to apply in informatics economics and information technology. Then both bachelor's degree students take those knowledge and skills to participate in developing their country in the fields of information technology and informatics economics. According to the technology integration in the world as well as in Cambodia's changing perspective of new technology in education, the faculty of informatics economic has set a mission based on the needs of Cambodia's young people with both developing teaching ability of teachers and students. In particular, it provides students with the skills to promote research, publication, and develop academic programs to adapt to progress in technology.

2.3.4 University Students on digital technology in education

In Cambodia, university enrollment has continued to grow since 2010, both in terms of student enrollment and in terms of institutions as well. It is one of the important points that the update of new technology in education is also updated each year, specifically in the university perspective. Since March 2020, education globally has been

forced to move online, as well as in Cambodia. It is for affluent Cambodian youth who are rarely involved with technology. Meanwhile, according to Khmertimes news, university students in Cambodia are encouraged to focus on digital technology. University students have to adapt to new technology in different ways, such as education in the digital era, e-learning, e-commerce, and understanding of new technology development. Furthermore, university students in Cambodia have to understand that the work of technology in education is based on agreements between ASEAN nations on e-commerce, regional comprehensive economic partnership, and bilateral free trade agreements with China and South Korea, and among other advanced countries.

2.4 Assessment in e-Learning

The process of evaluating or documenting a person's knowledge, skills, and attitudes via an online technique is known as an e-learning assessment. An instructor or manager can determine how well a learner has mastered the course material by using assessments in e-learning courses. Assessments also enable students to monitor their own learning and progress. The process of evaluating or documenting a person's knowledge, skills, and attitudes via an online technique is known as an e-learning assessment. An instructor or manager can determine how well a learner has mastered the course material by using assessments in e-learning courses. Assessments also enable students to monitor their own learning and progress. Steer (2016) claimed that while technology increases the speed of assessment in online courses, it must also make up for the absence of convenient access to personal observation. As a result, online exams must be more thorough than those conducted traditionally. The assignments must also be as accurate as possible because instructors "develop" the course themselves before it starts. Because of this, there is no justification for assessments that don't align with the subject matter or focal point of the lesson. Since we will explore the validity of assignments in the discussion section

later on in this paper, e-learning makes teachers accountable for the validity of their evaluations (Steer et al., 2016). There are various methods of e-learning evaluation, according to Necole (2021) and websites discussing e-learning assessment. Multiple choice, true/false, drag and drop, and fill in the blank matching are a few of the more well-liked ones (Necole, 2021).

In truth, every educational institution has a course of study that, via an accurate evaluation of each enrolled student, aims to prepare the student to manage responsibilities and obstacles at the workplace with ease. The assessment of e-learning platforms is one of the most crucial ways to guarantee student happiness and quantification in course assessments because all universities are under increasing pressure to link their curricula to real-world work and social growth. The assessment component is developed in particular with the goal of targeting a particular learning outcome and the course's knowledge domains. One of the measures of the efficacy of e-learning in RULE is the platform for learning outcomes known as Microsoft Teams. However, using technology for assessment, specifically the Microsoft Teams Platform in e-learning, also poses certain unavoidable risks to all undergraduate students at the Royal University of Law and Economics (RULE) in Phnom Penh, Cambodia, during and after the COVID-19. So, this study is intended to find out what kind of assessment was used for e-learning using Microsoft Teams.

2.5 Theoretical Framework

2.5.1 Unified Theory of Acceptance and Use of Technology (UTAUT 2)

According to Nain (2016), the UTAUT2 framework combines three new constructs (hedonic motivation, price value, and habit) as antecedents of behavioral intention and use behavior with four existing constructs (performance expectancy, effort

expectancy, social influence, and facilitating conditions) from the UTAUT model. Few researchers have utilized the Unified Theory of Acceptance and Use of Technology (UTAUT), which was developed by combining TAM with seven other theories (including the Theory of Reasoned Action, the Motivational Model, the Theory of Planned Behaviors, and the Model of PC Utilization) to predict acceptance (Nain et al., 2016). Several studies to gauge technology use and adoption have employed the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) as a baseline framework (Fidani and Idrizi, 2012; Maldonado et al., 2011). Later, the UTAUT2 model was expanded to include consumer effects, automaticity, and monetary costs (Venkatesh et al., 2012). One of the best models for analyzing acceptance research across different IT and IS domains is the Unified Technology Acceptance (UTAUT), which unifies the disparate theory and research on individual acceptance of information technology into a unified theoretical model (Venkatesh et al., 2011). Many researchers have used the UTAUT2 constructs to examine the effects of performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, habit, and price value on the acceptance of smart phones (Ally and Gardiner, 2012). The uptake of broadband Internet by inner-city residents (LaRose et al., 2012) and the use of e-governance technology (Krishnaraju et al., 2013) One of the most complete theories of technology acceptance is the Unified Theory of Acceptance and Use of Technology (UTAUT), which combines eight major theories of acceptance, including the Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM) (Venkatesh & Davis, 2000).

The UTAUT2 which is the successor to the original model of the UTAUT, both are the technologies adoption models to help person individual or organization to get more understanding why or why not choose to adopt and implement new technologies. When we are talking about technology acceptance models, we're really talking about how

people or organization accept to change. According to UTAUT, an individual's behavioral intention to use a technology is influenced by performance expectancy (i.e., how useful the technology is perceived to be), effort expectancy (i.e., how simple it is perceived to be to use the technology), social influence (i.e., how well-liked using the technology is in the social network that is significant to the individual), and other factors that enabling circumstances (i.e., the extent to which the user believes they have the means to employ the technology) (Venkatesh et al., 2003).

According to earlier research, UTAUT2 specifically asserts that in addition to the UTAUT constructs, the intention to use the technology is influenced by hedonic motivation (i.e., the degree of enjoyment the technology is perceived to provide), price value (i.e., the cognitive trade-off between perceived benefits and monetary costs of technology usage), habit (i.e., the amount of time that has passed since the initial technology usage), and habit after practice. The definition of the UTAUT2 framework is as follows: performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, habit, and learning value. The distinct empirical evidence for each of these variables is discussed in the section that follows.

Performance expectancy (PE)

According to Venkatesh et al. (2003), performance expectancy is "the extent to which an individual believes that using the system will help him or her attain gains in job performance." It shows one's assessment of the extra benefits obtained from adopting or utilizing technology. In their study on IT innovation, Alrawashdeh (2012) also discovered significant effects of performance expectancy on behavioral intention. Performance expectations are indicators of how well a system is being used, how productivity is being increased, how well performance is being affected, and how beneficial the system is to both the employer and the employees (Osei et al., 2022). Previous studies have shown

that the PE target captures users' perceptions of how employing a specific technology may assist them in reaching their anticipated objective (Macedo, 2017). Furthermore, Tennakoon and colleagues (2013) found that the evidence from the body of research suggests that PE is a potent predictor of technology use in both personal and professional spheres (Korunka & Vartiainen, 2017). PE is examined to comprehend how the students use the e-Learning platform (Vekatesh et al., 2012). PE indicates the degree to which students believe that e-learning is relevant for them to complete their learning activities more efficiently and effectively, especially able to apply for their future lifelong learning both in study for graduation and learning for work life, in this study related to the perspective of an e-learning platform for higher education. In this instance, we could say that students will be more inclined to use an e-learning system if they think it will improve their learning. The use of e-learning is also anticipated to boost students' perceived relatedness, according to the aforementioned grounds for performance expectancy.

Measurement of PE

The purpose of this study is to learn whether undergraduate students think adopting an e-learning system, specifically the Microsoft Teams platform, will improve their learning and make them more motivated to utilize it. The students will be intrinsically motivated to utilize the system because, for example, they will expect it to improve their learning more effectively and efficiently. Furthermore, how does performance at RULE for undergraduate students affect the usefulness of performance when productivity is increased by system use? Students will view e-learning as advantageous to their studies, especially if it confirms their knowledge and skills. Students will therefore accept and use the Microsoft Team platform for e-learning to

carry out their learning activities if they have a favorable PE and a favorable impression of their competence.

Effort expectancy (EE)

The adoption of intentions is found to be positive for effort expectancy. The ease with which a person can interact with technology is referred to as the effort expectation, according to Venkatesh (2012) and his coauthors (Venkatesh et al., 2012). Particularly, EE is defined as students' expectations that using e-learning for their academics or communication will not present a challenge or demand minimal work. On the other hand, the core tenet of EE is that students at various levels of study will accept and use e-learning differently depending on the amount of work required to acquire and use it (Venkatesh et al., 2003). Eeffort Eexpectancy highlights how easy-to-use an e-learning platform is in the eyes of students. Of course, if students find using e-learning simple, their perception of their autonomy to self-control and self-regulate their behavioral intentions in their studies will be affected. In other words, EE is anticipated to have a favorable impact on how autonomously students evaluate their usage of e-learning (Osei et al., 2022). Higher education students become more aware of and concerned about their online learning because of the COVID-19 epidemic, which could have an impact on their future lifetime learning. Therefore, EE will be crucial for improving the student's perception of awareness and helping them adjust to using e-learning tools.

Measurement of EE

In the context of this study, effort expectancy (EE) refers to how user-friendly a platform for online learning is perceived by a person. It is correlated with the amount of work needed to complete an online consultation, indicating that the higher the utilization intention in RULE, the less effort necessary. It is true that new ways of assisting students and providing orientation to them are available, but they are typically given through

videoconference prior to usage, and an e-learning platform is already something that many people are accustomed to using. In particular, EE is defined as students' conviction that using an e-learning platform during and after COVID-19 in RULE won't be difficult for them and will only demand minimal effort on their side. The fundamental premise of Effort Expectancy (EE) in this study is that undergraduate students' adoption and utilization of an e-learning platform would be influenced by the amount of work needed to learn and use it.

Social Influence (SI)

According to Venkatesh et al. (2003), social influence is "the extent to which an individual perceives significantly that others believe he or she should use the technology." In their study comparing the adoption of technology around the world, Im et al. (2011) reported that social impact played a significant role (Im et al., 2011). Zhou (2011) researches the UTAUT framework and social influence to analyze m-banking in the USA. According to Khechine et al. (2014), SI can be assessed in the context of acquaintances, coworkers, or family members. The results supported the usefulness of social influence in predicting behavioral intention. Social impact is the most significant element influencing internet usage, according to Cheung and Vogel's (2013) study on internet and world wide web usage at the workplace.

Measurement of SI

The extent to which a person believes that significant individuals think they should adopt a particular technology, specifically an e-learning platform, is referred to as social influence. This study will concentrate on the significance of taking family, classmates, and friends' influences into account when choosing an e-learning platform because it was found that social influence influences users' behavior when it comes to adopting Microsoft Teams. The degree to which a person believes that others think they

should encourage by the management team or administration of RULE to adopt the new Microsoft Team system for their studies.

Facilitating condition (FC)

According to Venkatesh et al. (2003), the facilitation condition is "the extent to which an individual believes that an organizational and technical infrastructure exists to support technology use." One of the most crucial things is to use technology in education, especially e-learning in institutions. In their study of the UTAUT model, Joshua and Koshy (2011) found that respondents who had easier access to computers and the internet used them more effectively and were more likely to use electronic banking. We must overlook the fact that using e-learning involves technical infrastructure, a certain sort of skill, and certain resources.These facilities are typically of utmost importance to users (students who study through e-learning) in order for them to adapt and employ them for learning. In actuality, FC refers to students' belief that the institution's current resources and technical infrastructure would enable their usage of e-learning systems during the COVID-19 pandemic and continue to apply to all students with the intention of setting as long terms for e-learning as possible. According to another study, the FC has an impact on how people behave when it comes to new technologies. Therefore, it will increase their usage intentions when students understand that the institution is prepared to provide support and technical infrastructure for their use of an e-learning system. Thus, during the COVID-19 pandemic, students who have access to the necessary equipment and support are more likely to adopt e-learning systems (Osei et al., 2022).FC will therefore persuade pupils to adopt e-learning against their will. In other words, users will be able to manage their own behavior when deciding whether to use the system. Again, the presence of FC will support students' desire to have the chance to engage and communicate with others (lecturers and colleagues). Due to the FC, students' motivation to work effectively and

efficiently through e-learning will be enhanced and positively influenced (Osei et al., 2022). Similar empirical data supporting the relationship between favorable conditions and technology adoption may be found in the studies by Yu (2012), Zhou et al. (2010), and Oliveira et al. (2014).

Measurement of FC

In this study, "FC" stands for the students' belief that their use of e-learning platform systems will be supported by the institution's current resources and technical infrastructure both during and after the COVID-19. Therefore, it will increase their usage intentions when students understand that the institution is prepared to provide assistance and technological infrastructure for their use of an e-learning system. Students who have access to proper infrastructure and support both during and after the COVID-19 pandemic are therefore more likely to adopt Microsoft Teams for e-learning platforms. Due to FC, all enrolled students will be forced to use e-learning against their will. This study also focuses on undergraduate students' access to the system knowledge needed to use the Microsoft Teams system and their ability to get a good placement within the corporate structure of RULE.

Hedonic motivation (HM)

Hedonic motivation, as defined by Venkatesh (2012), is an emotion that can be joy or happiness that arises as a result of employing technology. It has been noted that when it comes to customers, intrinsic characteristics like fun and enjoyment have a big impact on how they feel about new technology (Hwang et al., 2007). According to theory, the most significant elements influencing a customer's propensity to adopt internet banking are those related to hedonic motivation (Riffai et al., 2012). According to Hwang and Kim (2007), hedonic motivation has an effect on the two e-trust characteristics of ability and integrity. This indicates that students who enjoy pleasure and entertainment

had similar perceptions of online applications, especially e-learning platforms, and likely trusted and used them. According to Venkatesh et al. (2012), HM is the pleasure and happiness a person derives from using technology.

Measurement of HM

This study focuses on undergraduate students motivation to take actions related to using Microsoft Team as an e-learning system both during and after COVID-19. According to Hagger et al. (2014), the degree to which the three fundamental requirements of autonomy, competence, and relatedness are met determines the quality of behavior, persistence, and motivation.In order to support teaching and learning during and beyond COVID-19, the Royal Universities of Law and Economics (RULE) are currently investing a significant amount of resources in the Microsoft Team platform for e-learning systems. However, the students' motivation to embrace the system and engage in the necessary behaviors to sustain usage will determine the adoption and continued usage of e-learning systems.Therefore, it's crucial to find out through this study whether the Microsoft Team platform of an online learning system ensures that students are engaged and motivates them to engage in the desired behavior.

Habit (HT)

As defined by Venkatesh (2012), a habit is an action that a person performs repeatedly due to knowledge. As stated by Venkatesh and Davis (2000), habit is another aspect that influences a person's behavior and use of technology. According to empirical research (Limayem et al., 2007; Venkatesh et al., 2012), a habit is a recurrent activity that occasionally occurs subconsciously and is formed by experiences, knowledge, and abilities acquired over time. It has also been observed that routine behavior puts obstacles in the way of students' or clients' willingness to use technology (Laukkanen, 2007). Likewise, this study used the idea put forth by Venkatesh et al. (2012), who established a

strong link between habit, behavioral intention, and adoption. Many research investigations conducted from the same angle have similarly supported these findings (Kolodinsky et al., 2004; Eriksson et al., 2008). According to Chopdar et al. (2018), habit is the idea that people's past experiences can cause them to behave automatically. As a consequence, habit is a reflection of experiences in the past and how they turned out (Venkatesh et al., 2012). An individual is most likely to repeat a behavior if the results are positive. We maintain that students' regular use of electronic devices will have an impact on their desire to use an e-learning system in connection with e-learning. Students will be prompted to govern their behavior and freely participate in online learning through habitual behavior that produces favorable results. The desire of students to use online learning to associate with and interact with their professors and peers will be further increased. The competency of the students will increase through habitual use, which will then lead to actual use of the electronic educational system (Osei et al., 2022).

Measurement of HT

In the current investigation, these researchers contend that e-learning students' frequent utilization of the Microsoft Teams platform will have an impact on their willingness to use the e-learning system. If students have a habitual behavior that produces favorable results, they will be encouraged to control their behavior and fully participate in online learning both during and after COVID-19. Likewise, it will strengthen the incentive for learners to use e-learning to collaborate and connect with their professors, particularly as they get in the habit of utilizing Microsoft Teams throughout the e-learning platform. Graduate students' competency will increase as a result of habitually using the RULE electronic instruction system, and this will ease the way for actual e-learning system utilization.

Price value (PV)

Adoption of consumer technology has both monetary expenses and advantages. The concept of "price value," often known as customers' cognitive tradeoff, was introduced by Venkatesh et al. (2012). It is the compromise made between the alleged financial benefits of employing technology and the perceived costs of doing so (Dodds et al., 1991; Venkatesh et al., 2012). In other words, if the user perceives that using technology would benefit them as well, they will be responsible for paying for the equipment's purchase. The individual's intention of utilizing technology is impacted by this cost-benefit connection (Venkatesh et al., 2012). This concept has significance in a situation where consumers are expected to make a cognitive trade-off between the price of using technology and its alleged advantages (Gunasinghe et al., 2019). The consumer or student plans to use the technology, which has a favorable pricing value. However, from the perspective of the student, the value is connected to the learning obtained by utilizing the LMS in e-Learning. From the consumer's point of view, the product or service has value if it satisfies the perceived benefits or quality. The advantages of employing LMS technology in an educational setting are that it is free for the students to use. The students focused their time and energy on learning about the advantages of LMS rather than the expense. The students' favorable outlook on learning from the LMS motivates them to invest more time and energy in learning the necessary information from the LMS. This study examines how learning value—defined as the link between time and effort—affects students' intentions to utilize learning management systems (LMS). The definition of this construct is "the learners' knowledge of a trade-off between the perceived benefits of a system and the monetary cost paid for system adoption. Students are more likely to accept e-learning if the benefits are thought to outweigh the financial cost (Osei et al., 2022).

Measurement of PV

The study is significant in a situation where users must make a trade-off in their thinking between the costs of using Microsoft Teams in their e-learning system and the benefits. Additionally, where necessary for students' academic needs, the cost may also include data rates, device costs, and service fees related to a specific network. If the perceived advantages of utilizing the e-learning system outweigh the perceived disadvantages, the pricing value will have a favorable impact on students' self-determination (behavior). In this study, the advantages of using the e-learning system are predicted to have a favorable impact on students' motivation and behavioral intentions.

Trust (TR)

Trust is reliance on the character, ability, strength, or truth of someone for something in daily life, the workplace, school, communication, business, or other situations where confidences are placed. Trust in an e-learning platform was also confirmed as a key factor determining the confidence of students. According to Widjaja (2019), trust is the desire of a person (the trustor) to be more vulnerable to the deeds of a party (the trustee), based on expectations from others who are trusted to take particular behaviors. Because it can indicate a person's readiness to engage in practices that depend on software in order to execute a task, trust in information systems can be viewed as a workable term (Widjaja et al., 2019). When it comes to e-commerce, e-learning, and online learning, trust can affect both the intention to use something and the actual behavior of using it (Singh et al., 2017). For example, trust can affect whether online shops are going to fulfill their assurances and warranties regarding their products and services, whether they will take steps to guarantee the confidentiality of the transactions, and whether they will consistently remain trustworthy through their capabilities. This study will also include the UTAUT-2 model's inherent completeness alongside the

additional trust variables. Therefore, in order to widen the analytical scope of the UTAUT-2, TR has been added as an external factor as a supplement to the UTAUT-2 in the same conceptual model as strongly suggested by Venkatesh et al. (2012) (Alalwan et al., 2017). Trust is a perceptual propensity for assuming that an action will occur that is compatible with positive assumptions, and it is ensured when a sufficient amount of skill, goodness, and integrity are discovered in a particular system, according to Merhi (2019; Merhi et al., 2019).

Measurement of TR

The researchers of this study contend that their desire to utilize the e-learning system in RULE will be influenced by their trust in the Microsoft Teams platform. Of course, trust is added to the research variables of UTAUT2 because the use of Microsoft Teams at RULE is new, and on the other hand, students at RULE can be trusted to use Microsoft Teams for their study. It is important to know that Microsoft Teams is valuable for students and professors. Student trust in Microsoft Teams at RULE is as important as the widely accepted e-learning system usage, so trust Microsoft Teams as a study platform at RULE, which significantly influences their satisfaction.

Satisfaction (ST)

The act of satisfying a need, want, or appetite, as well as the emotion engendered by such satiation, is known as satisfaction. Gopal (2021) claimed that the elements affecting student satisfaction in online learning during the pandemic time of COVID-19 were course design, the standard of the professor, immediate feedback, and the expectations of the students. Additionally, the technical design of the course is strongly persuading the students' learning and contentment through their course expectations, which in turn has a beneficial impact on the students' learning and satisfaction (Gopal et al., 2021). According to Jakkaew (2017), student happiness with e-learning significantly

affects their behavior and decision to utilize e-learning systems on a particular platform. High levels of student satisfaction also lead to higher levels of student enthusiasm. Chao (2019) claimed that in addition to cognitive assessments like effort and performance expectations, students' emotional experiences may also have an impact on how satisfied they are with m-learning or online learning. Additionally, students' levels of satisfaction can have a big impact on whether or not they use online learning or mobile learning (Chao, 2019). In learning-related studies, satisfaction is frequently used to quantify learners' satisfaction since it is a well-established result of user acceptability, IT characteristics, and system features (Mohd et al., 2020).

Measurement of ST

In this study, users are happy with the element of using Microsoft Teams for their study that follows the aspect of the content, and they are also happy with the aspect of finding it pleasant and enjoyable. On a five-point Likert scale, all student respondents are asked to score their level of satisfaction. The usage of Microsoft Teams at RULE is novel; therefore, satisfaction is naturally included in the research variables of UTAUT2, but on the other hand, students at RULE can be satisfied to use Microsoft Teams for their studies. At RULE, student happiness with Microsoft Teams is just as significant as the use of the widely accepted e-learning platform.

Behavioral intention (BI)

BI stands for a person's propensity to use a system. When someone plans to use a system, that is when it is being used. Evidence suggests that BI directly affects how a system is actually used. As an indicator of real activity among technology users, behavioral intention evaluates a person's propensity to engage in a particular behavior (Venkatesh et al., 2003). According to several intention models, BI is a key factor that influences how technology is actually used (Venkatesh et al., 2003, 2012). The goal of

this study is to determine how much Microsoft Teams was used in the past and is still being used by undergraduate students at RULE.

2.6 Research Framework

The UTAUT 2 theories and models were used as the primary variables in this study. The Unified Theory of Acceptance and Use of Technology (UTAUT), created by Venkatesh et al. in 2003, is a framework. This model focuses on identifying usage patterns and users' aspirations to utilize Microsoft Teams as an e-learning platform for their studies. This theory incorporates four primary constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions. While facilitating conditions is a crucial implication of usage behavior, the first three components are significant drivers of users' purpose and behavior. Gender, age, experience, and voluntariness are the moderators that are utilized to affect the main independent variables on behavior intention and uses of information technology. In addition, due to UTAUT's enormous popularity, UTAUT 2 has emerged, incorporating three additional variables into the original model: habits, hedonic motivation, price value, and users' characteristics such as age, gender, and experiences as moderator variables to affect the relationship between the independent variables and behavior intention and use of e-learning (Microsoft Teams) at the Royal University of Law and Economics (RULE).

2.7 Hypotheses

There are seven hypotheses which taken variables from the UTAUT-2 model.

Table 2.1

Hypotheses

Hypotheses	Statements
$H_0$1	Performance Expectancy has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.
$H_0$2	Effort Expectancy has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.
$H_0$3	Social Influence has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.
$H_0$4	Price Value has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.
$H_0$5	Habit has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.
$H_0$6	Satisfaction has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.
$H_0$7	Undergraduate students at the Royal University of Law and Economics (RULE) trust Microsoft Teams as a study platform, which does not significantly influence their satisfaction.

CHAPTER III

CONCEPTUAL FRAMEWORK

3.1 Theories and Theoretical Framework

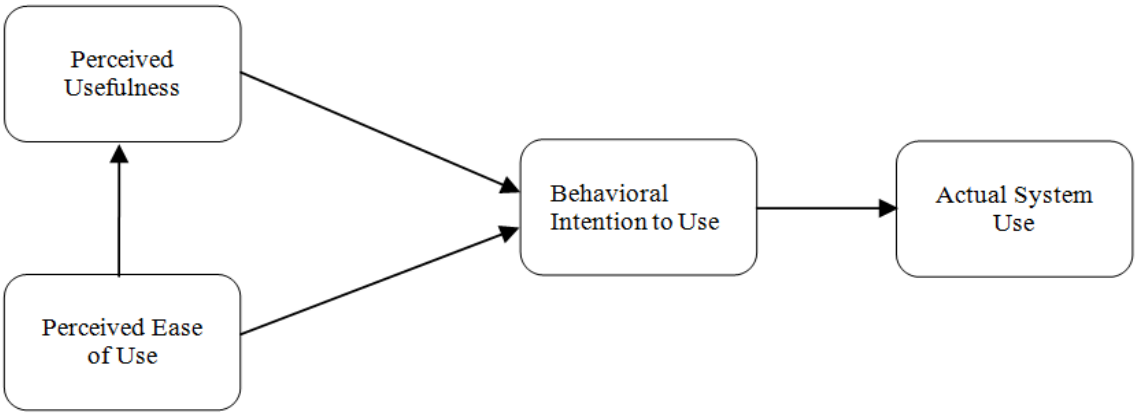
This study examines how university undergraduate students use technology and how they interact with the e-learning platform (Microsoft Teams) during their studies. This section is crucial for reviewing theories of technology acceptance and determining the one that best fits this study's needs in order to apply the right variables and theories to the study's research.

3.1.1 Technology Acceptance Model

The advancement of technology used in education around the world continues to grow annually, notably over the past 20 years. To run online learning platforms, there have been many different tools, programs, and software available. However, in general, technology in education is extremely important for students to learn and accept in the 21st century. Of course, the new way of accepting technology integration in education depends on each country's situation and human resource perspective. For the last two decades, academics from all over the world have undertaken in-depth studies on technology acceptability in a variety of fields, including education. The studies that were undertaken also used theories and models in various contexts to accomplish their stated goals, with variable degrees of success. The initial model of the technology acceptance model (TAM) (Davis, 1986), which asserts perceived usefulness (PU) and perceived ease of use (PEOU) as factors of the intention to use technology, which subsequently determines acceptance behavior, has been mentioned by numerous studies in the past. TAM2 (Venkatesh & Davis, 2000) is an extension of TAM that includes social influence (subjective norm) and cognitive instrumental processes.

Figure 3.1

Technology Acceptance Model



Source: Baraz et al. (2021)

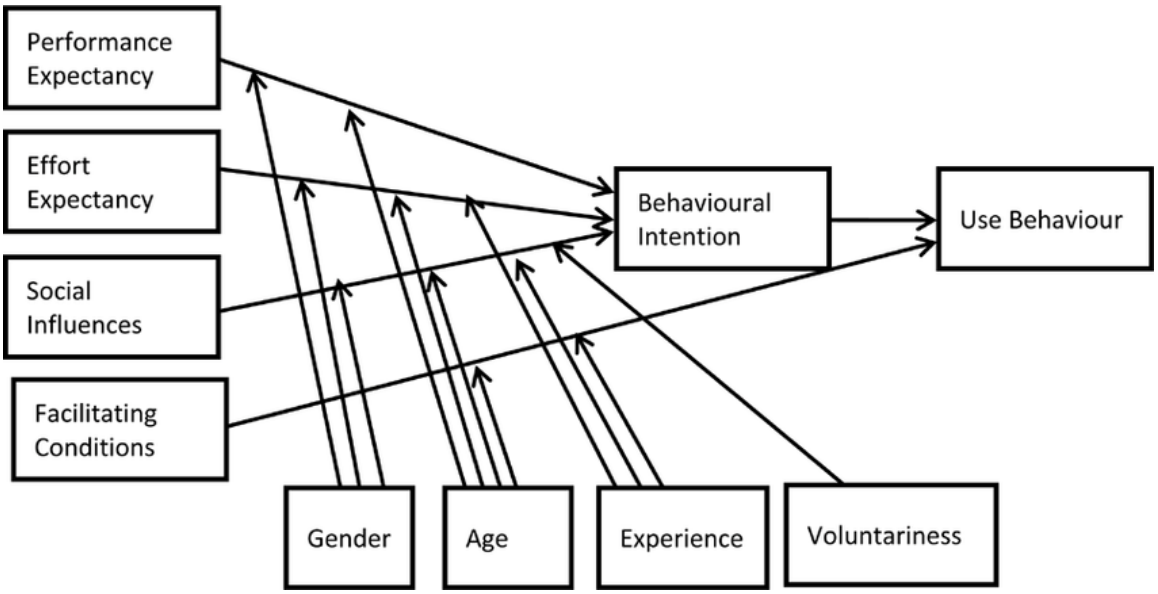
3.1.2 Unified Theory of Acceptance and Use of Technology

These theories, along with others (such as the motivation model and PC usage), were amalgamated by Venkatesh et al. (2003) to create the unified theory of acceptance and use of technology (UTAUT), which is an integrated theory of technology acceptance. However, according to Dwivedi et al. (2019), the UTAUT model left out certain connections that would be important, predicted some connections that might not be acceptable in all circumstances, and eliminated some constructs that might be essential for illuminating the adoption and use of information systems. In the UTAUT, behavioral goals are directly connected with performance expectancy, effort expectancy, and social influences, but actual usage is directly associated with the ultimate enabling conditions. In addition, factors including gender, age, experience, and voluntariness have an impact on behavioral intentions. There were four key structures in UTAUT (performance expectations, expected efforts, social influence and promotion conditions) and four moderating variables (gender, age, experience, and voluntary). Venkatesh (2012) later proposed the UTAUT2 theoretical model to extend the original UTAUT model. The model included three other factors: price, hedonic motivation and habits. Venkatesh et al.,

(2016) further proposed a multi-level framework to further improve the interpretation capabilities of the model, thus analyzing UTAUT and its extensions. For the TAM, there are also various rules. As can be observed, by modifying the shortcomings and advantages of the models already presented in their study, Venkatesh et al. (2003) established a Unified Theory of Acceptance and Use of Technology (UTAUT). The four main components of usage and intention in the UTAUT are performance expectancy, effort expectancy, social influence, and facilitating conditions.

Figure 3.2

The Unification of Theory of Acceptance of the Use of Technology (UTAUT) model by Venkatesh et al. (2003)



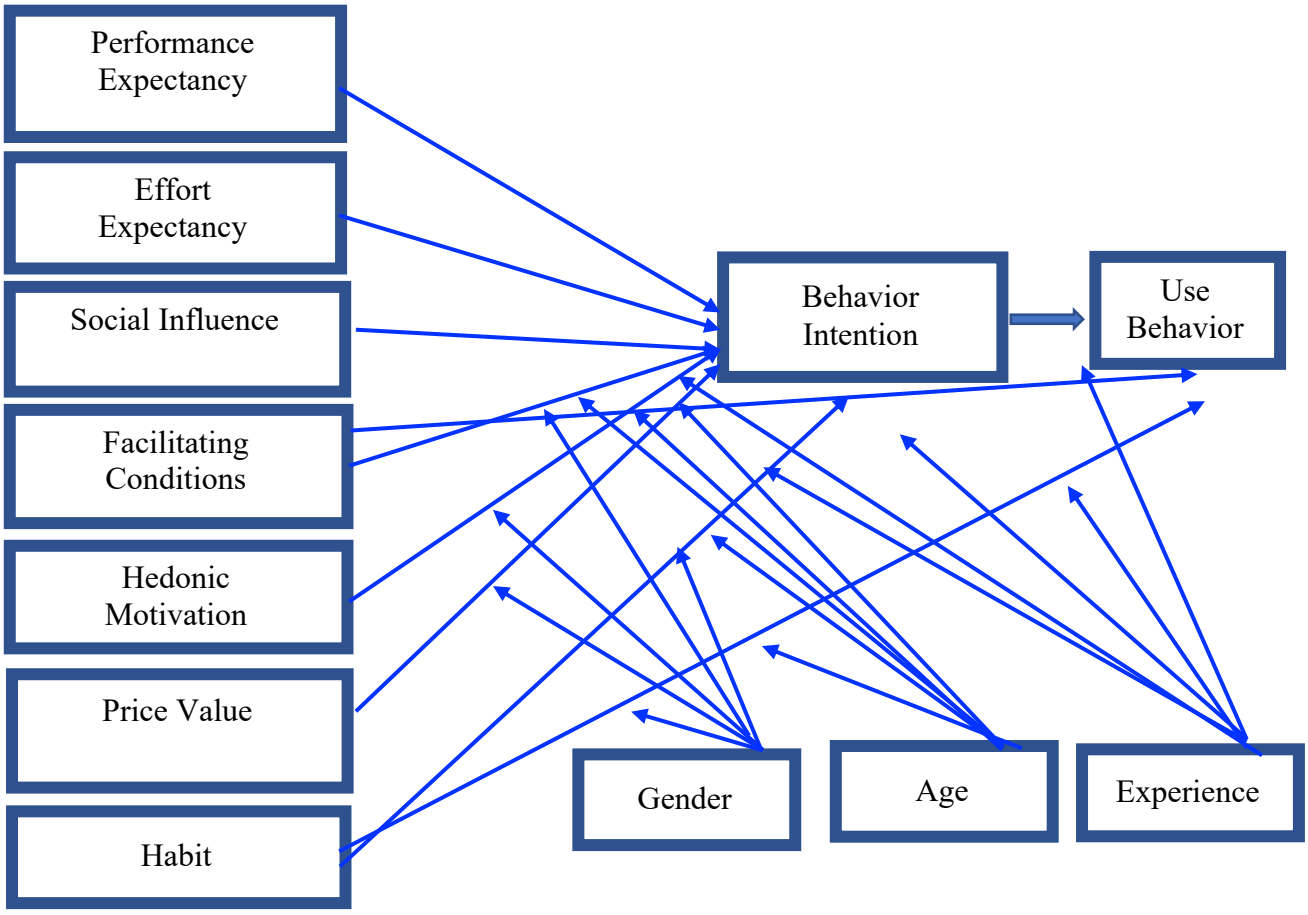
3.1.3 Unified Theory of Acceptance and Use of Technology-2

The Unified Theory of Acceptance and Use of Technology-2 (UTAUT-2) is the reconstructed version of the UTAUT that Venkatesh et al. (2012) created. The voluntary usage of the UTAUT is not part of the new concept. The new model, in contrast to the previous one, took habit, price value, and hedonic motivation into account. In the context of integrating technology in the classroom, numerous theories and paradigms can be

applied. These theories and models will be able to produce results that are generalizable after investigations are carried out using them (Kalinkara, Tala Kalinkara, & Talan, 2022). As a result, three new constructs—hedonic motivation, price value, and habit—were added to the original UTAUT. This new extended version is known as UTAUT2. Since consumers have no hierarchical mandate and frequently engage in voluntary behavior, voluntariness of usage was eliminated from UTAUT2 as a moderator (Venkatesh et al., 2012).

Figure 3.3

Unified Theory of Acceptance and Use of Technology-2

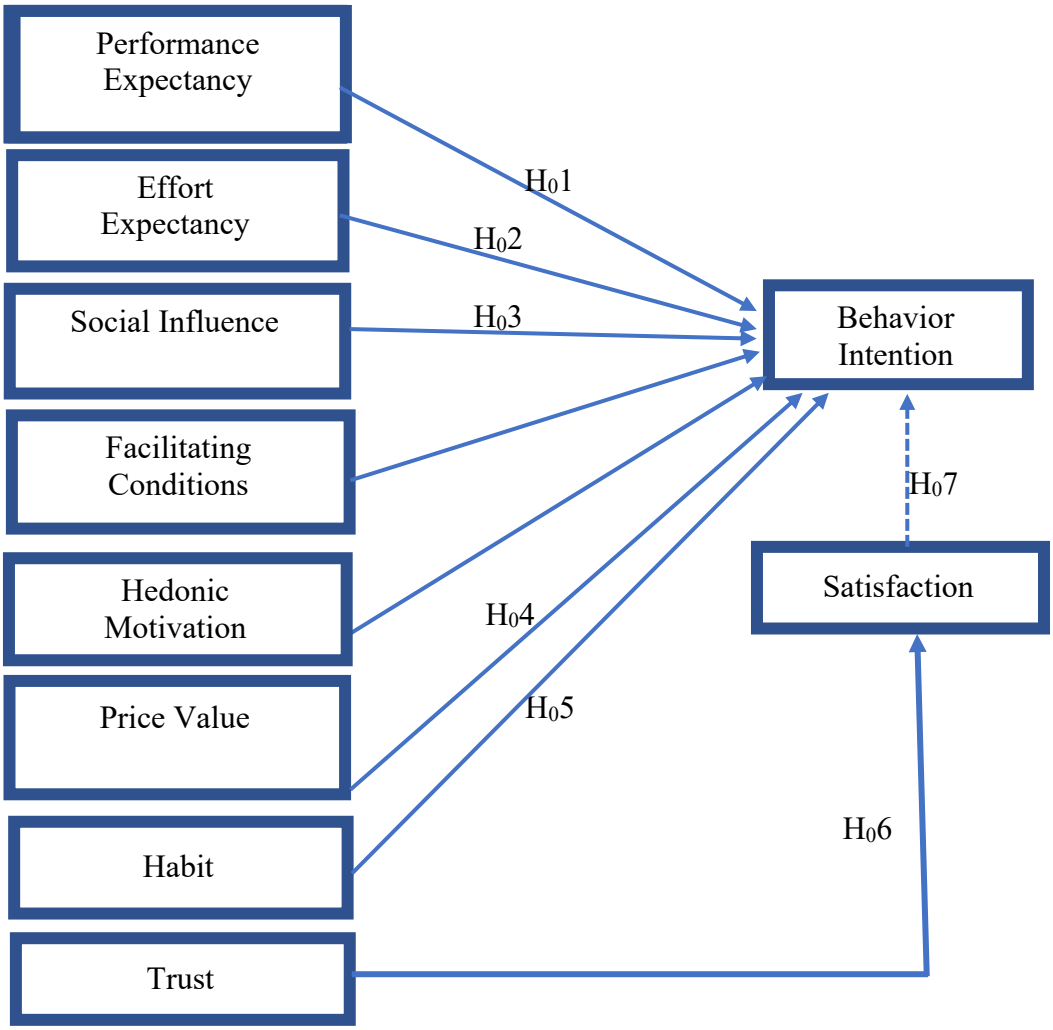


Source: Venkatesh et al. (2012)

3.2 Conceptual Framework of the research

Figure 3.4

Conceptual Framework of Unified Theory of Acceptance and Use of Technology-2



3.3 Relationship between Variables and Research

As it was evident, the literature has investigated how different technologies are used in education, applying the UTAUT2 model to determine how technology adoption has been finalized in the educational system. However, as e-learning platforms have recently grown more popular day by day, they have become crucial to the global education system both during and after the pandemic. Both state and private universities in Cambodia's higher education system are subject to the same legislation. Studying e-

learning systems in terms of technology use and acceptance before and after the pandemic is extremely important because the new e-learning system (Microsoft Teams) is being questioned. For these reasons, a study covering undergraduate students in higher education institutions inside the city limits of Phnom Penh is being completed. The most crucial model to be utilized for this research is the UTAUT-2.

Although there are numerous factors that influence the effectiveness of knowledge transmission through the e-Learning platform (Microsoft Teams), this research was employed the UTAUT-2 model as the primary factor. In the research plan, the researcher started with a notion like Friesen's, who in 2009 defined e-learning as a method of receiving education with the aid of technological devices. Learning and knowledge building have purportedly become highly integrated and participatory processes worldwide as e-Learning use increases among academic and training institutions (Ding et al., 2011). Because of this, Microsoft Teams' integrated E-learning platform emerged as a result of efforts to take steps in the direction of greater effectiveness and quality. In the higher education setting, e-learning offers a chance to improve instruction and foster knowledge sharing between learners and educators.

According to Benta (2014), using an e-learning platform enhanced professor-student interaction and raised student course satisfaction. Another promising feature of this strategy (using the Microsoft Teams e-learning platform) was how significantly it altered students' perceptions of homework and its significance in the educational process. The communication within the class, the growth of the groups, and the homogeneity all benefited from the use of the e-learning platform. According to the inner model (structural model), the quality of the learning management system (LMS), learning content, and teachers all have a greater impact on the quality of e-learning than any other factor. According to Sayekti (2015), the use of e-learning as a learning medium improved

learning effectiveness and efficiency, enhanced information technology skills, strengthened discipline in finishing lecture assignments, and assisted interaction among educators who are in possession of the subject matter (Sayekti, 2015). Cognitive, psychomotor, and interpersonal abilities are all enhanced by e-learning. According to Sorgenfrei et al. (2013), the design of technology and information systems, individual motivation, and environmental factors are the three key factors that affect the adoption of e-learning.

3.4 Hypothesis

The following were the list of hypotheses and literatures that supports the development of hypotheses in the study.

Table 3.1

List of hypotheses in the study with literature support

Hypotheses	Statements	Literature Support
$H_0$1	Performance Expectancy has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	Venkatesh et al. (2012); Baraz et al. (2021)
$H_0$2	Effort Expectancy has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	Venkatesh et al. (2012); Baraz et al. (2021)
$H_0$3	Social Influence has not significantly influenced the behavior intention of undergraduate students	Venkatesh et al. (2012); Baraz et al. (2021)

	at RULE to use the Microsoft Team platform in their study.	
$H_0$4	Price Value has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	Venkatesh et al. (2012); Baraz et al. (2021)
$H_0$5	Habit has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	Venkatesh et al. (2012); Baraz et al. (2021)
$H_0$6	Satisfaction has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	Venkatesh et al. (2012); Baraz et al. (2021)
$H_0$7	Undergraduate students at the Royal University of Law and Economics (RULE) trust Microsoft Teams as a study platform, which does not significantly influence their satisfaction	Venkatesh et al. (2012); Baraz et al. (2021)

CHAPTER IV

RESEARCH METHODOLOGY

4.1 Research Design

This research was the descriptive research, which was one of the quantitative research methods, in an attempt to cover undergraduate student cognitive structures related to technology acceptance and use in the faculty of informatics at the Royal University of Law and Economics (RULE) and other students currently study in e-learning at RULE where located in Phnom Penh City, Cambodia by applying the UTAUT-2 scale developed by Venkatesh et al. (2012) and adapted by Baraz et al. (2021) in the data collection phase. The UTAUT2 scale including Performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, and behavioral intention are researched.

4.2 Target Population and Sample

This research was conducted during the second semester of the 2022-2023 academic year in the faculty of informatic economics of Royal University of Law and Economics (RULE). The participants of the study in only undergraduate students studying at the faculty of informatics economics of Royal University of Law and Economics at Royal University of Law and Economics (RULE) which is a public university in Phnom Penh City, Cambodia.

4.2.1 Population Characteristics

The total number of undergraduate students in the faculty of informatics economics is approximately around 500, from the first to fourth years in both the

department of information technology and informatics economics. All of the students in the faculty have their own account and ID number to study with Microsoft Teams.

4.2.2 Sample

The researcher selected samples from the target population in the faculty of informative economics among those who have accounts and IDs to study with Microsoft Teams at RULE.

4.2.3 Sampling Technique

Sine the population and the sample are the same group, the census sampling technique is applied.

4.2.4 Sample Size

This research was conducted to collect data as much as possible from all undergraduate students in the faculty of informatics economics within 500 people.

4.3 Research Instrument

The UTAUT-2 model created by Venkatesh et al. (2012) was used as the foundation for this research's model. This study's hypotheses and the model are preparing according to the model created that UTAUT-2 including performance expectancy, effort expectancy, social influence, facilitating conditions, motivation, price value, habit, trust, satisfaction and behavior intention towards e-Learning has significantly influence undergraduate student intention to use Microsoft Team system platform in their study.

4.3.1 Questionnaire for survey

There were 40 questions questionnaire items extracted from The UTAUT-2 by Venkatesh et al., (2012) for this study. Each student was asked to complete the survey. The survey questions and utilized five-point Likert type where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree.

Table 4.1

Items for questionnaires UTAUT-2

Code	Items of Performance Expectancy
PE1	Using Microsoft Teams for my learning increasing productivity.
PE2	Using Microsoft Teams helpful to my study.
PE3	Using Microsoft Teams enhancement of my knowledge for e-learning.
PE4	Microsoft Teams is usefulness for my study at RULE.
Code	**Items of Effort Expectancy**
EE1	Learning how to use Microsoft Teams is easy for me.
EE2	It is easy for me to become skillful to use Microsoft Teams in my study.
EE3	My interaction in Microsoft Teams system is clear and understanding.
EE4	It is not taken long time to learn about Microsoft Teams system in my study.
Code	**Items of Social Influence**
SI1	People who are important to me think that I should use Microsoft Teams for my study.
SI2	Most of my friends think that I should use Microsoft Teams platform for my study.
SI3	Most people around me are using Microsoft Teams platform for their study.
SI4	Most of my classmate tell me to use Microsoft Teams platform for my study.
Code	**Items of Facilitating Condition**
FC1	I have resources enough to use Microsoft Teams platform for my study.
FC2	I have knowledge necessary to use Microsoft Teams platform for my study.
FC3	I can get help from others when I have some difficult of using Microsoft Teams.
FC4	The internet access enough to Microsoft Teams for my study.
Code	**Items of Hedonic Motivation**
HM1	Using Microsoft Teams for my study is fun.

HM2	Using Microsoft Teams in my study is enjoyable.
HM3	Using Microsoft Teams in my study is very entertaining.
HM4	I feel excited to use Microsoft Teams platform in my study.

Code	Items of Price Value
PV1	Microsoft Teams platform is reasonably prices to use for my study.
PV2	Microsoft Teams is a good value for my study at RULE.
PV3	At the currently, Microsoft Teams platform provide a very good value to me.
PV4	I can save money when I use Microsoft Teams for my study.

Code	Items of Habit
H1	The use of Microsoft Teams has become a habit for me.
H2	I am very addicted to using Microsoft Teams in my study.
H3	I must use Microsoft Teams for my study.
H4	Using the Microsoft Team has become natural to me.

Code	Items of Behavior Intention
BI1	I intend to continue using the Microsoft Teams in the future.
BI2	I will always try to use the Microsoft Teams in my study for daily life.
BI3	I plan to continue to use the Microsoft Teams frequently.
BI4	I will keep using Microsoft Teams as I am doing now.

Code	Items of Trust
T1	I believe that Microsoft Teams is trustworthy.
T2	I trust in Microsoft Teams platform for e-learning.
T3	I do not doubt the honesty of the Microsoft Teams in my study.
T4	Microsoft Teams have ability to fulfill its task.

Code	Items of Satisfaction
ST1	I am very content with Microsoft Teams system at RULE.

ST2	I am very pleased with Microsoft Teams system at RULE.
ST3	I am satisfied with Microsoft Teams system at RULE.
ST4	I felt delighted with Microsoft Teams system at RULE.

4.3.2 Interview Questions

The interview is conducted with seven lecturers full-time who are teaching through Microsoft Team in RULE in order to understand more about their perspectives and how they set up, and process about Microsoft Teams' acceptance at RULE. This research is not interview for administration or management team at RULE.

Table 4.2

List of interview questions for lecturers

No.	Questions for interview
1	How do undergraduate students in RULE adopt the Microsoft Teams learning system?
2	How did you set up the Microsoft Teams system for your teaching in e-learning? What are the technical problems of e-learning via Microsoft Teams system that you deal with?
3	What are the difficulties for you when teaching an e-learning course via Microsoft Teams system?
4	What are the common problems with e-learning through Microsoft Teams, for you as a professor at RULE?
5	What are your thoughts on RULE's use of Microsoft Teams?
6	How would you advise improving the use of Microsoft Teams at RULE for both students and professors?

4.4 Operationalization of the Variables

Table 4.3

Operationalization Table of Questionnaire

Variables	Definitions	Measurement items Operationalization	Source	Scale Type
Performance Expectancy (PE)	People believe that utilizing the system will boost their performance and provide benefits from applying technology in performance activities to the extent that they consider using the system will improve their academic achievement (Abbad et al., 2021).	PE1: Using Microsoft Teams for my learning increasing productivity. PE2: Using Microsoft Teams helpful to my study. PE3: Using Microsoft Teams enhancement of my knowledge for e-learning. PE4: Microsoft Teams is usefulness for my study at RULE.	Venkatesh et al. (2012)	Strongly Agree to Strongly Disagree on a 5-Point Likert Scale
Effort Expectancy (EE)	The degree of ease with which the system can be used. It has to do with how simple it is to use technology (Venkatesh et al., 2012; Zhou et al., 2010).	EE1: Learning how to use Microsoft Teams is easy for me. EE2: It is easy for me to become skillful to use Microsoft Teams in my study. EE3: My interaction in Microsoft Teams system is clear and understanding. EE4: It is not taken long time to learn about Microsoft Teams system in my study.	Venkatesh et al. (2012)	Strongly Agree to Strongly Disagree on a 5-Point Likert Scale
Social Influence (SI)	The extent to which a person believes significant others think they should use the new technological system (Venkatesh et al., 2003). The idea that a person should accept a system is one that is held by important others, such as family and friends (Graf-Vlachy et al., 2018).	SI1: People who are important to me think that I should use Microsoft Teams for my study. SI2: Most of my friends think that I should use Microsoft Teams platform for my study. SI3: Most people around me are using Microsoft Teams platform for their study. SI4: Most of my classmate tell me to use Microsoft Teams platform for my study.	Venkatesh et al. (2012)	Strongly Agree to Strongly Disagree on a 5-Point Likert Scale

Facilitating Conditions (FC)	The extent to which a person thinks that the system is supported by a technical and organizational infrastructure (Venkatesh et al., 2003)	FC1: I have resources enough to use Microsoft Teams platform for my study. FC2: I have knowledge necessary to use Microsoft Teams platform for my study. FC3: I get help from others when I have some difficult of using Microsoft Teams. FC4: The internet access enough to Microsoft Teams for my study.	Venkatesh et al. (2012)	Strongly Agree to Strongly Disagree on a 5-Point Likert Scale
Hedonic Motivation (HM)	Is described as the happiness and enjoyment a person experiences when using technology (Venkatesh et al., 2012).	HM1: Using Microsoft Teams for my study is fun. HM2: Using Microsoft Teams in my study is enjoyable. HM3: Using Microsoft Teams in my study is very entertaining. HM4: I feel excited to use Microsoft Teams platform in my study.	Venkatesh et al. (2012)	Strongly Agree to Strongly Disagree on a 5-Point Likert Scale
Price Value (PV)	It will be expected that utilizing an e-learning system will have a positive impact on students' perceptions of their autonomy, relatedness, expenditure, and competence (Gunasinghe et al., 2019).	PV1: Microsoft Teams platform is reasonably prices to use for my study. PV2: Microsoft Teams is a good value for my study at RULE. PV3: Microsoft Teams platform provides a very good value to me. PV4: I can save money when I use Microsoft Teams for my study.	Venkatesh et al. (2012)	Strongly Agree to Strongly Disagree on a 5-Point Likert Scale
Habit (HT)	Students' competency will increase with habitual use, which will further encourage real use of the e-learning platform (Osei et al., 2022).	H1: The use of Microsoft Teams has become a habit for me. H2: I am very addicted to using Microsoft Teams in my study. H3: I must use Microsoft Teams for my study. H4: Using the Microsoft Teams has become natural to me.	Venkatesh et al. (2012)	Strongly Agree to Strongly Disagree on a 5-Point Likert Scale
Behavior Intention (BI)	The use of the e-learning system will be carried out if students demonstrate an	BI1: I intend to continue using the Microsoft Teams in the future.	Venkatesh et al. (2012)	Strongly Agree to Strongly Disagree on a 5-

	intention to take action (Osei et al., 2022).	BI2: I will always try to use the Microsoft Teams in my study for daily life. BI3: I plan to continue to use the Microsoft Teams frequently. BI4: I will keep using Microsoft Teams as I am doing now.		Point Likert Scale
Trust (TR)	The ability to constantly maintain trust is one facet of e-learning and online learning, and trust can affect both the intention to use something and the way that someone uses it (Singh et al., 2017).	T1: I believe that Microsoft Teams is trustworthy. T2: I trust in Microsoft Teams platform for e-learning. T3: I do not doubt the honesty of the Microsoft Teams in my study. T4: Microsoft Teams have ability to fulfill its task.	Venkatesh et al. (2012)	Strongly Agree to Strongly Disagree on a 5-Point Likert Scale
Satisfaction (ST)	Students' degree of satisfaction with their online education has a significant impact on their decision to choose a particular platform for e-learning, and it also contributes to higher levels of learner enthusiasm (Jakkaew et al., 2017).	ST1: I am very content with Microsoft Teams system at RULE. ST2: I am very pleased with Microsoft Teams system at RULE. ST3: I am satisfied with Microsoft Teams system at RULE. ST4: I felt delighted with Microsoft Teams system at RULE.	Venkatesh et al. (2012)	Strongly Agree to Strongly Disagree on a 5-Point Likert Scale

4.5 Validity of Research Instruments

The index of Item-Objective Congruence (IOC) has been used to assess the questionnaire's content validity. The questionnaires were checked by three experts who have more than eight years of teaching experience in education and information technology. Each expert was asked to assess whether the item measured the intended objective and assign the IOC score: 1 = the expert is sure that the item measures the objective, 0 = the expert is not sure that the item actually measures the objective, and -1 = the expert is sure that the item does not measure the objective.

4.5.1 Validity of the Questionnaire

By requesting experts to validate the questions, the questionnaire's content validity was evaluated using the Item-Objective Congruence (IOC) index.

Table 4.4

List of Experts to check questionnaires

ID	Education Degree	Current Profession
Expert 1	Ph.D. in Business Administration	Head of Department of Information Technology at RULE, Lecture of Information Technology
Expert 2	Ph.D. in Education Administration	Vice-Rector of RULE Lecture of Education and Administration
Expert 3	Ph.D. Archaeology (Research, and History)	Lecturer at the Royal University of Phnom Penh and deputy director general of the Royal Academy of Cambodia's Institute of Culture and Fine Arts

4.5.2 Validity of the Interview Questions

The structured interview is conducted for interviewing lecturers, in which the researcher has a set of questions that have been designed in advance and focus on the core competencies, while the unstructured interview is applied to interview part-time and full-time lecturers who used Microsoft Teams for their teaching. The item-objective congruence (IOC) index is used in the structure interview for professors. All interview processes were recorded, either through a Zoom meeting or face-to-face.

4.6 Reliability of Research Instruments

This research used Cronbach's coefficient alpha, and the score results was computed on Jamovi to check the reliability of UTAUT2 based on the questionnaires. The example of test in the table 4.5 presented the acceptable rate of Cronbach's alpha values. According to Kadir et al., (2019), if the Cronbach's alpha value is at between 0.60 to 0.70 or above, it confirmed the questionnaires are reliable for this research (shown in Table 4.5).

Table 4.5

Range of reliability and its coefficient of Cronbach's alpha

No	Cronbach's Alpha Value	Interpretation
1	More than 0.90	Excellent
2	0.80-0.89	Good
3	0.70-0.79	Acceptable
4	0.60-0.69	Acceptable
5	0.50-0.59	Poor
6	Less than 0.59	Unacceptable

Source: Adopted from George, D., and Mallery, M. (2003).

Table 4.6

Results of pilot test reliability statistics of Cronbach's

Variables	Cronbach's Alpha Value	Interpretation
Behavior Intention (BI1 BI2 BI3 BI4)	0.85	Good
Effort Expectancy (EE1 EE2 EE3)	0.67	Acceptable
Facilitating Conditions (FC2 FC3)	0.66	Acceptable

Habit (H1 H2 H3 H4)	0.73	Acceptable
Hedonic Motivation (HM3 HM4)	0.53	Poor (Delete from questionnaires)
Performance Expectancy (PE1 PE2 PE3)	0.70	Acceptable
Price Value (PV1 PV2 PV3 PV4)	0.78	Acceptable
Social Influence (SI1 SI2 SI3 SI4)	0.68	Acceptable
Satisfaction (ST1 ST2 ST3 ST4)	0.85	Good
Trust (T1 T2 T3 T4)	0.73	Acceptable

According to the pilot test with 58 respondents for reliability statistics with all questions and also from the three experts who gave a mark on all questionnaires, this research needs to remove some items from the questionnaire.

First, EE removed one item among four because the reliability statistic of Cronbach's Alpha has shown that EE (EE1, EE2, EE3) is 0.67, which is questionable for this research.

Second, FC removed two items from the questionnaire among the four items of questions because the result of the pilot test reliability statistics has shown that if they are put together, they will not be acceptable. After deleting two items, the result shows that FC (FC2, FC3) is 0.66, which is questionable for this research.

Third, HM, according to the expert, is impossible to give a mark and calculate with the index of item-objective congruence (IOC), as well as the result of the pilot test realiability statistics for Cronbach's Alpha, which has shown that HM is impossible to put for this research because the result was shown to be very poor, even delete HM1 and HM2 for pilot testing.

Fourth, for PE, this research removed one item. PE (PE1, PE2, PE3) is 0.70, which is acceptable for this research.

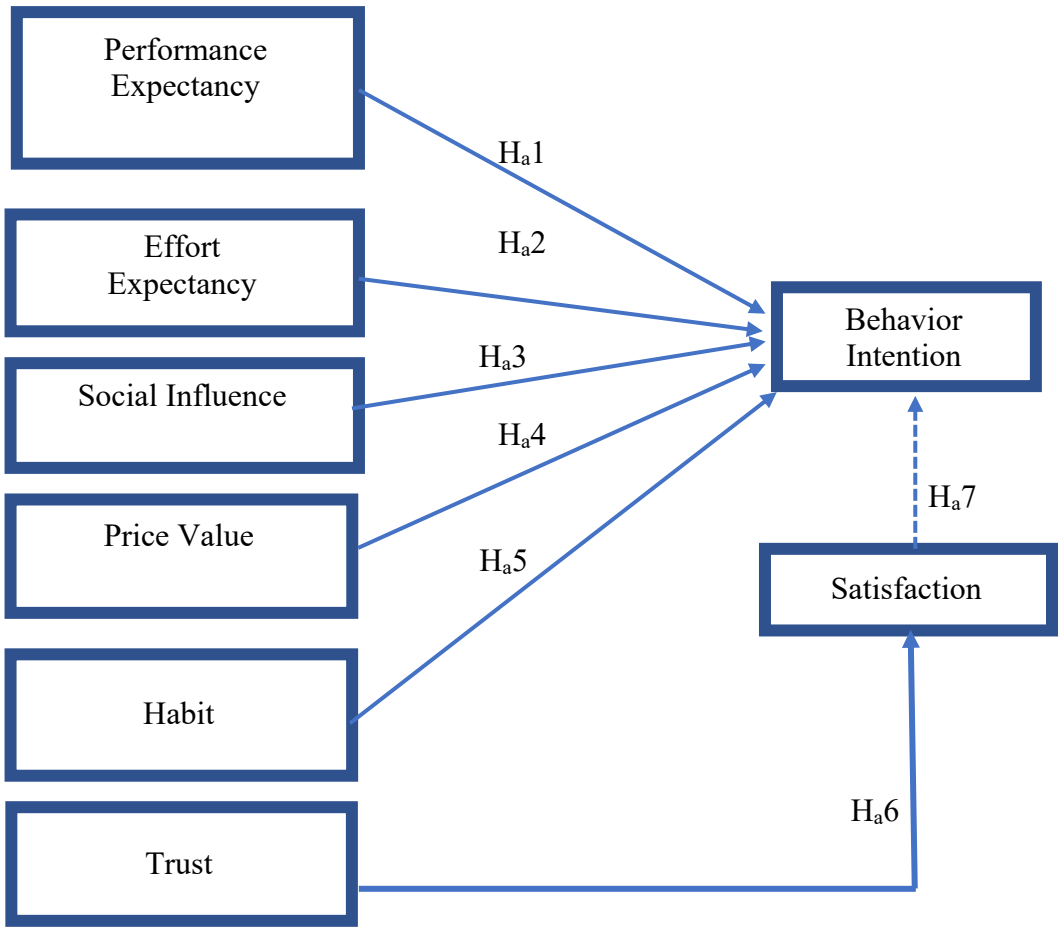
So, this research has 32 items of questionnaires after a pilot test with 58 respondents for reliability statistics, of which Behavior Intention, Habit, Price Value , Social Influence, Satisfaction, and Trust have 4 items in questionnaires. In addition, the Hedonic Motivation (HM) is removed from the conceptual framework.

Furthermore, in the course of conducting research involving 476 respondents, an in-depth analysis was undertaken to assess the reliability of facilitating conditions (FC) within the conceptual framework. Unfortunately, the findings revealed that FC did not demonstrate the anticipated level of reliability in the context of the study. Reliability is a crucial aspect of this research endeavor, as it reflects the consistency and stability of the measurements or variables under investigation. In this particular study, the unreliability of facilitating conditions suggests that the concept did not consistently produce valid results across the diverse sample of 476 participants. The decision to exclude facilitating conditions from the conceptual framework was informed by an analysis of the reliability of this construct across 476 respondents. This adjustment advances the study's overall contribution to the field by ensuring that the research retains its rigorous methodology and provides reliable results.

Therefore, the adjusted conceptual framework presented in Figure 4.1 removed Hedonic Motivation (HM) and Facilitating Conditions (FC) from the conceptual framework for this research.

Figure 4.1

Conceptual Framework research of Unified Theory of Acceptance and Use of Technology-2



4.7 Data Collection Procedures

For the ease of gathering information from students who were enrolled in classes and using Microsoft Teams for their studies, this study was performed as an online survey. On social media sites where the university maintains a personal account, the survey link was shared. There were two sections to the questionnaire. Demographic data was gathered in Section A, while all other factors were measured in Section B. Likert scales are used in this study to evaluate every item (1 being strongly disagreed with and 5 being strongly agreed with). The data was gathered using an easy-to-use online survey tool (Microsoft Form), take the research's cost and feasibility into account. From

September to December 2023, the respondents were polled via a self-administered survey. The researcher sends out the survey forms to specific students through their academic offices using Microsoft Teams.

To protect data collection from undergraduate students at RULE using Microsoft forms, the following procedures have been applied with agreement from lectures and technical support from RULE, such as a secure login system: implement a secure login system for students accessing Microsoft Forms. Each student should have a unique student ID, an email from Microsoft Team, and a password to log in to their Microsoft account at RULE. The researcher used Microsoft 365 to collect responses; only people at the Royal University of Law and Economics can respond (RULE), with one response per person. And when researcher meet student directly or telegram group to explain them individual in each class, the questionnaires collect to send to anyone can respond with noted of code from each class. On the other hand, anonymous responses are also available with the code of each class to protect the privacy of students and also encourage more students from the faculty to respond, but they still have the code of each class. All the procedures have been done with the purpose of avoiding duplicate respondents and preventing errors in data analysis.

4.7.1 Ethical Research Procedures

This research was conducted by respondents who were undergraduate students at RULE, and the researcher ensures that all respondents were voluntary participants, and all information has been provided clearly with the purpose of data collection for the research. All information from respondents was kept confidential and never linked to other data by anyone else. Furthermore, the researcher ensures that all data collected from respondents was represented.

4.7.2 Survey Procedures

The questionnaires were distributed to all sample sizes through the technical staff of the IT department at RULE, and the researcher also has to meet target classes to explain the purpose of the research clearly before distributing the questionnaires.

4.7.3 Interview Procedures

The interviewees were RULE lecturers who used Microsoft Team as a teaching instrument. The researcher first made contact with each respondent to schedule a suitable time for an interview, either during the weekday or on the weekend, based on their availability and comfort level. The researcher also sent out interview questionnaires in advance. Interviews are particularly allowed in the RULE consulting room, via Zoom meeting, or via telegraph, based on the interviewees' convenience. The researcher will ask the interviewee to record audio as an MP3 and to send a voice recording or write a note during the interview process.

4.8 Translation of Research Instruments

This research was applied as national language known as Khmer to prepare both survey questionnaires and interview questions. So, researcher have to translated all from English to Khmer and send it to a Khmer professional to check, as well as send it to the IT department office at RULE to check both English and Khmer.

Table 4.7

List of Translator expert to check translation

ID	Credential (degree/profession)
Translator 1	Master of Business Administration in English and Khmer language

Translator 2	Master of Information Technology (Technical staff of Information Technology at RULE, and responsible for Microsoft Teams work).
Translator 3	Master of Information Technology and Khmer Language.

4.8.1 Translation of the Questionnaire

The questionnaires were translated from English to Khmer by an English-Khmer professional to ensure that the meaning of each item was accurate. After that, the questionnaire has been sent to an IT personnel at RULE to distribute to the samples through Microsoft form.

4.8.2 Translation of the Interview Questions

The interview questions were translated from English to Khmer by an English-Khmer professional to ensure that the meaning of each question was accurate. The interview session was done in Khmer conversation.

4.9 Data Analysis

The descriptive statistics and the inferential statistics through Jamovi statistical software were applied for data analysis of the research.

4.9.1 Descriptive Statistics

The descriptive statistics were calculated to report the demographic information of the samples in forms of frequencies and percentages. In addition, the mean values and standard deviation were reported on the perceptions of the samples towards each item of the variables.

4.9.2 Inferential Statistics

The Confirmatory Factor Analysis (CFA) and Structural Equation Model (SEM) have been applied for hypothesis testing to examine the influence between the variables.

4.9.3 Content Analysis

The content analysis has been applied to report the qualitative data—interview responses from the samples.

Table 4.8

Summary of Hypothesis and statistical method

Hypotheses	Statement	Statistical Method
$H_0$1	Performance Expectancy has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	CFA and SEM
$H_0$2	Effort Expectancy has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	CFA and SEM
$H_0$3	Social Influence has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	CFA and SEM
$H_0$4	Price Value has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	CFA and SEM
$H_0$5	Habit has not significantly influenced the behavior intention of undergraduate students at	CFA and SEM

	RULE to use the Microsoft Team platform in their study.	
$H_0$6	Satisfaction has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	CFA and SEM
$H_0$7	Undergraduate students at the Royal University of Law and Economics (RULE) trust Microsoft Teams as a study platform, which does not significantly influence their satisfaction.	CFA and SEM

CHAPTER V

DATA ANALYSIS AND RESULTS

This chapter provides an informative, three-pronged analysis that includes demographic information, a summary of the key variables using descriptive statistics, and comprehensive hypothesis testing. This framework offers detailed description of the research participants, the key features of the data, and the statistical confirmation of proposed theories.

The purpose of this study was to investigate undergraduate students' perceptions of the Microsoft Teams e-learning platform at a public institution in Phnom Penh, Cambodia. It also aimed to determine how students felt about e-learning in the context of a public university in relation to a number of different aspects, such as performance expectancy, effort expectancy, social influence, facilitating conditions, price value, habit, trust, behavior intention, and satisfaction. Understanding undergraduate students' levels of trust in using Microsoft Teams for teaching and learning was another focus of the study. For the duration of the study, 476 undergraduate volunteers participated in it.

5.1 Demographic Information

There were 476 total respondents. Females made up 53.2% of all respondents, while males made up 46.8%. The majority of participants, 98.7%, were between the ages of 18 and 25; 1.1% were between the ages of 25 and 30; and 0.2% were between the ages of 30 and 35. The majority of respondents, 52.1%, were first-year students, followed by 11.1% in the second year, 25.0% in the third year, and 11.8% in the fourth year, and all respondents using Microsoft Teams is equal to 100% (see Table 5.1).

Table 5.1

Demographic Characteristics (n=476)

Variable	Description	Frequency	Percentage %
Gender	Female	253	53.2 %
	Male	223	46.8 %
	Total	**476**	**100 %**
Age	18 to 25	470	98.7 %
	25 to 30	5	1.1 %
	30 to 35	1	0.2 %
	Total	**476**	**100 %**
Year of study	1st year	248	52.1%
	2nd year	53	11.1%
	3rd year	119	25.0%
	4th year	56	11.8%
	Total	**476**	**100%**
Using Microsoft Teams	**Yes**	**476**	**100%**

5.2 Descriptive Statistics of Main Variables

5.2.1 Arbitrary Level of Questionnaire

The 476 respondents, who were undergraduate student from the faculty of informatics economics answered to the UTAUT2 questionnaires for e-learning using Microsoft Team at RULE was evaluated using Likert-Scale to rate from 1-5. The 5-point Likert scale is a commonly used tool in survey research for measuring people's attitudes, opinions, or perceptions. Each point on the scale represents a level of agreement or disagreement with a statement. The standard interpretation of a 5-point Likert scale typically ranges from strongly disagreeing to strongly agreeing, with the following labels assigned to each point: 1 Strongly Disagree: This indicates a strong negative response or disagreement with the statement. 2 Disagree: This suggests a less intense disagreement compared to strongly disagreeing but still indicates a negative response. 3 Neutral: This point reflects a neutral or indifferent stance, implying neither agreement nor disagreement with the statement. 4 Agree: This represents a positive response or agreement with the statement, though it may not be as strong as the next category. 5 Strongly Agree: This

indicates a strong positive response or strong agreement with the statement (Croasmun et al., 2011). In the study, the 5 Level Likert Scale questionnaire (Agreement) was employed to collect samples' viewpoints toward each variable measured. According to Norman, G. (2010), to interpret the data obtained, the following arbitrary level is utilized to interpret the mean value for each variable.

Table 5.2
Arbitrary Level for Interpretation of Questionnaire Data Likert scale score Range Interpretation

Arbitrary Level	Mean
1.00 - 1.50	Strongly Disagree
1.51 - 2.50	Disagree
2.51 - 3.50	Neutral
3.51 - 4.50	Agree
4.51 - 5.00	Strongly Agree

Table 5.3

The Mean and Standard Deviation (S.D.) of Performance Expectancy towards Microsoft Teams Usage

Code	Items	Mean	S.D.	Interpretation
PE1	Using Microsoft Teams for my learning increasing productivity.	3.75	0.85	Agree
PE2	Using Microsoft Teams helpful to my study.	3.85	0.83	Agree
PE3	Using Microsoft Teams enhancement of my knowledge for e-learning.	4.02	0.76	Agree
	Average	**3.87**	**0.82**	**Agree**

Table 5.3 shows that the questionnaire for Microsoft Team at RULE in term of Performance Expectancy agree on the highest mean of "Using Microsoft Teams enhancement of my knowledge for e-learning." (Mean 4.02, S.D. = 0.76). This was followed by "Using Microsoft Teams helpful to my study." (Mean = 3.85, S.D. = 0.83), "Using Microsoft Teams for my learning increasing productivity." (Mean = 3.75, S.D. =

0.85). The overall result from questionnaire for Microsoft Team at RULE in terms of Performance Expectancy reveals as agree with average of Mean 3.87 and S.D. = 0.82.

Table 5.4

The Mean and Standard Deviation (S.D.) of Effort Expectancy towards Microsoft Teams Usage

Code	Items	Mean	S.D.	Interpretation
EE1	Learning how to use Microsoft Teams is easy for me.	3.76	0.85	Agree
EE2	It is easy for me to become skillful to use Microsoft Teams in my study.	3.46	0.86	Neutral
EE3	My interaction in Microsoft Teams system is clear and understanding.	3.77	0.80	Agree
	Average	**3.66**	**0.84**	**Agree**

Table 5.4 shows that the questionnaire for Microsoft Team at RULE in term of Effort Expectancy agree on highest mean "My interaction in Microsoft Teams system is clear and understanding." (Mean 3.77, S.D. = 0.80), "Learning how to use Microsoft Teams is easy for me." (Mean 3.76, S.D. = 0.85), and neutral was "It is easy for me to become skillful to use Microsoft Teams in my study." (Mean 3.46, S.D. = 0.86). The overall result from questionnaire for Microsoft Team at RULE in terms of Effort Expectancy reveals as agree with average of Mean 3.66 and S.D. = 0.84.

Table 5.5

The Mean and Standard Deviation (S.D.) of Social Influence towards Microsoft Teams Usage

Code	Items	Mean	S.D.	Interpretation
SI1	People who are important to me think that I should use Microsoft Teams for my study.	3.71	0.89	Agree
SI2	Most of my friends think that I should use Microsoft Teams platform for my study.	3.72	0.87	Agree

SI3	Most people around me are using Microsoft Teams platform for their study.	3.81	0.80	Agree
SI4	Most of my classmate tell me to use Microsoft Teams platform for my study.	3.79	0.87	Agree
	Average	**3.76**	**0.86**	**Agree**

Table 5.5 shows that the questionnaire for Microsoft Team at RULE in term of Social Influence agree on highest mean "Most people around me are using Microsoft Teams platform for their study." (Mean 3.81, S.D. = 0.80). This was followed by "Most of my classmate tell me to use Microsoft Teams platform for my study." (Mean 3.79, S.D. = 0.87), "Most of my friends think that I should use Microsoft Teams platform for my study." (Mean 3.72, S.D. = 0.87). However, the undergraduate students agree on lowest mean was "People who are important to me think that I should use Microsoft Teams for my study." (Mean 3.71, S.D. = 0.89). The overall result from questionnaire for Microsoft Team at RULE in terms of Social Influence reveals as agree with average of Mean 3.76 and S.D. = 0.86.

Table 5.6

The Mean and Standard Deviation (S.D.) of Facilitating Condition towards Microsoft Teams Usage

Code	Items	Mean	S.D.	Interpretation
FC2	I have knowledge necessary to use Microsoft Teams platform for my study.	3.73	0.81	Agree
FC3	I can get help from others when I have some difficult of using Microsoft Teams.	3.64	0.92	Agree
	Average	**3.69**	**0.86**	**Agree**

Table 5.6 shows that the questionnaire for Microsoft Team at RULE in term of Facilitating Condition agree on highest mean "I have knowledge necessary to use Microsoft Teams platform for my study." (Mean 3.73, S.D. = 0.81). This was followed by

"I can get help from others when I have some difficult of using Microsoft Teams." (Mean 3.64, S.D. = 0.92). The overall result from questionnaire for Microsoft Team at RULE in terms of Facilitation Condition reveals as agree with average of Mean 3.69 and S.D. = 0.86.

Table 5.7

The Mean and Standard Deviation (S.D.) of Price Value towards Microsoft Teams Usage

Code	Items	Mean	S.D.	Interpretation
PV1	Microsoft Teams platform is reasonably prices to use for my study.	3.65	0.95	Agree
PV2	Microsoft Teams is a good value for my study at RULE.	3.83	0.85	Agree
PV3	At the currently, Microsoft Teams platform provide a very good value to me.	3.78	0.79	Agree
PV4	I can save money when I use Microsoft Teams for my study.	3.57	0.96	Agree
	Average	**3.70**	**0.89**	**Agree**

Table 5.7 shows that the questionnaire for Microsoft Team at RULE in term of Price Value agree on highest mean "Microsoft Teams is a good value for my study at RULE." (Mean 3.83, S.D. = 0.85). This was followed by "At the currently, Microsoft Teams platform provide a very good value to me." (Mean 3.78, S.D. = 0.79), "Microsoft Teams platform is reasonably prices to use for my study." (Mean 3.65, S.D. 0.95). However, the undergraduate students agree on lowest mean was "I can save money when I use Microsoft Teams for my study." (Mean 3.57, S.D. 0.96). The overall result from questionnaire for Microsoft Team at RULE in terms of Price Value reveals as agree with average of Mean 3.70 and S.D. = 0.89.

Table 5.8

The Mean and Standard Deviation (S.D.) of Habit towards Microsoft Teams Usage

Code	Items	Mean	S.D.	Interpretation
H1	The use of Microsoft Teams has become a habit for me.	3.48	0.91	Neutral
H2	I am very addicted to using Microsoft Teams in my study.	3.41	0.91	Neutral
H3	I must use Microsoft Teams for my study.	3.50	0.88	Neutral
H4	Using the Microsoft Team has become natural to me.	3.42	0.89	Neutral
	Average	**3.45**	**0.90**	**Neutral**

Table 5.8 shows that the questionnaire for Microsoft Team at RULE in term of Habit neutral on highest mean "I must use Microsoft Teams for my study." (Mean 3.50, S.D. = 0.88). This was followed by "The use of Microsoft Teams has become a habit for me." (Mean 3.48, S.D. = 0.91), "Using the Microsoft Team has become natural to me." (Mean 3.42, S.D. 0.89) and lowest mean was "I am very addicted to using Microsoft Teams in my study." (Mean 3.41, S.D. 0.91). The overall result from questionnaire for Microsoft Team at RULE in terms of Habit reveals as neutral with the average of Mean 3.45 and S.D. = 0.90.

Table 5.9

The Mean and Standard Deviation (S.D.) of Behavior Intention towards Microsoft Teams Usage

Code	Items	Mean	S.D.	Interpretation
BI1	I intend to continue using the Microsoft Teams in the future.	3.61	0.86	Agree
BI2	I will always try to use the Microsoft Teams in my study for daily life.	3.53	0.85	Agree
BI3	I plan to continue to use the Microsoft Teams frequently.	3.45	0.90	Neutral

BI4	I will keep using Microsoft Teams as I am doing now.	3.56	0.84	Agree
	Average	**3.54**	**0.86**	**Agree**

Table 5.9 shows that the questionnaire for Microsoft Team at RULE in term of Behavior Intention agree in highest mean "I intend to continue using the Microsoft Teams in the future." (Mean 3.61, S.D. = 0.86). This was followed by "I will keep using Microsoft Teams as I am doing now." (Mean 3.56, S.D. = 0.84), "I will always try to use the Microsoft Teams in my study for daily life." (Mean 3.53, S.D. =0.85). The neutral was "I plan to continue to use the Microsoft Teams frequently." (Mean 3.45, S.D. = 0.90). The overall result from questionnaire for Microsoft Team at RULE in terms of Behavior Intention reveals as agree with the average of Mean 3.54 and S.D. = 0.86.

Table 5.10

The Mean and Standard Deviation (S.D.) of Trust towards Microsoft Teams Usage

Code	Items	Mean	S.D.	Interpretation
T1	I believe that Microsoft Teams is trustworthy.	3.84	0.76	Agree
T2	I trust in Microsoft Teams platform for e-learning.	3.89	0.74	Agree
T3	I do not doubt the honesty of the Microsoft Teams in my study.	3.45	0.88	Neutral
T4	Microsoft Teams have ability to fulfill its task.	3.78	0.76	Agree
	Average	**3.74**	**0.78**	**Agree**

Table 5.10 shows that the questionnaire for Microsoft Team at RULE in term of Trust agree in highest mean "I trust in Microsoft Teams platform for e-learning." (Mean 3.89, S.D. = 0.76). This was followed by "I believe that Microsoft Teams is trustworthy." (Mean 3.84, S.D. 0.76), "Microsoft Teams have ability to fulfill its task." (Mean 3.78, S.D. = 0.76). This was a neutral with mean "I do not doubt the honesty of the Microsoft

Teams in my study." (Mean 3.45, S.D. = 0.88). The overall result from questionnaire for Microsoft Team at RULE in terms of Trust reveal as agree with the average of Mean 3.74 and S.D. = 0.78.

Table 5.11

The Mean and Standard Deviation (S.D.) of Satisfaction towards Microsoft Teams Usage

Code	Items	Mean	S.D.	Interpretation
ST1	I am very content with Microsoft Teams system at RULE.	3.82	0.80	Agree
ST2	I am very pleased with Microsoft Teams system at RULE.	3.92	0.72	Agree
ST3	I am satisfied with Microsoft Teams system at RULE.	3.85	0.79	Agree
ST4	I felt delighted with Microsoft Teams system at RULE.	3.80	0.82	Agree
	Average	**3.85**	**0.78**	**Agree**

Table 5.11 shows that the questionnaire for Microsoft Team at RULE in term of Satisfaction agree in highest mean "I am very pleased with Microsoft Teams system at RULE." (Mean 3.92, S.D. 0.72). This was followed by "I am satisfied with Microsoft Teams system at RULE." (Mean 3.85, S.D. = 0.79), "I am very content with Microsoft Teams system at RULE." (Mean 3.82, S.D. = 0.80), "I felt delighted with Microsoft Teams system at RULE." (Mean 3.80, S.D. = 0.82). The overall result from questionnaire for Microsoft Team at RULE in terms of Satisfaction reveals as agree with the average of Mean 3.85 and S.D. = 0.78.

Table 5.12

The Mean and Standard Deviation of UTAUT2 Variables for Microsoft Team at RULE

Variables	Mean	S.D.	Interpretation
Performance Expectancy	3.87	0.82	Agree
Effort Expectancy	3.66	0.84	Agree
Social Influence	3.76	0.86	Agree
Facilitating Condition	3.69	0.86	Agree
Price Value	3.70	0.89	Agree
Habit	3.45	0.90	Neutral
Behavior Intention	3.54	0.86	Agree
Trust	3.74	0.78	Agree
Satisfaction	3.85	0.78	Agree
Average	**3.96**	**0.84**	**Agree**

Table 5.12 shows that the questionnaire for Microsoft Team at RULE agree on highest mean of “Performance Expectancy” (Mean 3.87, S.D. = 0.82). This was followed by “Satisfaction” (Mean 3.85, S.D. = 0.78), “Social Influence” (Mean 3.76, S.D. =0.86), “Trust” (Mean 3.74, S.D. = 0.78), “Price Value” (Mean 3.70, S.D. = 0.89), “Facilitating Condition” (Mean 3.69, S.D. = 0.86), “Effort Expectancy” (Mean 3.66, S.D. = 0.84), “Behavior Intention” (Mean 3.54, S.D. = 0.86), and neutral was “Habit” (Mean 3.45, S.D. = 0.90). The overall result from the questionnaire for Microsoft Team at RUL reveals as agree with the Mean 3.96 and S.D. = 0.84.

5.2.3 Descriptive of reliability of main variables

The reliability of this study was carefully evaluated using the Cronbach's Alpha test, which is a commonly used indicator of internal consistency. A complete software structure to perform statistical analysis, Jamovi 2.3.28, was used to carry out the statistical study. The measured variables' generally accepted requirements of between

0.60 to 0.70 or above, which indicates suitable consistency, were exceeded by the obtained Cronbach's Alpha value.

Reliability and consistency tests, including Cronbach's alpha and McDonald's omega, were employed to assess the validity of responses in this study. The findings revealed good consistency across various factors from UTAUT2, with Cronbach's alpha values meeting acceptable standards, except for the facilitating condition. This highlights the reliability of the collected data, except in the specific context of the Facilitating Condition, where further investigation or refinement may be warranted (see Table 5.13).

Table 5.13

Reliability Analysis

Code	Items	Cronbach's Alpha	Interpretation
	Items of Performance Expectancy		
PE1	Using Microsoft Teams for my learning increasing productivity.	0.73	Acceptable
PE2	Using Microsoft Teams helpful to my study.	0.64	Acceptable
PE3	Using Microsoft Teams enhancement of my knowledge for e-learning.	0.78	Acceptable
	Scale Reliability statistics	**0.79**	**Acceptable**
	Items of Effort Expectancy		
EE1	Learning how to use Microsoft Teams is easy for me.	0.72	Acceptable
EE2	It is easy for me to become skillful to use Microsoft Teams in my study.	0.70	Acceptable
EE3	My interaction in Microsoft Teams system is clear and understanding.	0.76	Acceptable
	Scale Reliability statistics	**0.79**	**Acceptable**
	Items of Social Influence		
SI1	People who are important to me think that I should use	0.81	Good

	Microsoft Teams for my study.		
SI2	Most of my friends think that I should use Microsoft Teams platform for my study.	0.80	Good
SI3	Most people around me are using Microsoft Teams platform for their study.	0.84	Good
SI4	Most of my classmate tell me to use Microsoft Teams platform for my study.	0.82	Good
	Scale Reliability statistics	**0.86**	**Good**
	Items of Facilitating Condition		
FC2	I have knowledge necessary to use Microsoft Teams platform for my study.	0.34	Unacceptable
FC3	I can get help from others when I have some difficult of using Microsoft Teams.	0.44	Unacceptable
	Scale Reliability statistics	**0.55**	**Unacceptable**
	Items of Price Value		
PV1	Microsoft Teams platform is reasonably prices to use for my study.	0.78	Acceptable
PV2	Microsoft Teams is a good value for my study at RULE.	0.75	Acceptable
PV3	At the currently, Microsoft Teams platform provide a very good value to me.	0.74	Acceptable
PV4	I can save money when I use Microsoft Teams for my study.	0.75	Acceptable
	Scale Reliability statistics	**0.80**	**Good**
	Items of Habit		
H1	The use of Microsoft Teams has become a habit for me.	0.83	Good
H2	I am very addicted to using Microsoft Teams in my study.	0.84	Good

H3	I must use Microsoft Teams for my study.	0.85	Good
H4	Using the Microsoft Team has become natural to me.	0.83	Good
	Scale Reliability statistics	**0.87**	**Good**
	Items of Behavior Intention		
BI1	I intend to continue using the Microsoft Teams in the future.	0.84	Good
BI2	I will always try to use the Microsoft Teams in my study for daily life.	0.84	Good
BI3	I plan to continue to use the Microsoft Teams frequently.	0.83	Good
BI4	I will keep using Microsoft Teams as I am doing now.	0.83	Good
	Scale Reliability statistics	**0.87**	**Good**
	Items of Trust		
T1	I believe that Microsoft Teams is trustworthy.	0.82	Good
T2	I trust in Microsoft Teams platform for e-learning.	0.80	Good
T3	I do not doubt the honesty of the Microsoft Teams in my study.	0.81	Good
T4	Microsoft Teams have ability to fulfill its task.	0.80	Good
	Scale Reliability statistics	**0.85**	**Good**
	Items of Satisfaction		
ST1	I am very content with Microsoft Teams system at RULE.	0.88	Good
ST2	I am very pleased with Microsoft Teams system at RULE.	0.91	Excellent
ST3	I am satisfied with Microsoft Teams system at RULE.	0.86	Good
ST4	I felt delighted with Microsoft Teams system at RULE.	0.89	Good
	Scale Reliability statistics	**0.91**	**Excellent**

According to the results shown in Table 5.22 from the consistency test with 476 respondents for reliability statistics with all questions presented,

First, Performance Expectancy with three items (PE1, PE2, PE3) was 0.79 of the scale reliability statistics of Cronbach's Alpha, which was acceptable for this research.

Second, Effort Expectancy with three items (EE1, EE2, EE3) was 0.79 of the scale reliability statistics of Cronbach's Alpha, which was acceptable for this research.

Third, Social Influence with four items (SI1, SI2, SI3, SI4) was 0.86 of the scale reliability statistics of Cronbach's Alpha, which was good for this research.

Fourth, Facilitating Condition with two items (FC2, FC3) was 0.55 of the scale reliability statistics of Cronbach's Alpha, which was unacceptable for this research especially for SEM.

Fifth, Price Value with four items (PV1, PV2, PV3, PV4) was 0.80 of the scale reliability statistics of Cronbach's Alpha, which was good for this research.

Sixth, Habit with four items (H1, H2, H3, H4) was 0.87 of the scale reliability statistics of Cronbach's Alpha, which was good for this research.

Seventh, Behavior Intention with four items (BI1, BI2, BI3, BI4) was 0.87 of the scale reliability statistics of Cronbach's Alpha, which was good for this research.

Eighth, Trust with four items (T1, T2, T3, T4) was 0.85 of the scale reliability statistics of Cronbach's Alpha, which was good for this research.

Ninth, Satisfaction with four items (ST1, ST2, ST3, ST4) was 0.91 of the scale reliability statistics of Cronbach's Alpha, which was excellent for this research.

5.3 Hypotheses Testing

The current study utilized the Confirmatory Factor Analysis (CFA) and Structural Equation Model (SEM) to test all hypotheses in the study. All the analysis utilized Jamovi Software version 2.3.4 MacIntosh to calculate the statistics for the hypotheses testing.

5.3.1 Normality of Data

In order to test the distribution of data, the skewness and kurtosis statistics are applied for measuring the normality of data on the items used. According to Hair et.al. (2010) The skewness ranges between -2 and +2 and the Kurtosis range of -7 to +7

Table 14 shows the skewness of kurtosis of all items measuring variables in the study. The ranges for all items are within the acceptable ranges on the skewness and kurtosis. As a results, the data is considered normally distributed.

Table 5.14

Skewness and Kurtosis values of all items

	N	Mean	SD	Skewness	Kurtosis
PE1	476	3.75	0.859	-0.867	1.57294
PE2	476	3.85	0.837	-0.905	1.65145
PE3	476	4.02	0.766	-1.055	2.54572
EE1	476	3.76	0.851	-0.705	1.09195
EE2	476	3.46	0.856	-0.236	0.36498
EE3	476	3.77	0.796	-0.437	0.40847
SI1	476	3.71	0.891	-0.644	0.68521
SI2	476	3.72	0.873	-0.608	0.55507
SI3	476	3.81	0.798	-0.601	0.65938
SI4	476	3.79	0.873	-0.687	0.62831
FC2	476	3.73	0.814	-0.625	0.96075
FC3	476	3.64	0.92	-0.699	0.59641
PV1	476	3.65	0.954	-0.57	0.09722
PV2	476	3.83	0.849	-0.77	1.07885
PV3	476	3.78	0.79	-0.484	0.65088
PV4	476	3.57	0.961	-0.464	-0.05747
H1	476	3.48	0.914	-0.384	0.03997
H2	476	3.41	0.912	-0.203	0.12043
H3	476	3.5	0.884	-0.398	0.37329
H4	476	3.42	0.894	-0.296	-0.00174

BI1	476	3.61	0.864	-0.422	0.34916
BI2	476	3.53	0.847	-0.277	0.13676
BI3	476	3.45	0.904	-0.287	0.07294
BI4	476	3.56	0.835	-0.495	0.83859
T1	476	3.84	0.76	-0.672	1.40457
T2	476	3.89	0.744	-0.679	1.47273
T3	476	3.45	0.885	-0.185	0.1507
T4	476	3.78	0.764	-0.507	1.04353
ST1	476	3.82	0.801	-0.553	0.81537
ST2	476	3.92	0.719	-0.468	0.71276
ST3	476	3.85	0.794	-0.706	1.2719
ST4	476	3.8	0.822	-0.333	-0.02565

5.3.2 Confirmatory Factor Analysis

Prior to applying the structural equation model (SEM) to tests the hypotheses, the confirmatory factor analysis was applied in order to evaluate correlation among latent variables to evaluate the model fit.

Utilizing the CFA can helps the researcher analyze the fit of the data of the items that should be measure on the specific construct. As well as providing possible weakness of items in the construct (Mueller & Hancock, 2001).

Table 5.15

Confirmatory factor analysis result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Factor	**Indi-cator**	**Estimate**	**SE**	**Z**	**p**	**Stand. Estimate**	**CR (> .7)**	**AVE (> .5)**
PE	PE1	0.634	0.036	17.6	< .001	0.739	0.801	0.546121
	PE2	0.717	0.0334	21.5	< .001	0.739		
	PE3	0.511	0.0332	15.4	< .001	0.739		

EE	EE1	0.639	0.0357	17.9	< .001	0.752	0.801	0.570058
	EE2	0.641	0.0361	17.8	< .001	0.75		
	EE3	0.607	0.0333	18.2	< .001	0.763		
SI	SI1	0.691	0.0357	19.3	< .001	0.777	0.859	0.605501
	SI2	0.729	0.0338	21.5	< .001	0.836		
	SI3	0.563	0.0332	16.9	< .001	0.706		
	SI4	0.687	0.0349	19.7	< .001	0.788		
FC	FC2	0.557	0.0408	13.6	< .001	0.684	0.561	0.396378
	FC3	0.524	0.0449	11.7	< .001	0.57		
PV	PV1	0.569	0.0416	13.7	< .001	0.597	0.812	0.523024
	PV2	0.686	0.0334	20.5	< .001	0.809		
	PV3	0.642	0.031	20.7	< .001	0.814		
	PV4	0.621	0.0411	15.1	< .001	0.647		
H	H1	0.73	0.0356	20.5	< .001	0.799	0.873	0.632173
	H2	0.74	0.0351	21.1	< .001	0.813		
	H3	0.694	0.0346	20.1	< .001	0.786		
	H4	0.698	0.0352	19.8	< .001	0.782		
BI	BI1	0.654	0.0347	18.9	< .001	0.757	0.872	0.62876
	BI2	0.644	0.0339	19	< .001	0.762		
	BI3	0.739	0.0349	21.2	< .001	0.818		
	BI4	0.694	0.0319	21.7	< .001	0.832		
T	T1	0.559	0.0309	18.1	< .001	0.736	0.848	0.583597
	T2	0.576	0.0296	19.4	< .001	0.775		
	T3	0.676	0.0354	19.1	< .001	0.765		
	T4	0.594	0.0303	19.6	< .001	0.779		
ST	ST1	0.708	0.0292	24.3	< .001	0.886	0.891	0.720753

ST2	0.548	0.0284	19.3	< .001	0.763
ST3	0.725	0.0283	25.6	< .001	0.913
ST4	0.678	0.0312	21.7	< .001	0.826

Remark: CR = Composite Reliability, AVE = Average Variance Extracted

5.3.3 Convergent Validity

The convergent validity is conducted in order to test the construct validity. The researcher employed Hair et al. (2006) indices which are the Factor Loading greater than 0.5 and the Average Variance Extracted (AVE) greater than .50.

Reviewing the Confirmatory Factor Analysis (CFA) results, the variable FC Composite reliability (CR = .561) and Average Variance Extracted (AVE) (AVE = .396) were not sufficient for further analysis. Thus, the FC variable and items was removed from the model. For other variables in the model, the Composite Reliability (CR) and the Average Variance Extracted (AVE) were at satisfactory results.

5.3.4 Discriminant Validity

The discriminant validity of each construct is also tested prior to the structural equation model analysis. According to Fornell and Larcker (1981), the discriminant validity can be based on the comparison of the correlation coefficient of each construct to the square root of the Average Variance Extracted (AVE). The results of the square root of AVE need to be larger than the correlation coefficient of the construct to ensure that the discriminant validity is obtained.

Table 5.16

Discriminant Validity

	PE	EE	SI	PV	H	BI	T	ST
PE	0.739							
EE	0.532	0.755						
SI	0.587	0.557	0.778					
PV	0.607	0.556	0.636	0.723				
H	0.608	0.570	0.663	0.748	0.795			
BI	0.574	0.547	0.588	0.670	0.806	0.793		
T	0.562	0.619	0.608	0.702	0.717	0.709	0.764	
ST	0.619	0.591	0.577	0.659	0.712	0.662	0.745	0.849

Based on the table 5.16 discriminant validity. It shows that the construct Price Value (PV) and Habit (H) had square root of AVE less than the correlation coefficient of other constructs. The modification of the constructs are needed to ensure that the construct meet the requirements of the discriminant validity.

The correlation coefficient of both constructs were review utilizing the Residual Observed Correlation Matrix output. The correlation coefficient showed that the H item 2 correlated with the PV item 4, which residual observed correlation value of .120. Thus, this item was removed from the analysis. The results of the modified analysis showed that the new correlation coefficient of all variables were not greater than the square root of the AVE.

The following table 5.17 showed the modified discriminant validity table

Table 5.17

Modified Discriminant Validity

	PE	EE	SI	PV	H	BI	T	ST
PE	0.739							
EE	0.532	0.755						
SI	0.587	0.557	0.778					
PV	0.607	0.556	0.636	0.723				
H	0.585	0.561	0.648	0.706	0.795			
BI	0.574	0.547	0.588	0.670	0.789	0.793		
T	0.562	0.619	0.608	0.702	0.702	0.709	0.764	
ST	0.619	0.591	0.577	0.659	0.689	0.662	0.745	0.849

After modification, all of the construct showed that the square root of AVE values are higher than the correlation coefficient among construct. Thus, the discriminant validity among constructs is achieved.

5.3.5 Modified Confirmatory Factor Analysis

After he removal of Variable (Facilitating Conditions, FC) and item 2 of Habit (H) variable, a new confirmatory factor analysis was conducted to evaluated the model on its adjustment values. The new confirmatory factor analysis (CFA) is shown in table 5.18.

Table 5.18

Modified Confirmatory Factor Analysis

Factor	**Indicator**	**Estimate**	**SE**	**Z**	**p**	**Stand. Estimate**	**CR**	**AVE**
PE	PE1	0.633	0.036	17.600	< .001	0.738	0.801	0.575
	PE2	0.717	0.033	21.500	< .001	0.858		
	PE3	0.511	0.033	15.400	< .001	0.667		

EE	EE1	0.632	0.036	17.400	< .001	0.744	0.801	0.569
	EE2	0.641	0.037	17.500	< .001	0.749		
	EE3	0.612	0.034	18.200	< .001	0.770		
SL	SI1	0.693	0.036	19.400	< .001	0.779	0.859	0.807
	SI2	0.729	0.034	21.500	< .001	0.836		
	SI3	0.563	0.033	17.000	< .001	0.707		
	SI4	0.685	0.035	19.600	< .001	0.785		
PV	PV1	0.564	0.042	13.500	< .001	0.592	0.812	0.695
	PV2	0.688	0.034	20.600	< .001	0.811		
	PV3	0.649	0.031	21.000	< .001	0.822		
	PV4	0.609	0.041	14.700	< .001	0.634		
H	H1	0.718	0.036	19.900	< .001	0.787	0.842	0.635
	H3	0.702	0.035	20.200	< .001	0.795		
	H4	0.722	0.035	20.400	< .001	0.809		
BI	BI1	0.656	0.035	18.900	< .001	0.759	0.872	0.838
	BI2	0.642	0.034	18.900	< .001	0.759		
	BI3	0.739	0.035	21.200	< .001	0.818		
	BI4	0.694	0.032	21.700	< .001	0.832		
T	T1	0.562	0.031	18.200	< .001	0.740	0.848	0.779
	T2	0.579	0.030	19.600	< .001	0.779		
	T3	0.672	0.036	18.900	< .001	0.761		
	T4	0.592	0.030	19.400	< .001	0.776		
ST	ST1	0.707	0.029	24.200	< .001	0.884	0.891	0.961
	ST2	0.549	0.028	19.400	< .001	0.764		
	ST3	0.726	0.028	25.700	< .001	0.915		
	ST4	0.677	0.031	21.700	< .001	0.825		

Remark: CR = Composite Reliability, AVE = Average Variance Extracted

The results of the modified CFA showed that all of the variables obtained the CR greater than .7 and AVE values greater than .5. Thus, the values were at acceptable level.

5.3.6 Confirmatory Factor Analysis Model Fit

The CFA model fit was evaluated, the following table 5.19 showed the information of the model fit of the CFA.

Table 5.19

Model Fit Measures

			RMSEA 90% CI	
CFI	**TLI**	**RMSEA**	**Lower**	**Upper**
0.937	0.927	0.059	0.055	0.064

Based on the results of Table 5.19, the current model fits seems to be at a satisfactory fit according to the criteria by Navarro and Foxcroft (n.d.) of CFI > 0.9, TLI > 0.9, and RMSEA of about 0.05 to 0.08 (Navarro & Foxcroft, n.d.).

Table 5.20

Confirmatory Factor Analysis Fit Indices

Fit Index	**Acceptable Criteria**	**Source**	**Statistical Values**
RMSEA	≤ 0.08	Navarro and Foxcroft (n.d.)	0.059
CFI	≥ 0.90	Navarro and Foxcroft (n.d.)	0.937
TLI	≥ 0.90	Navarro and Foxcroft (n.d.)	0.927
Model Summary			In harmony with empirical data

5.4 Structural Equation Model

In order to tests the hypotheses of causal relationship among variables proposed. The Structural Equation Model (SEM) was applied to the model.

5.4.1 Fitness of Structural Model

The structural model was tested for the model fit using the following the following fit indices. Goodness of Fit Index (GFI), Standardized root mean square residual (SRMR), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI)

Table 5.21

Fit Indices Results of the Structural Equation Model

Fit Index	Acceptable Criteria	Source	Statistical Values
GFI	≥ 0.80	Cho et.al. 2020	0.973
SRMR	≤ 0.08	Cho et.al. 2020	0.038
RMSEA	≤ 0.10	Hooper et al. 2008	0.060
CFI	≥ 0.80	Hooper et al. 2008	0.934
TLI	≥ 0.80	Sharma et al., 2005	0.924
Model Summary			In harmony with empirical data

The results of the analysis showed the following value of the fit indices chosen. The indices results were: GFI = .973, SRMR = .038, RMSEA = .060, CFI = .934, and TLI = .924. The current model fit analysis was in harmony with the empirical data. Thus, the research proposed model was consider acceptable.

Figure 5.4

Structural Equation Model

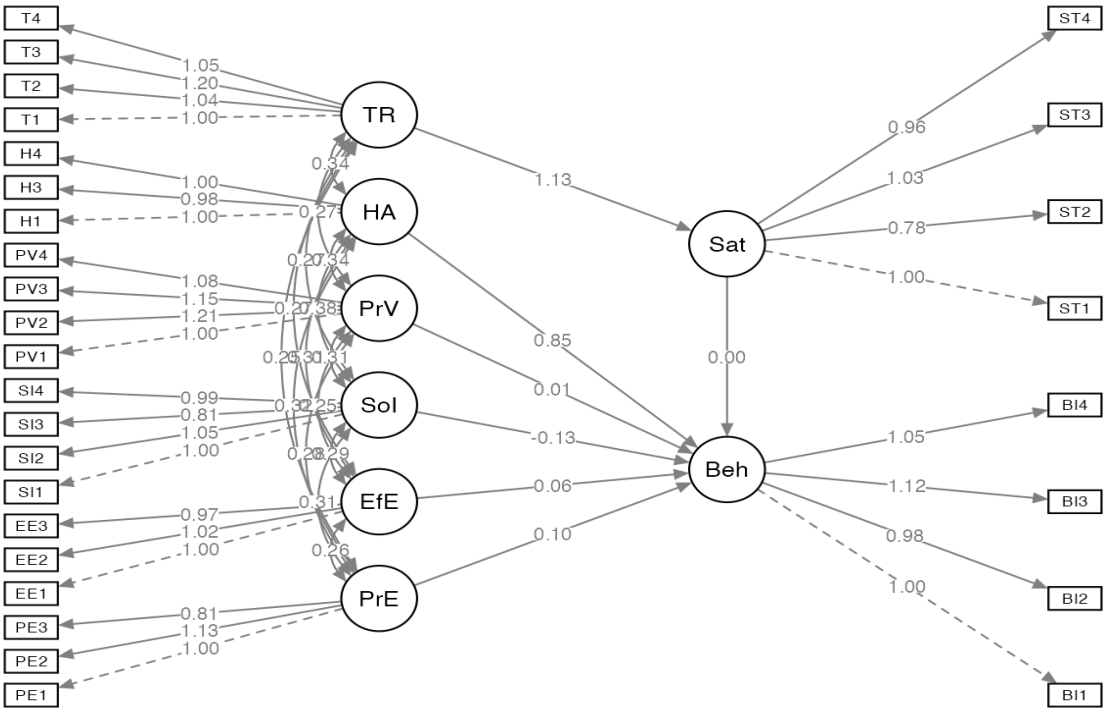


Table 5.22

Parameter Estimates

			95% Confidence Intervals				
Dep	**Pred**	**Estimate**	**SE**	**Lower**	**Upper**	**β**	**z**	**p**
Beh	PrE	0.102	0.069	-0.032	0.237	0.099	1.490	0.136
Beh	PrV	0.010	0.124	-0.234	0.253	0.008	0.080	0.937
Beh	EfE	0.064	0.063	-0.059	0.187	0.061	1.018	0.309
Beh	HA	0.847	0.104	0.643	1.051	0.921	8.149	< .001
Beh	Sat	0.002	0.056	-0.108	0.111	0.002	0.028	0.978
Beh	SoI	-0.132	0.066	-0.261	-0.004	-0.139	-2.022	0.043
Sat	TR	1.128	0.067	0.998	1.259	0.882	16.946	< .001

The results of the Structural Equation Model showed that the variables that had the statistically significant influence on the Behavioral Intention were Habit (p <.001) and

Social Influence ($p < .05$). Trust also showed the statistically significant influence toward the Satisfaction ($p < .001$).

5.4.2 Research Hypothesis Testing

The following is the results of the hypotheses testing of the model.

Table 5.23
Hypothesis Testing Result of the Structural Model

Hypothesis	p	z-value	Result
$H_0$1: Performance Expectancy has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	0.136	1.490	Not Rejected
$H_0$2: Effort Expectancy has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	0.309	1.018	Not Rejected
$H_0$3: Social Influence has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	0.043	-2.022*	Rejected
$H_0$4: Price Value has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	0.937	0.080	Not Rejected
$H_0$5: Habit has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	< .001	8.149***	Rejected
$H_0$6: Satisfaction has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study.	0.978	0.028	Not Rejected

$H_0$7: Undergraduate students at the Royal University of Law and Economics (RULE) trust Microsoft Teams as a study platform, which does not significantly influence their satisfaction.	< .001	16.946***	Rejected

*** = P<.001, * = P<.05

5.4.3 Indirect Effects

The proposed conceptual framework includes the testing of the indirect effects of Satisfaction as the mediating variable of the Trust toward Behavior Intention. The following table showed the analysis of the mediating effect of Satisfaction on the Behavior Intention.

Table 5.24

Indirect Effect of the Trust > Satisfaction > Behavior Intention

					95% Confidence Intervals				
Label	**Description**	**Parameter**	**Estimate**	**SE**	**Lower**	**Upper**	**β**	**z**	**p**
	TR ⇒ Sat			0.0			0.00	0.02	0.97
IE1	⇒ Beh	p36*p34	0.002	63	-0.121	0.125	1	8	8

The results of the indirect analysis showed that the indirect effect was not statistically significant. Thus, the null hypothesis was retained. The Satisfaction was not the mediating variable between Trust and Behavior Intention.

5.5 Result from lectures interview

The qualitative data obtained from the sample group's interview replies has been carefully analyzed and interpreted using content analysis. A comprehensive examination of all participants was made possible by this technique, which categorizes and assesses themes and patterns found in the interviews. Furthermore, a deeper comprehension of the

qualitative features of the study was made possible by the concentration of important insights and views through content analysis. The research project on Microsoft Teams use with six questions included interviews seven full-time lecturers at the Royal University of Law and Economics (RULE). The information gathered through these interviews provides insightful qualitative data that illuminates educators' perspectives, experiences, and preferences about adopting Microsoft Teams as a teaching tool at RULE. Content analysis has been applied to these extensive responses, enabling a comprehensive examination of the different themes and patterns that surfaced during the interviews. The results of these interviews offer a complex and comprehensive viewpoint that advances our knowledge of Microsoft Teams' use and perception in the RULE learning environment.

1) How do undergraduate students in RULE adopt the Microsoft Teams learning system? A multifaceted approach was used at the Royal University of Law and Economics (RULE) to ensure that students accepted and adopted Microsoft Teams for their academic pursuits. Teachers were the ones who first made the integration possible by encouraging and recommending that students utilize Microsoft Teams as a part of their instructional toolkit. This methodical approach attempted to introduce students to the platform and emphasize its significance in the context of higher education. Furthermore, with the help of IT specialists, a systematic onboarding procedure was developed. This method required students to have a Microsoft Teams account, which was actively created by IT specialists and made required for their academic participation. By streamlining the initial setup procedure, this approach reduced potential obstacles to entry and guaranteed consistency in the creation of accounts.Furthermore, self-initiation constituted a third route for student adoption. Students applied for and registered for Microsoft Teams on their own initiative, exhibiting a bottom-up strategy in which individual students saw the

platform's value and chose to integrate it into their study program. With three distinct approaches, teacher supervision, IT-assisted onboarding, and student self-application, this multifaceted approach demonstrates a comprehensive and complete method of encouraging the adoption and use of Microsoft Teams as an important tool for academic endeavors at RULE.

2) How did you set up the Microsoft Teams system for your teaching in e-learning? What are the technical problems of e-learning via Microsoft Teams system that you deal with? The Royal University of Law and Economics (RULE) deployed Microsoft Teams through a strategic strategy in which IT specialists were instrumental in setting up personalized accounts for each student. But there were some difficulties with this procedure. The primary obstacle encountered by students concerned the speed and consistency of internet connectivity. One major obstacle that prevented students from participating easily in Microsoft Teams e-learning programs or online learning was poor internet access. This problem emphasizes how crucial it is to have a reliable internet connection in order to use these digital platforms in an instructional setting. The availability of professionals to give students appropriate orientation was another noticeable difficulty. Although user accounts were created by IT specialists, there seemed to be a lack of staff members to provide all students with comprehensive advice and support. This weakness made it harder for some people to learn Microsoft Teams, as they had trouble using and comprehending all of its capabilities. To tackle these issues, a complete strategy is required, which involves enhancing the internet infrastructure to improve access and making sure there are enough professional resources for in-depth orientation sessions. In order to facilitate a more seamless and efficient integration of Microsoft Teams into the RULE academic environment, it is essential that these fundamental challenges be solved.

3) What are the difficulties for you when teaching an e-learning course via Microsoft Teams system? Teaching students using Microsoft Teams at the Royal University of Law and Economics (RULE) encountered notable challenges, primarily revolving around students' limited access to essential study materials and technological resources. First, a major challenge resulted from the insufficient resources available to help students in their academic endeavors. Lack of access to high-quality laptops or smart phones, which are necessary devices for interacting with online platforms like Microsoft Teams, presented difficulties for a lot of students. For those without the required technology, the digital divide created an obstacle to participating in online courses effectively and limited their ability to learn. Second, the complexity was increased by the problem of delaying class access. A number of students encountered challenges upon commencing their studies due to their lack of access to Microsoft Teams at the start of the session. There was a gap between the students and the instructional material being provided by the platform as a result of the delayed introductions, which impacted their capacity to actively participate in the current lessons learned. Thirdly, the difficulties were made worse by the unreliable internet connection. When students didn't have reliable internet access, it was difficult for them to participate in online learning and use Microsoft Teams efficiently for their coursework. A comprehensive strategy is needed to address these issues, one that includes supplying the required technology resources, guaranteeing prompt access to digital platforms, and looking into ways to close the digital divide. By tackling these issues, RULE can endeavor to develop a Microsoft Teams-based, inclusive, and accessible learning environment for all students.

4) What are the common problems with e-learning through Microsoft Teams, for you as a professor at RULE? The primary obstacle faced by the Royal University of Law and Economics (RULE) throughout the deployment of Microsoft Teams was the

problem of slow internet access. The weak internet connection speeds had a noticeable impact on teaching, communication, and the general interaction between professors and students, even though Microsoft Teams itself did not present any major issues. A slow internet connection made it difficult to run online classrooms effectively. It caused buffering problems and delays in online sessions, making it difficult for instructors to conduct lectures with confidence or interact with students. Interactions between teachers and students were disrupted in part because of the slow internet connectivity. Teachers found it challenging to answer questions from students quickly, give them feedback right away, or lead lively conversations in virtual classes due to communication breakdowns. This difficulty degraded the educational process and made it more difficult for teachers and students to communicate effectively in both directions. One remarkable benefit of Microsoft Teams, in spite of its difficulties, was the freedom it gave students to study anywhere as long as they had dependable internet connectivity. Through the platform, distance learning was made possible, giving students the ease and accessibility of accessing learning resources, taking part in classes, and interacting with teachers from different places. To remedy the weak internet issue, either new solutions or improvements to the internet infrastructure are required to optimize content delivery at a lower speed. The virtual engagement experience can be improved by providing teachers and students with training sessions on Microsoft Teams' excellent online communication capabilities.

5) What are your thoughts on RULE's use of Microsoft Teams? According to respondents, the perspective on “the use of Microsoft Teams at the Royal University of Law and Economics (RULE)" presented several advantages for both teachers and students, yet certain challenges have emerged, particularly in interaction due to limitations in material support and intermittent internet connectivity.

Advantages of Using Microsoft Teams:

a) Ease of Communication: Microsoft Teams provides a user-friendly platform for both teachers and students to communicate effortlessly. Features such as instant messaging, audio calls, and video calls facilitate seamless interaction, enabling quick and efficient communication between educators and learners.

b) Assignment and Homework Submission: The platform simplifies the process of assigning and submitting homework or assignments. Teachers can easily share tasks, instructions, and resources, and students can submit their work electronically, streamlining the entire assessment process.

c) Convenience and Elimination of Travel: Microsoft Teams eliminates the need for physical travel to the university for teaching sessions. This convenience is particularly beneficial for both teachers and students, saving time and resources that would otherwise be spent on commuting.

d) Video Recording Capabilities: Another notable advantage is the ability to record video during online sessions. This feature allows teachers to create valuable resources for students by providing recorded lectures or tutorials that can be revisited for review or accessed by students who may have missed the live session.

Challenges of using Microsoft Team at RULE

a) Material Support Limitations: Despite the platform's user-friendly nature, some students face limitations in material support, such as access to good-quality smartphones or computers. This can hinder their ability to fully engage with Microsoft Teams and participate in online interactions effectively.

b) Internet Interruptions: The challenge of intermittent internet connectivity poses a significant obstacle to smooth interaction between teachers and students. Slow or unreliable internet can lead to disruptions during live sessions, affecting the quality and continuity of virtual communication.

In conclusion, from the perspective of respondents, while Microsoft Teams at RULE offers substantial benefits, addressing challenges related to material support and internet interruptions were essential to ensuring effective and inclusive interaction between teachers and students in the online or e-learning environment.

6) How would you advise improving the use of Microsoft Teams at RULE for both students and professors? According to respondents, for an effective and seamless integration of Microsoft Teams at the Royal University of Law and Economics (RULE), it was very essential for both students and teachers to adhere to certain suggestions and requests. These recommendations aim to ensure that classes run smoothly, with well-prepared materials and stable internet connections.

Suggestions for students:

a) Material Preparation: Students are encouraged to prepare materials well in advance of scheduled classes. This includes having necessary textbooks, notebooks, and any digital resources or assignments ready before the online session begins.

b) Stable Internet Connection: It is highly recommended that students ensure a stable internet connection before the start of classes. This may involve finding a location with reliable connectivity and using appropriate devices, and addressing any potential internet issues in advance.

Suggestions for teachers:

a) Material Preparation:Teachers should diligently prepare teaching materials before the scheduled classes. This includes having lesson plans, presentations, and any necessary resources ready to ensure a smooth flow of the session.

b) Technological Readiness: Prior to classes, teachers should ensure that their devices, cameras, and microphones are in working order. This ensures a seamless online teaching experience without technical disruptions.

Requests for Both Students and Teachers:

a) Commitment to Punctuality: Both students and teachers are requested to adhere to punctuality when joining online classes. Being on time helps in the efficient use of the allocated class duration.

b) Active Participation: Actively participating in discussions, asking questions, and engaging with the material are essential for a productive online learning environment. Both students and teachers are encouraged to foster a culture of participation and collaboration.

Suggestions for Microsoft Teams Platform Implementation:

a) Expert Orientation: RULE is urged to provide expert-led orientation sessions for both students and teachers on effectively using Microsoft Teams. Professional guidance will enhance their proficiency in utilizing the platform for teaching and learning.

b) Continuous Support: Ongoing support from IT experts should be available to address any technical issues that may arise during classes. Having a responsive support system ensures that disruptions are minimized and issues are promptly resolved.

By following these suggestions and requests, the use of Microsoft Teams at RULE can be optimized for a more effective and enriching online or e-learning experience, benefiting both students and teachers alike.

CHAPTER VI

DISCUSSION, CONCLUSION, AND RECOMMENDATION

The chapter includes a comprehensive overview of the research, exploring the main findings that are in line with the previously established objectives as demonstrated by accepted theories and earlier studies. The results are carefully analyzed, providing an advanced understanding of the topic. The chapter enriches the conceptual framework by drawing on findings from previous investigations in addition to highlighting the theoretical foundations and adds to its impact by providing well-considered recommendations and conclusions. These recommendations bridge the gap between theory and real techniques by providing helpful pointers. The research findings and an integrated narrative that connects to the original objectives are summarized and provided in the conclusions of this chapter. The acknowledgment of the study's limits and the constraints that the research works according to are the primary topics of the chapter's conclusion. In addition, the chapter provides recommendations for further research and establishes an opportunity for future study directions. This forward-looking strategy deepens the scholarly contribution by promoting ongoing research and the growth of the field's collection of knowledge. Besides, the conclusion of the study project, including the presentation and interpretation of the results and breaking out into areas, such as practical examples, theoretical developments, and directions for future research is presented in this chapter.

6.1 Summary of the Findings

For the past two decades, e-learning has become a revolutionary phenomenon in Cambodian higher education, harmonizing with the nation's strategic planning initiatives to incorporate ICT (information and communication technology) into its universities. E-learning is a major shift from traditional pedagogical approaches in Cambodia's ongoing

efforts to modernize its educational system. Nevertheless, e-learning is still not that prevalent in Cambodia, even with the country's increasing commitment to ICT integration Heng (2021), emphasized the wide range of difficulties involved in integrating this online or e-learning of instruction within the nation's educational system. These obstacles could include differences in digital access, infrastructure constraints, and the requirement for all-encompassing policy frameworks to facilitate the successful adoption of e-learning. In order to guarantee a smooth and inclusive adoption of e-learning techniques, it is critical to address these concerns as Cambodia struggles with the shift to e-learning. The government's dedication to navigating the changing higher education landscape is demonstrated by the ongoing development of information and communication technology strategies, which are a step towards making Cambodia's academic environment more technologically integrated and competitive globally.

This study set out to investigate undergraduate students perspectives on the Microsoft Teams e-learning platform in the context of a public university in Phnom Penh, Cambodia. The study examined UTAUT-2 dimensions, such as performance expectancy, effort expectancy, social influence, facilitating conditions, price value, habit, trust, behavior intention, and satisfaction so as to determine how students experienced e-learning in the setting of a public university. However, the understanding undergraduate students' levels of trust and happiness with Microsoft Teams as a platform for their teaching and learning experiences were another important focus of the study. Throughout the duration of the study, 476 student volunteers participated in the research for the purpose of obtaining comprehensive insights. By exploring these areas, the study attempted to provide useful data that might guide techniques for raising undergraduate students' acceptability and efficacy of e-learning platforms within the specifically chosen educational environment.

6.2 Discussion of the Research Findings

The findings of the indirect analysis suggest that satisfaction not play a significant mediating role between trust and behavioral intentions in the context under investigation. This result is consistent with existing literature that emphasizes the complex nature of the relationship between trust, satisfaction, and behavioral intentions in different environments (Chang & Chen, 2014), although trust is often considered a precursor of satisfaction and subsequent behavioral intentions. The lack of statistical significance in the indirect effect suggests that other factors be at play. It may influence students' intentions to use e-learning platforms, such as Microsoft Teams. This highlights the need for further research to explore additional variables and potential moderators. It can explain the dynamics of trust, satisfaction, and behavioral intentions in e-learning environments.

Moreover, maintaining the null hypothesis emphasizes the importance of considering paths and variables when examining the factors that influence student acceptance and use of e-learning platforms. Although satisfaction is often assumed to mediate the relationship between trust and behavioral intentions, the current results suggest that a more nuanced understanding is needed. Future research could explore alternative models or include additional variables to capture the complexity of students' decision-making processes regarding the adoption and utilization of e-learning technologies (Lu et al., 2016). Educators and policymakers will gain greater insight into the factors that shape students' attitudes and behavior towards e-learning platforms. It ultimately informs strategies aimed at increasing efficiency and acceptance in educational environments.

In addition, the study set out to investigate undergraduate students’ perspectives on the Microsoft Teams e-learning platform in the context of a public university in Phnom Penh, Cambodia. The study examined UTAUT-2 dimensions including performance expectancy, effort expectancy, social influence, facilitating conditions, price value, habit,

trust, behavior intention, and satisfaction in order to determine how students experienced e-learning in the setting of a public university. However, the understanding undergraduate students' levels of trust and happiness with Microsoft Teams as a platform for their teaching and learning experiences was another important focus of the study. Throughout the duration of the study, 476 student volunteers participated in the research for the purpose of obtaining comprehensive insights. By exploring these areas, the study attempted to provide useful data that might guide techniques for raising undergraduate students' acceptability and efficacy of e-learning platforms within the specifically chosen educational environment.

Thus, the findings from this study suggest that understanding student perceptions of the Microsoft Teams e-learning platform, especially in terms of trust and satisfaction, be important. Enhancing the efficiency and acceptance of e-learning within public universities is crucial to support, and so do all in Phnom Penh, Cambodia. With insights gathered from 476 student volunteers, this research provides valuable information to inform strategies aimed at improving the overall teaching and learning experience through e-learning platforms.

According to the findings, the utilization of Microsoft Teams at RULE has demonstrated several advantages, including ease of communication, streamlined assignment and homework submission processes, enhanced convenience, and the elimination of the need for travel. The platform's video recording capabilities have also proven valuable for efficiently sharing information with all students. Despite these benefits, challenges have been identified in the use of Microsoft Teams at RULE. Notably, limitations in material support pose obstacles to the seamless operation of the platform. Additionally, interruptions in the Internet connectivity have been identified as a challenge, impacting the consistent and reliable use of Microsoft Teams. Moreover, there are concerns related to human resources in terms of both having sufficient personnel to

implement the platform effectively and ensuring that users are well-oriented to maximize its potential. Addressing these challenges will be crucial for optimizing the overall effectiveness of Microsoft Teams as an educational tool at RULE. In conclusion, from the perspective of respondents, while Microsoft Teams at RULE offers substantial benefits, addressing challenges related to material support, human resources, and internet interruptions were essential to ensuring effective and inclusive interaction between teachers and students in the online or e-learning environment.

It is said that the use of Microsoft Teams at RULE offers unique advantages in terms of communication, management and information sharing. However, the challenge of material support internet connection and the allocation of human resources requires attention to increase efficiency and effectiveness as an educational tool. Addressing these challenges is essential to creating a smooth interaction between teachers and students. This will help increase the overall efficiency and comprehensiveness of the online learning environment at RULE.

6.2.1 Result of hypothesis testing

The results that have been provided are supported by the study's compliance with the seven hypotheses.

First Hypothesis: The result stating that "Performance Expectancy has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study" was not supported, suggesting a lack of statistically significant relationship between performance expectancy and behavioral intention among the targeted group of undergraduate students with a p-value of 0.136 and a z-value of 1.490. Performance expectancy, in the context of technology acceptance models, typically refers to users' perceptions about the positive outcomes and benefits they expect to gain from using a particular technology. In the context of the Microsoft

Teams platform, it's possible that students at RULE did not perceive substantial advantages or positive outcomes in terms of their academic performance or study experience by using this platform. This lack of perceived benefits may have contributed to the non-significant influence on their behavioral intentions. Additionally, it's essential to consider the unique characteristics and preferences of the undergraduate students at RULE. Different user groups may have diverse expectations, experiences, and needs, which can influence their perceptions of technology. Perhaps there are specific challenges, barriers, or alternative solutions that students at RULE prefer or find more suitable for their study needs, making Microsoft Team less influential in shaping their intentions. This finding is corroborated by Utomo et al., (2021) discovering that behavioral intentions wasn't influenced by performance expectancy. It is now necessary to have application and platform usage experience in order to continue with adoption (Utomo et al., 2021) and also supported by Zacharis, G., & Nikolopoulou, K. (2022). As stated by Chao (2019), the study's findings showed that behavior intentions and performance expectancy had a favorable relationship and that this influence extended to student performance when they used technology. In summary, the non-significant influence of performance expectations on behavioral intentions in using Microsoft Teams among undergraduate students at RULE may be attributed to their specific perceptions, preferences, or unique educational context.

Second Hypothesis: The result, indicating that "Effort Expectancy has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study" was not supported by the p-value of 0.309 and z-value of 1.018, which suggested lack of statistically significant relationship between the effort expectancy and the students' intention to use the platform. Effort expectancy is often associated with the perceived ease of use of a technology. If students

perceive the Microsoft Team platform as challenging to use or if they anticipate a high level of effort in learning and navigating the platform, it may negatively impact their intention to adopt it for their studies. The overall educational environment and support provided by the institution can influence students' perceptions of effort. If there is inadequate training, resources, or support for using Microsoft Team, students may perceive it as requiring more effort, impacting their intention to adopt it. To contextualize and support the current finding refer to previous studies in the literature that have explored the relationship between effort expectancy and technology adoption in educational settings. Moya et al. (2018) confirmed that users' behavioral intention to use the system was improved or increased by the effort expectancy of the system. Consequently, users will adjust their favorable behavior toward utilizing the system in proportion to the system's increased conceptual ease of use. Also, this finding was lined by the previous research Rudhumbu (2022). In summary, the non-significant influence of effort expectancy on the behavioral intention of undergraduate students at RULE to use Microsoft Team may be influenced by factors, related to ease of use, familiarity with alternative tools, and the educational context. Linking this result to previous studies enhances the understanding of this finding within the broader context of technology adoption in educational system.

Third Hypothesis: The result, stating that "Social Influence has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study" was supported with a p-value of 0.043 and z-value of -2.022 suggested that the perceived impact of social factors on student's intention to use Microsoft Team. Social Influence typically refers to the impact of social factors, such as the influence of peers, important people around students, instructors, or friends. If students at RULE do not perceive significant encouragement or pressure from their peers

or social circles to use Microsoft Team for their studies, it may contribute to the non-significant influence on behavioral intention. Also, the overall culture and norms within the educational institution can play a role in social influence. The channels through which social influence is communicated can impact its effectiveness. If there is a lack of effective communication channels or if students are not exposed to positive endorsements of Microsoft Teams from influential figures within the academic community, it could diminish the influence of social factors on their intentions. On the other hand, students may perceive the opinions and recommendations of their social network differently based on the relevance of Microsoft Team to their academic needs. To support and contextualize this finding refer to previous studies that have investigated the role of social influence in technology adoption within educational settings. As stated by Chao (2019), social influence construct was expanded by using the technology and platform, which was expected to outperform the relationship between social influence and behavior intentions to adopt the new way of new technology of m-learning. In the study conducted by Nordhoff et al. (2020), social influence was the best predictor of behavioral intention, which indicates that people who think of significance in their social network value the conditionally automated cars they drive more likely to plan to use new transportation apps. that integrate new technology. In summary, the non-significant influence of Social Influence on the behavioral intention of undergraduate students at RULE to use Microsoft Team may be influenced by factors related to peer influence, institutional culture, communication channels, and perceived relevance. Linking this result to previous studies enhances the understanding of this finding within the broader context of social factors in technology adoption.

Fourth Hypothesis: The result indicating that "Price value has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft

Team platform in their study" was not supported with a p-value of 0.937 and a z-value of 0.080, suggesting that the perceived value in relation to the cost or price of using the platform did not play a significant role in shaping the students' behavioral intentions. Price value is often associated with the perceived cost-benefit ratio of using a particular technology. If students at RULE do not see a clear and substantial benefit in relation to the perceived cost (financial or otherwise) of using Microsoft Team, it may diminish the influence of price value on their behavioral intention. This finding was supported by Merhi et al. (2019), price value had a unique inverse relationship when it came to using mobile banking. And also supported from the previous research that Price Value (PV) was determined by Raman and Thannimalai et al. (2021) to have no impact at all on the behavioral intention to adopt e-learning in higher education during the COVID-19 epidemic. In summary, the non-significant influence of price value on the behavioral intention of undergraduate students at RULE to use Microsoft Team may be influenced by factors related to perceived cost-benefit ratio, availability of alternatives, financial constraints, and perceived quality and features. Linking this result to previous studies enhances the understanding of this finding within the broader context of economic considerations in technology adoption.

Fifth Hypothesis: The result, indicating that "Habit has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study" was supported with a p-value of.001 and a z-value of 8.149, suggesting that the habitual use of Microsoft Team did not have a significant impact on students' intentions to continue using the platform. Students may already have established habits of using alternative platforms for their study needs. If they have long-standing habits with other tools or platforms and find them more effective, it could diminish the impact of habit on their intention to switch to Microsoft Team. This is

consistent with a study by Moorthy et al., (2019), which found that habit was the study's strongest factor and had a notable beneficial influence on behavior intentions. Additionally, as corroborated by research of Raman and Thannimalai et al., (2021), habit was found to have a significant impact on behavior intention to use e-learning in higher education. Tarhini et al., (2017) observed that habits are examined in the study to explore the impact and significance level on users' behavioral intention of e-learning systems, which is consistent with this finding. Habit formation is often influenced by the perceived ease of incorporating a new behavior into one's routine. If students find it challenging or inconvenient to integrate Microsoft Team into their existing study habits, it may contribute to the non-significant influence of habit on their behavioral intentions. Also, the compatibility of Microsoft Team with students' existing study habits and routines may affect the formation of habits. If the platform is perceived as not seamlessly integrating with their current practices, it might reduce the impact of habit on behavioral intention. Students may face time constraints when adapting to a new platform. If using Microsoft Team requires a significant time investment to establish a habit, students may prioritize existing habits due to the limited time available for studying. In summary, the non-significant influence of habit on the behavioral intention of undergraduate students at RULE to use Microsoft Team may be influenced by factors related to established habits with alternative platforms, perceived ease of habit formation, functional compatibility, and time constraints. Linking this result to previous studies enhances the understanding of this finding within the broader context of habit formation and technology adoption.

Sixth Hypothesis: The result, indicating that "Satisfaction has not significantly influenced the behavior intention of undergraduate students at RULE to use the Microsoft Team platform in their study" was supported with a p-value of 0.978 and a z-value of 0.028, suggesting that students' satisfaction with the platform did not play a significant

role in shaping their intentions to continue using it. This finding was associated with Chao (2019) confirmation that the degree of satisfaction among university students has a significant impact on their behavior intentions regarding the use of the system and platform for student studies. Also, this finding was consistent with the findings of another study Rajeh et al., (2021), Puriwat, W., & Tripopsakul, S. (2021), Masadeh et al., (2023) stated that satisfaction influences behavior intention to use and adopt e-learning platform for student's studies. If students had high expectations regarding the features or performance of Microsoft Team and the platform did not meet these expectations, it might result in lower satisfaction. And if there are alternative platforms that students find more satisfying for their study needs, they may be less inclined to continue using Microsoft Teams. The availability of other platforms offering better user experiences could impact satisfaction levels and, consequently, the behavioral intention toward Microsoft Teams. The perceived relevance of the features offered by Microsoft Team to students' specific study requirements may influence satisfaction. If the platform lacks features that are crucial for their academic tasks, it could lead to lower satisfaction and a diminished impact on behavioral intention. On the other hand, the technical issues, glitches, or poor performance of the Microsoft Team platform may negatively impact users' satisfaction. If students encounter persistent problems with the platform, it could undermine their satisfaction levels and, consequently, their behavioral intentions. In summary, the non-significant influence of satisfaction on the behavioral intention of undergraduate students at RULE to use Microsoft Team may be influenced by factors such as unmet expectations, competition from more satisfying platforms, perceived relevance of features, and technical issues. Linking this result to previous studies enhances the understanding of this finding within the broader context of user satisfaction and technology adoption.

Seventh Hypothesis: The result, indicating that "Undergraduate students at the Royal University of Law and Economics (RULE) trust Microsoft Teams as a study platform, which does not significantly influence their satisfaction" was supported with a p-value of .001 and a z-value of 16.946 which presented that despite students' trust in the platform, this trust does not translate into a significant impact on their overall satisfaction. Trust in a platform may not necessarily encompass all aspects of user satisfaction. While trust is often associated with reliability and security, functional satisfaction involves the perceived usefulness and performance of the platform. This finding was associated with Chao's (2019) confirmation that the degree of satisfaction and trust among university students has a significant impact on their behavior intentions regarding the use of the system and platform for their studies. Also, this finding was associated with Pham et al., (2020), Miftarević, S. B., & Paliaga, M. (2021), indicated that trust and satisfaction with a work relationship have a positive statistically significant relationship with a project outcome, and fully trust on e-learning. In summary, the finding that trust in Microsoft Teams does not significantly influence the satisfaction of undergraduate students at RULE may be explained by considering the multifaceted nature of satisfaction, the context-specific factors at RULE, and the potential need for complementary influences on satisfaction.

6.3 Answer to the Research Questions

6.3.1 Answer to research question 1

Research Question 1: How do factors of Microsoft Team for e-Learning acceptance affect undergraduate students in a public higher education institution inside Phnom Penh city?

To answer the question, content analysis methods combined with variable analysis throughout the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) framework were utilized to properly tackle the inquiry. By carefully examining both the quantitative elements from UTAUT2 and the qualitative insights from content analysis, this method ensured a complete and comprehensive response, providing a comprehensive response. The acceptance of Microsoft Teams for e-learning among undergraduate students in a public higher education institution within Phnom Penh City, specifically at RULE, is influenced by various factors. The efficacy of Microsoft Teams as an e-learning platform is shaped by the unique circumstances and dynamics within the institution. This was one of the first expressions and attractions from students, which made them confident enough to accept their study. This shows the current study is consistent with earlier research by Suwarno (2022), which found that e-learning management system institutions, remote learning adoption, Microsoft Teams use as a virtual meeting platform, teaching platforms, and remote learning adoption all have an effect on students' acceptance. Second factors such as internet connectivity, device accessibility, ease of platform use, support and orientation from experts, and the overall technological readiness of both students and teachers play a crucial role in determining the level of acceptance. The lack of resources resulted in problems with technical support, which included internet-based as well as expert assistance. These limitations were especially noticeable in the institutional and governmental domains, as their operational frameworks were under development at the same time. This finding is supported by researchers, as highlighted by Pal, and Vanijja (2020), who discovered that Microsoft Teams is a useful tool for acknowledging and addressing the issue of the digital divide, particularly in developing countries where there are differences in the platforms used for consumption. While there has been a lot of development going on for both web-based and mobile

applications, not much is known about how user-friendly these applications are in relation to the current online education delivery environment. The third significant factors were influenced by student acceptance pertains to the platform's capability to provide effective synchronous and asynchronous communication. The utilization of Microsoft Teams for academic purposes offers students a robust environment conducive to both real-time collaboration and independent learning, thus contributing to their acceptance of the platform for educational use. This result was confirmed by Al Enezi et al. (2022), who found that Microsoft Teams' live-class quality was highly rated. The quality of synchronous learning offered by Microsoft Teams encourages students to interact with their teachers both in and outside of the classroom because they can instantly receive notifications about homework, assignments, and class updates on their mobile devices, which encourages students to accept and learn with the platform.

The success and acceptance of Microsoft Teams as an e-learning tool at RULE are contingent upon addressing the factors mentioned and ensuring that the platform aligns seamlessly with the diverse needs and technological landscapes of the student body and faculty within the institution.

6.3.2 Answer to research question 2

Research Question 2: What are the perceptions of undergraduate students regarding performance expectancy, effort expectancy, social influence, price value, habit, trust, behavior intention, and satisfaction towards Microsoft Team for e-Learning in a public higher education setting?

In order to address the question, the findings of the UTAUT-2 variable analysis were carefully summarized, and concepts from the content analysis were combined and synthesized. Undergraduate students at RULE's opinions of Microsoft Teams for e-learning show a complex assessment in a number of areas.

Performance Expectancy: Students evaluate the expected advantages and efficacy of Microsoft Teams, taking into account its influence on their academic achievements and learning outcomes. This assessment is influenced by individual characteristics related to performance in using Microsoft Teams, as well as guidance and support from professionals regarding its implementation during e-learning studies. This is in line with earlier research by Osei et al. (2022), who stated that student perceptions of performance expectancy vary according to individual personality factors, which have been proven to have a substantial impact on behavioral intention to use e-learning systems.

Effort Expectancy: Effort expectancy, reflecting the perceived ease of use and navigation simplicity of Microsoft Teams, plays a pivotal role in determining students' engagement with the platform for e-learning purposes. Students at RULE were looking for an easy platform to study on, especially during the pandemic. The perception of using Microsoft Teams was very fast to accept as it was important for their study. The finding was supported by previous research by Smoliński et al. (2023), who confirmed that Microsoft Teams is easy to learn and its use is more significant than among academic teachers as well as for students, which was found during the COVID-19 pandemic and post-pandemic. This finding is also supported by Rudhumbu (2022), who confirmed that effort expectancy significantly influenced students in universities to accept blended or online learning as a learning mode that is effortless to use in the performance of their task on the platform.

Social Influence: Students' perceptions of Microsoft Teams were significantly influenced by the collective impact of their peers, instructors, and the wider academic community. Social factors played a crucial role in shaping the adoption and acceptance of Microsoft Teams as a tool for their academic endeavors. This is consistent with previous

research by Zacharis, G., and Nikolopoulou, K. (2022), which discovered that social influence also affected college students' intentions toward new technology platforms. In other words, students believe that their parents, peers, tutors, and other important people can affect their decision to use e-learning platforms. When students feel that influential people will assist them, it is expected that they will use e-learning platforms for their educational goals.

Price Value: Microsoft Teams' price-value evaluation for e-learning includes evaluating the platform's perceived value, advantages, and cost implications. Students assess the alignment between investment and value by considering numerous factors such as accessibility, user experience, features, integration with learning resources, and assistance. As a result of Microsoft Teams' ability to successfully improve collaboration, enable flexible learning, encourage participation, and provide organizing tools, students are probably going to think that their investment in e-learning was acceptable.This finding is consistent with earlier research by Raman and Thannimalai (2021), who found that students intention to utilize and accept Microsoft Teams for learning were highly influenced by price value. This discovery was made possible by the open availability of e-learning tools in both consumer and organizational contexts, including social networking platforms like Telegram, We Chat, and What's App, as well as mobile programs like Google Classroom and Google Meet. It was reasonably priced for students' studies and provided them with more information on technology and e-learning platforms, in keeping with research by Tan et al., (2022).

Habit: One of the main things that influenced students' attitudes during the COVID-19 as well as post pandemic was the emergence of regular and habitual use of Microsoft Teams. Students' positive impressions of the platform's efficiency, ease, flexibility, engagement, and connection were encouraged by their regular engagement

with it, which also helped to integrate it into their learning routines with different App to support student study. Students' attitudes changed as they continued to interact with Microsoft Teams on a daily basis, highlighting the important role that habitual interaction plays in the adoption and acceptance of digital platforms in the field of e-learning. According to previous research by Raman and Thannimalai (2021), habits had a favorable impact on undergraduate students' use of e-learning through off-campus social interactions. Additionally, research by Gunasinghe et al., (2020) indicated that academicians' acceptance of e-learning was significantly influenced by habit. Apart from that, according to Saunders-Wyndham's (2022) research, a habit is developed by experience and reinforces strong attitudes about using a platform for online teaching and learning.

Trust: Students' trust in using Microsoft Teams for their academic work is influenced by the platform's reputation as a dependable and secure e-learning resource. Once RULE students were given permission to learn and integrate e-learning into their studies, they were trusted to use the Microsoft Team platform during the beginning of the COVID-19 pandemic. Though learning while building the e-learning platform's structure made them less reliable to Microsoft Teams, it nevertheless encouraged students to participate in their studies. However, the result lined with previous research by Jeljeli et al., (2022) noted that programs such as Microsoft Teams alleviate this shortcoming and encourage students to participate in an online, in-person virtual classroom setting. Particularly in light of the ongoing COVID-19 outbreak and its effects on healthcare. Additionally, students have trust in Microsoft Teams to lead the instructional activities that improve their ability to use the relevant software.

Behavior Intention: Undergraduate students at RULE inclinations and intentions to consistently use Microsoft Teams for e-learning were shaped by their perceptions of the platform's utility, ease of use, and overall effectiveness with technological media support. Lined to the previous research, as stated by Laurencia and Sudarto (2021), Microsoft Team's ease of use and usefulness for e-learning studies were the driving forces behind the decision to employ it. Additionally, it was found that the intention of behavior about the usage of Microsoft Teams was influenced by the rapidity of technical advancement, including the media of today, which includes laptops, smartphones, and social communication. This contributed to a shift in the way people accepted technology in particular. According to Jose et al. (2021), the majority of users saw Microsoft Teams from a positive perspective, with users' intentions shaping their behavior based on the platform's learning outcomes.

Satisfaction: The comprehensive satisfaction and sense of fulfillment experienced by students using Microsoft Teams for e-learning significantly enhance their overall contentment, reflecting a holistic engagement with the platform's features. Undergraduate students at RULE have reported positive experiences with Microsoft Teams, finding it user-friendly and effective for both synchronous and asynchronous learning activities but still need time to have develop. The study conducted by Keerio et al. (2022) supported the result by confirming that students were satisfied with Microsoft Teams due to its perceived simplicity of use and the amount of time and practice needed to become familiar with it. However, Christanto et al., (2023) revealed that while students are satisfied with Microsoft Teams, the platform's interface needs to be improved, workflows need to be streamlined, and users need clear instructions that are easy to understand. These improvements will take time to benefit the institution and the students. Additionally, a good learning environment that maximizes engagement, information

retention, and academic performance can be fostered by users' pleasure with Microsoft Teams.

Understanding these multifaceted perceptions is crucial for tailoring strategies to enhance the adoption and utilization of Microsoft Teams within RULE's unique higher education setting. It provides insights into the specific areas that require attention and improvement, ensuring a more effective and satisfactory e-learning experience for undergraduate students.

6.3.3 Answer to research question 3

Research Question 3: How do undergraduate students trust to use Microsoft Team platforms in learning and teaching in a public higher education institution?

According to all analysis results from UTAUT-2 by SEM as well as content interview analysis, the trust that undergraduate students place in the use of the Microsoft Teams platform for learning and teaching at RULE was influenced by a variety of factors, encompassing technological reliability, security with secure communication channels, ease of use, and overall confidence in the platform's ability to support their educational endeavors. A detailed examination of these factors provides insights into the nuanced dynamics of student trust in the Microsoft Teams platform within the context of a public higher education institution like RULE. While RULE undergraduate students may not yet have the highest percentage of trust when it comes to using Microsoft Team for their undertakings, the majority of them accept its use as a way to keep their studies going while the COVID-19 pandemic is ongoing and even after it has ended. It is evident that during the pandemic, students at RULE began to trust innovative methods of instruction, as seen through their continued use of Microsoft Teams for academic study and communication. This outcome was consistent with earlier research by Hargreaves et al.,

(2022) who found that most respondents and students trusted Microsoft Teams to be used both during and after the COVID-19 pandemic. However, just a small percentage of respondents still distrust Microsoft Teams, expressing things like how hard it is to read people over and how tough it may be to speak up in meetings so that the conversation can go on to another issue. The results were further corroborated by Casey's (2010) research, which found that trust in virtual software for e-learning platforms is crucial and is increasingly acknowledged as an essential factor in the successful operation of organizations, particularly in the context of business, professional, and employment relationships. Concurrently, one of the most important things for users is the growth of trust in the Microsoft Team environment. This indicates that while user and students trust in Microsoft Teams is not very strong, it is still possible for it to improve.

Understanding these factors provides a comprehensive view of how undergraduate students at RULE trust and rely on Microsoft Teams platforms for their learning and teaching experiences. This insight is vital for continually enhancing the platform's features, addressing any concerns, and fostering a trustworthy digital learning environment at RULE.

6.4 Implications for Practice

The analysis of Microsoft Teams usage at RULE suggests practical steps for improvement. Key implications include prioritizing technology upgrades, implementing comprehensive user training, fostering engaging communication strategies, addressing material support limitations, optimizing the user experience, emphasizing data security, expanding accessibility initiatives, leveraging positive past experiences for trust-building, establishing continuous monitoring mechanisms, and enhancing integration with

academic resources. Implementing these measures will contribute to a more seamless and effective e-learning environment for undergraduate students at RULE.

6.5 Recommendation for Future Research

Based on the findings from Microsoft Teams usage at RULE among undergraduate students, several recommendations for future research emerge. These suggestions aim to broaden the scope of research to include the entire higher education landscape in Phnom Penh, Cambodia, including both public and private universities. The detailed recommendations include: First, comparative analysis across institutions: future research should conduct a comparative analysis of Microsoft Teams usage across various public and private universities in Phnom Penh. This could involve assessing the platform's adoption rates, challenges, and success factors to identify variations based on institutional characteristics. Second, in-depth investigation of implementation strategies: explore the diverse strategies employed by universities in Phnom Penh for implementing Microsoft Teams. Investigate the methods used for user training, technical support, and the integration of the platform into different academic settings to identify best practices and areas for improvement. Third, examination of pedagogical integration: investigate how instructors across different universities integrate Microsoft Teams into pedagogical practices. This includes exploring the varied instructional methods, collaborative learning approaches, and assessment strategies facilitated by the platform. Fourth, Impact on Academic Performance: Explore the impact of Microsoft Teams on academic performance across universities in Phnom Penh. Investigate correlations between platform usage, student engagement, and learning outcomes to understand how e-learning tools contribute to educational success. Fifth, Assessment of Technological Readiness: Evaluate the technological readiness of universities in Phnom Penh to adopt and optimize

Microsoft Teams. Assess factors such as infrastructure, IT support, and institutional policies to identify challenges and facilitate informed recommendations for technological improvements. Sixth, Qualitative Analysis of User Perceptions: Conduct in-depth qualitative analyses to understand the nuanced perceptions of users regarding Microsoft Teams. Utilize interviews, focus groups, and open-ended surveys.

6.6 Recommendation for higher education institution in Phnom Penh

Using Microsoft Teams at RULE offers numerous advantages, including ease of communication, streamlined assignment and homework submission, convenience with the elimination of travel, and robust video recording capabilities. These benefits contribute significantly to enhancing the overall learning experience for students and educators alike.The ease of communication within Microsoft Teams enables seamless collaboration and interaction among students and instructors. Through chat, voice calls, and video meetings, communication barriers are minimized, fostering a more engaging and dynamic learning environment at RULE. Additionally, the platform's features, such as file sharing and real-time editing, facilitate efficient collaboration on group projects and assignments, promoting teamwork and knowledge sharing among students that help them to learn togethers. Furthermore, assignment and homework submission on Microsoft Teams at RULE are simplified and centralized, allowing students to submit their work digitally without the need for physical copies or face-to-face submissions. This streamlined process enhances organization and reduces administrative overhead for instructors, enabling them to provide timely feedback and assessment to students. About the convenience and elimination of travel associated with using Microsoft Teams are particularly beneficial in a higher education setting like RULE. Students can attend classes, participate in discussions, and access course materials from anywhere with an

internet connection, reducing the constraints of physical location and commuting. This flexibility accommodates diverse learning styles and schedules, promoting accessibility and inclusivity in education. Moreover, Microsoft Teams' video recording capabilities enable instructors to record lectures, presentations, and demonstrations for later review by students. This feature enhances learning retention and allows students to revisit key concepts at their own pace, promoting self-directed learning and academic success with high commitment as self-responsible in higher education.

However, despite these advantages, there are challenges associated with using Microsoft Teams at RULE. One such challenge is material support limitations, where the platform may not fully support certain file formats or interactive content types, potentially limiting the richness of learning materials that can be shared and accessed. Additionally, internet interruptions can pose challenges to the seamless use of Microsoft Teams for e-learning. Connectivity issues, bandwidth limitations, or outages can disrupt online sessions, causing delays or disruptions in communication, collaboration, and access to course resources. Overall, while Microsoft Teams offers significant advantages in terms of communication, collaboration, convenience, and multimedia capabilities, addressing challenges such as material support limitations and internet interruptions is essential to ensuring a smooth and effective e-learning experience for students and educators at RULE. To effectively prepare for higher education in Phnom Penh and implement Microsoft Teams for e-learning, a comprehensive approach is recommended. This approach should address both the advantages and challenges associated with using Microsoft Teams at RULE. To ensure a successful transition to e-learning using Microsoft Teams in higher education institutions in Phnom Penh, it is crucial to leverage the platform's advantages, such as ease of communication, streamlined assignment submission, convenience, and video recording capabilities. These features enhance the

learning experience, promote collaboration, and offer flexibility to students and educators. At the same time, proactive measures must be taken to address challenges such as material support limitations and internet interruptions. This includes providing training and support to faculty with knowledge of e-learning platform use as well as pedagogical in Microsoft Teams or e-learning pedagogical approach, and students on maximizing the platform's functionalities, ensuring compatibility with various file formats, and implementing contingency plans for connectivity issues. By strategically integrating Microsoft Teams into the e-learning ecosystem and addressing potential challenges, higher education institutions in Phnom Penh can create a robust and effective digital learning environment. This approach not only prepares students for the demands of modern education but also fosters innovation, inclusivity, and academic excellence in this digitalization age in Phnom Penh as well as in Cambodia. In response to asynchronous and synchronous learning within the Microsoft Teams e-learning platform, the following approach can be adopted in the higher education institution in Phnom Penh as followed; **Asynchronous Learning:** Utilize Microsoft Teams' asynchronous features, such as discussion boards, file sharing, and assignment submission, to facilitate self-paced learning and collaboration. Encourage students to engage in discussions, share insights, and work on assignments at their own convenience. Provide clear instructions, deadlines, and feedback mechanisms to support independent learning and progress tracking. On the other hand, e-learning assessment as asynchronous have to apply such as quiz, reflection paper, review paper and project. **Synchronous Learning:** Leverage Microsoft Teams' synchronous capabilities, such as live meetings, virtual classrooms, and real-time collaboration tools for interactive sessions and lectures. Schedule regular live sessions for lectures, Q&A sessions, group discussions, and presentations to promote active participation, appointment class, appointment presentation, and engagement. Use features

like screen sharing, whiteboarding, and polling to enhance interactivity and collaboration during synchronous sessions. **Integration of Asynchronous and Synchronous:** Create a balanced approach by integrating asynchronous and synchronous activities to cater to different learning styles and preferences. For instance, asynchronous discussions and pre-recorded lectures can complement live sessions, allowing students to review content beforehand and engage more meaningfully during synchronous interactions. Encourage peer collaboration, group projects, and reflective activities that combine both asynchronous and synchronous elements to enrich the learning experience. **Support and Training:** If higher education institution in Phnom Penh or in Cambodia would like to provide e-learning with Microsoft Team platform, have to provide comprehensive training and support to faculty with technique and pedagogical in e-learning and students on navigating both the asynchronous and synchronous features of Microsoft Teams. Offer guidance on best practices for organizing asynchronous content, facilitating synchronous sessions, managing time zones, and leveraging collaborative tools effectively. Foster a culture of continuous learning and adaptation to maximize the benefits of the platform for e-learning.However, by incorporating these strategies, higher education institutions in Phnom Penh can harness the full potential of Microsoft Teams for asynchronous and synchronous learning, promoting flexibility, engagement, and effective knowledge transfer in the digital learning environment.

6.7 Conclusion

The conclusion drawn from the analysis of Microsoft Teams as an e-learning platform at RULE with undergraduate students reveals a complex and multifaceted landscape. The platform demonstrates both strengths and areas for improvement within the specific context of RULE. On the positive side, the high level of acceptance and trust among students indicates that Microsoft Teams has become an integral part of their

academic experience. The platform's functionality, user interface, and collaboration features are appreciated, contributing to its widespread adoption for various e-learning activities. Moreover, the positive impact on habit formation suggests that students have integrated Microsoft Teams into their regular academic routines. However, challenges such as slow internet access, issues related to facilitation conditions, and varying levels of technological readiness present hurdles that need careful consideration. The findings underscore the importance of addressing infrastructure concerns, providing targeted technical support, and implementing strategies to enhance the overall user experience. Additionally, the analysis of influencing factors from UTAUT-2, including performance expectancy, effort expectancy, social influence, facilitation condition, habit, behavior intention, trust, and satisfaction, provides valuable insights for refining strategies and interventions. The variations in these factors highlight the need for personalized approaches to address diverse user perceptions and expectations. Furthermore, in conclusion, Microsoft Teams has established itself as a pivotal e-learning platform at RULE, enjoying widespread acceptance and trust among undergraduate students. However, the measures were required to address identified challenges, ensuring a smooth and inclusive e-learning experience that aligns with the unique needs of RULE's student community. The comprehensive understanding gained from this analysis lays the groundwork for future enhancements, fostering a dynamic and effective digital learning environment at RULE.

Another conclusion is that the analysis of variables influencing undergraduate students' opinions and adoption of the Microsoft Teams e-learning environment at a public university reveals significant findings. The study, focused on behavioral intention and satisfaction, highlights two key factors that exhibited statistically significant influences: habit and social influence on behavioral intention and trust on satisfaction.

The influence of habit on behavioral intention, with a p-value of less than 0.001, underscores the importance of routine and familiarity in students' continued use of Microsoft Teams. The habitual integration of the platform into their academic routines signals a positive trend, emphasizing the impact of consistent usage patterns on sustained behavioral intention. Social influence, with a p-value less than 0.05, emerges as another influential factor shaping students' behavioral intentions toward Microsoft Teams. The support and influence from peers, instructors, and the broader academic community contribute significantly to the platform's acceptance and adoption. Moreover, the statistically significant influence of trust on satisfaction, with a p-value of less than 0.001, emphasizes the critical role trust plays in shaping students' satisfaction levels. Trust in the platform, its security measures, and reliability directly contribute to a positive and satisfactory e-learning experience. These results collectively advance our understanding of the complex dynamics influencing students' perceptions and behaviors in the context of e-learning. The study contributes valuable insights into how trust, habit, and social influence play crucial roles in shaping behavioral intentions and satisfaction with Microsoft Teams. These findings provide a foundation for informed interventions and strategies aimed at enhancing the e-learning experience, fostering positive perceptions, and ensuring sustained satisfaction among undergraduate students in the public university setting. Overall, this research contributes to the transforming knowledge base on the different factors that drive successful e-learning adoption in higher education institutions.

REFERENCES

Abbad, M. M. (2021). Using the UTAUT model to understand students' usage of e-learning systems in developing countries. *Education and Information Technologies*, 1-20.

Abbad, M. M. (2021). Using the UTAUT model to understand students' usage of e-learning systems in developing countries. *Education and Information Technologies*, *26*(6), 7205-7224

Abbas, E. W., & Rajiani, I. (2019). Managing e-learning in public universities by investigating the role of culture. *Polish Journal of Management Studies*, *20*.

Abbas, Z., Umer, M., Odeh, M., McClatchey, R., Ali, A., & Farooq, A. (2005, May). A semantic grid-based e-learning framework (SELF). In *CCGrid 2005. IEEE International Symposium on Cluster Computing and the Grid, 2005.* (Vol. 1, pp. 11-18). IEEE.

Abdon, B. R., Ninomiya, S., & Raab, R. T. (2007). E-learning in higher education makes its debut in Cambodia: the provincial business education project. *International Review of Research in Open and Distributed Learning*, *8*(1), 1-14.

Aggarwal, D. (2009, February). Role of e-learning in a developing country like India. In *3rd National Conference, Computing For Nation Development, February* (pp. 26-27).

Ain, N., Kaur, K., & Waheed, M. (2016). The influence of learning value on learning management system use: An extension of UTAUT2. *Information Development*, *32*(5), 1306-1321.

Aixia, D., & Wang, D. (2011). Factors influencing learner attitudes toward e-learning and development of e-learning environment based on the integrated e-learning platform. *International Journal of e-Education, e-Business, e-Management and e-Learning*, *1*(3), 264.

Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. International Journal of Information Management, 37(3), 99-110.

Alameri, J., Masadeh, R., Hamadallah, E., Ismail, H. B., & Fakhouri, H. N. (2020). Students' Perceptions of E-learning platforms (Moodle, Microsoft Teams and Zoom platforms) in The University of Jordan Education and its Relation to self-study and Academic Achievement During COVID-19 pandemic. *Journal ISSN*, *2692*, 2800.

Alanazi, A. A. (2019). *Online Learning Environments: Investigating the Factors Influencing Social Presence* (Doctoral dissertation, University of Kansas).

Al Enezi, D. F., Al Fadley, A. A., & Al Enezi, E. G. (2022). Exploring the attitudes of instructors toward Microsoft Teams using the Technology Acceptance Model. *International Education Studies*, *15*(1), 123-135.

Alhabeeb, A., & Rowley, J. (2018). E-learning critical success factors: Comparing perspectives from academic staff and students. *Computers & Education*, *127*, 1-12.

Alhija, F. A. N. (2010). Factor analysis: An overview and some contemporary advances. *International encyclopedia of education, 3*, 162-170.

Alia, A. (2017). *An investigation of the application of the Technology Acceptance Model (TAM) to evaluate instructors' perspectives on E-Learning at Kuwait University* (Doctoral dissertation, Dublin City University).

Al Lily, A.E., Ismail, A.F., Abunasser, F.M., & Alhazmi, A.H. (2019). E-learning in Saudi universities: Past, present and future. *Journal of Information Technology Education: Research,* 18, 255-275

Ally, M., & Gardiner, M. (2012). The moderating influence of device characteristics and usage on user acceptance of Smart Mobile Devices.

.

Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic. *Education and information technologies*, *25*(6), 5261-5280.

Alqahtani, A. Y., & Rajkhan, A. A. (2020). E-learning critical success factors during the covid-19 pandemic: A comprehensive analysis of e-learning managerial perspectives. *Education sciences*, *10*(9), 216.

Alqahtani, A. Y., & Rajkhan, A. A. (2020). E-learning critical success factors during the covid-19 pandemic: A comprehensive analysis of e-learning managerial perspectives. *Education sciences*, *10*(9), 216.

Alqahtani, A. Y., & Rajkhan, A. A. (2020). E-learning critical success factors during the covid-19 pandemic: A comprehensive analysis of e-learning managerial perspectives. *Education sciences*, *10*(9), 216.

Alrawashdeh, T. A., Muhairat, M. I., & Alqatawnah, S. M. (2012). Factors affecting acceptance of web-based training system: Using extended UTAUT and structural equation modeling. *arXiv preprint arXiv:1205.1904*.

Al-Samarraie, H., Teng, B. K., Alzahrani, A. I., & Alalwan, N. (2018). E-learning continuance satisfaction in higher education: a unified perspective from instructors and students. *Studies in higher education*, *43*(11), 2003-2019.

Alvy, S. (2016). *Assessment of e-learning implementation in Cambodia Islamic Centre* (Master's thesis, Kuala Lumpur: Kulliyyah of Information and Communication Technology, International Islamic University Malaysia, 2016).

Alyoussef, I. Y. (2023). Acceptance of e-learning in higher education: The role of task-technology fit with the information systems success model. *Heliyon*, *9*(3).

Aoki, K. (2010). The use of ICT and e-learning in higher education in Japan. *World Academy of Science, Engineering and Technology*, *66*(6), 868-872.

Aoki, K. (2010). The use of ICT and e-learning in higher education in Japan. *World Academy of Science, Engineering and Technology*, *66*(6), 868-872.

Arifin, W. N., & Yusoff, M. S. B. (2016). Confirmatory factor analysis of the Universiti Sains Malaysia emotional quotient inventory among medical students in Malaysia. *Sage Open, 6*(2), 2158244016650240.

Arkorful, V., & Abaidoo, N. (2015). The role of e-learning, advantages and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning*, *12*(1), 29-42.

Arkorful, V., & Abaidoo, N. (2015). The role of e-learning, advantages and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning*, *12*(1), 29-42.

Arnab, S., Eyre, E., Noon, M., Kernaghan-Andrews, S., & Mahon, D. (2021, May). An adaptation of the 'Escape Rooms' methodology in online learning to facilitate and investigate active learner-led activities and experiences. In *15th European Conference on Games Based Learning*. Academic Conferences and Publishing International.

Avcı, Ü., & Ergün, E. (2022). Online students' LMS activities and their effect on engagement, information literacy and academic performance. *Interactive Learning Environments*, *30*(1), 71-84.

Aviram, R., & Tami, D. (2004). The impact of ICT on education: the three opposed paradigms, the lacking discourse. *The Center for Futurism in Education, Ben Gurion University of the Negev, Israel. Disponible en: http://www. elearningeuropa. info/extras/pdf/ict_impact. pdf*.

Ayu, M. (2020). Online learning: Leading e-learning at higher education. *The Journal of English Literacy Education: The Teaching and Learning of English as a Foreign Language*, *7*(1), 47-54.

Aziz, R. C., Hashim, N. A. A. N., Omar, R. N. R., Yusoff, A. M., Muhammad, N. H., Simpong, D. B., ... & Safri, F. H. M. (2019). Teaching and Learning in Higher Education: E-Learning as a Tool. *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, *9*(1), 458-463.

Baber, H. (2021). Modelling the acceptance of e-learning during the pandemic of COVID-19-A study of South Korea. *The International Journal of Management Education*, *19*(2), 100503.

Babu, G. S., & Sridevi, K. (2018). Importance of E-learning in Higher Education: A study. *International Journal of Research Culture Society*, *2*(5), 1-8.

Bailey, A., Vaduganathan, N., Henry, T., Laverdiere, R., & Pugliese, L. (2018). Making digital learning work: Success strategies from six leading universities and community colleges. *Boston: Massachusetts: Boston Consulting Group*.

Banga, K., & Velde, D. W. (2020). Cambodia, COVID-19 and inclusive digital transformation: a seven-point plan. *Supporting Economic Transformation*.

Barak, M., Watted, A., & Haick, H. (2016). Motivation to learn in massive open online courses: Examining aspects of language and social engagement. *Computers & Education*, *94*, 49-60.

Benta, D., Bologa, G., & Dzitac, I. (2014). E-learning platforms in higher education. Case study. *Procedia Computer Science*, *31*, 1170-1176.

Caporarello, L., & Sarchioni, G. (2014). E-learning: the recipe for success. *Journal of e-learning and Knowledge Society*, *10*(1).

Casey, V. (2010). Developing trust in virtual software development teams. *Journal of theoretical and applied electronic commerce research*, *5*(2), 41-58.

Chang, H.H., & Chen, S.W. (2014). The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator. *International Journal of Information Management*, 34(1), 20-28.

Chao, C. M. (2019). Factors determining the behavioral intention to use mobile learning: An application and extension of the UTAUT model. *Frontiers in psychology*, *10*, 1652.

Chao, C. M. (2019). Factors determining the behavioral intention to use mobile learning: An application and extension of the UTAUT model. *Frontiers in psychology*, *10*, 1652.

Chatelier, G. (2018). E-learning within the framework of UNESCO. Chatelier, G., & Voicu, I. UNESCO, E-LEARNING AND SUSTAINABLE DEVELOPMENT.

Chea, N. (2015). HIGHER EDUCATION IN CAMBODIA Poor rural female students' challenges, motivations, and coping strategies.

Chealy, C. (2009). Higher education in Cambodia. In *The political economy of educational reforms and capacity development in Southeast Asia* (pp. 153-165). Springer, Dordrecht.

Cheng, B., Wang, M., Moormann, J., Olaniran, B. A., & Chen, N. S. (2012). The effects of organizational learning environment factors on e-learning acceptance. *Computers & Education*, *58*(3), 885-899.

Cheung, R., & Vogel, D. (2013). Predicting user acceptance of collaborative technologies: An extension of the technology acceptance model for e-learning. *Computers & education*, *63*, 160-175.

Cho, G., Hwang, H., Sarstedt, M., & Ringle, C. M. (2020). Cutoff criteria for overall model fit indexes in generalized structured component analysis. *Journal of marketing analytics, 8(4),* 189-202.

Chopdar, P. K., Korfiatis, N., Sivakumar, V. J., & Lytras, M. D. (2018). Mobile shopping apps adoption and perceived risks: A cross-country perspective utilizing the Unified Theory of Acceptance and Use of Technology. *Computers in Human Behavior*, *86*, 109-128.

Christanto, H. J., Sutresno, S. A., Denny, A. N. D. R. E. W., & Dewi, C. H. R. I. S. T. I. N. E. (2023). Usability analysis of human computer interaction in google classroom and microsoft teams. *Journal of Theoretical and Applied Information Technology*, *101*(16), 6425-6425.

Cidral, W. A., Oliveira, T., Di Felice, M., & Aparicio, M. (2018). E-learning success determinants: Brazilian empirical study. *Computers & Education*, *122*, 273-290.

Cidral, W., Aparicio, M., & Oliveira, T. (2020). Students' long-term orientation role in e-learning success: A Brazilian study. *Heliyon*, *6*(12), e05735.

Cifuentes-Faura, J., Obor, D. O., To, L., & Al-Naabi, I. (2021). Cross-cultural impacts of COVID-19 on higher education learning and teaching practices in Spain, Oman, Nigeria and Cambodia: A cross-cultural study. *Journal of University Teaching & Learning Practice*, *18*(5), 8.

Clark, R. C., & Mayer, R. E. (2016). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*. john Wiley & sons.

Clark, R. C., & Mayer, R. E. (2016). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*. john Wiley & sons.

Colace, F., De Santo, M., & Pietrosanto, A. (2006, October). Evaluation models for e-learning platform: an AHP approach. In *Proceedings. Frontiers in Education. 36th Annual Conference* (pp. 1-6). IEEE.

Colace, F., De Santo, M., & Vento, M. (2003, January). Evaluating on-line learning platforms: a case study. In *36th Annual Hawaii International Conference on System Sciences, 2003. Proceedings of the* (pp. 9-pp). IEEE.

Corrado, R., Khat, S., & Nhean, P. V. (2021). The Role of Cambodian Universities in Preparing Cambodia for a Digital Economy. *Digitalization and Sustainable Development*, 76-84.

Corrado, R., & Tungjan, P. (2019). How Digital Tech Can Help Fix Cambodia's Broken Education and Healthcare Systems. *E-Governance in Cambodia; Perera, C., Hör, R., Eds*, 20-39.

Corrado, R., & Tungjan, P. (2019). How Digital Tech Can Help Fix Cambodia's Broken Education and Healthcare Systems. *E-Governance in Cambodia; Perera, C., Hör, R., Eds*, 20-39.

Corrado, R., Khat, S., & Nhean, P. V. (2021). The Role of Cambodian Universisties in Preparing Cambodia for a Digital Economy. *Digitalization and Sustainable Development*, 76-84.

Costa, C., Alvelos, H., & Teixeira, L. (2012). The use of Moodle e-learning platform: a study in a Portuguese University. *Procedia Technology*, *5*, 334-343.

Coven, J., & Gupta, A. (2020). Disparities in mobility responses to COVID-19. *New York University*, *150*.

Croasmun, J. T., & Ostrom, L. (2011). Using likert-type scales in the social sciences. *Journal of adult education*, *40*(1), 19-22.

Daniels, M. M., Sarte, E., & Cruz, J. D. (2019, February). Students' perception on e-learning: a basis for the development of e-learning framework in higher education institutions. In *IOP Conference Series: Materials Science and Engineering* (Vol. 482, No. 1, p. 012008). IOP Publishing.

Das, M. A. 5. Various E-Learning Platforms And Their Uses, Challenges, And Solutions. *Problems & Remedies*, 42.

de Brey, C., Snyder, T. D., Zhang, A., & Dillow, S. A. (2021). Digest of Education Statistics 2019. NCES 2021-009. *National Center for Education Statistics*.

DeLone, W. H., & McLean, E. R. (2016). Information systems success measurement. *Foundations and Trends® in Information Systems*, *2*(1), 1-116.

Delors, J., Chung, F., Geremek, B., Gorham, W., Kornhauser, A., Manley, M., ... & Nanzhao, Z. (1996). Relatório para a UNESCO da Comissão Internacional sobre Educação para o século XXI. *Educação um tesouro a descobrir*, *6*.

Deng, R., Benckendorff, P., & Gannaway, D. (2019). Progress and new directions for teaching and learning in MOOCs. *Computers & Education*, *129*, 48-60.

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of marketing research*, *28*(3), 307-319.

Ebner, M., Schön, S., Braun, C., Ebner, M., Grigoriadis, Y., Haas, M., ... & Taraghi, B. (2020). COVID-19 epidemic as E-learning boost? Chronological development and effects at an Austrian university against the background of the concept of "E-Learning Readiness". *Future Internet*, *12*(6), 94.

Elumalai, K. V., Sankar, J. P., Kalaichelvi, R., John, J. A., Menon, N., Alqahtani, M. S. M., & Abumelha, M. A. (2021). Factors affecting the quality of e-learning during the COVID-19 pandemic from the perspective of higher education students. *COVID-19 and Education: Learning and Teaching in a Pandemic-Constrained Environment*, *189*.

Ferdianto, F. (2019, October). Learning Management System (LMS) schoology: Why it's important and what it looks like. In *Journal of Physics: Conference Series* (Vol. 1360, No. 1, p. 012034).

Fernández, A. R., González, F. S., Merino, P. J. M., & Kloos, C. D. (2017). A Data Collection Experience with Canvas LMS as a Learning Platform. In *LASI-SPAIN* (pp. 109-123).

Fidani, A., & Idrizi, F. (2012). Investigating students' acceptance of a learning management system in university education: a structural equation modeling approach. *ICT Innovations 2012 Web Proceedings*, *2*(23), 311-320.

Friesen, N. (2009). Open educational resources: New possibilities for change and sustainability. *International Review Of Research In Open And Distributed Learning*, *10*(5).

Gopal, R., Singh, V., & Aggarwal, A. (2021). Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19. *Education and Information Technologies*, *26*(6), 6923-6947.

Graf-Vlachy, L., Buhtz, K., & König, A. (2018). Social influence in technology adoption: taking stock and moving forward. *Management Review Quarterly*, *68*, 37-76.

Gunasinghe, A., Hamid, J. A., Khatibi, A., & Azam, S. F. (2020). The adequacy of UTAUT-3 in interpreting academician's adoption to e-Learning in higher education environments. *Interactive Technology and Smart Education*, *17*(1), 86-106.

Guri-Rosenblit, S. (2005). 'Distance education'and 'e-learning': Not the same thing. *Higher education*, *49*(4), 467-493.

Hair, J., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th Ed.).Pearson Education International.

Hargreaves, C., Clarke, A. P., & Lester, K. R. (2022). Microsoft Teams and team performance in the COVID-19 pandemic within an NHS Trust Community Service in North-West England. *Team Performance Management: An International Journal*, *28*(1/2), 79-94.

Heng, K., & Sol, K. (2021). Online learning during COVID-19: Key challenges and suggestions to enhance effectiveness. *Cambodian Journal*, 3.

Heng, K., & Sol, K. (2021). Online learning during COVID-19: Key challenges and suggestions to enhance effectiveness. *Cambodian Journal of Educational Research*, *1*(1), 3-16.

Heng, K. (2021). COVID-19: A catalyst for the digital transformation of Cambodian education.

Heng, K. (2020). 7. COVID-19: A silver lining in the crisis for Cambodia's education sector. *Edited by Kimkong Heng Sopheap Kaing Vutha Ros Koemhong Sol*, 41.

Heng, K. Looking Ahead: Cambodia in 2022 and Beyond.

Hew, K. F., & Cheung, W. S. (2014). Students' and instructors' use of massive open online

Holmberg, B., Hrsg. Bernath, & Busch, F. W. (2005). *The evolution, principles and practices of distance education* (Vol. 11). Oldenburg: Bis.

Hooper, D., Coughlan, J. and Mullen, M. R. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit. *The Electronic Journal of Business Research Methods*, *6*(1), 53 - 60, available online at www.ejbrm.com

Huang, C. Y., & Kao, Y. S. (2015). UTAUT2 based predictions of factors influencing the technology acceptance of phablets by DNP. *Mathematical Problems in Engineering*, *2015*. courses (MOOCs): Motivations and challenges. *Educational research review*, *12*, 45-58.

Im, I., Hong, S., & Kang, M. S. (2011). An international comparison of technology adoption: Testing the UTAUT model. *Information & management*, *48*(1), 1-8.

Islam, M. A., Nur, S., & Talukder, M. S. (2021). E-learning in the time of COVID-19: Lived experiences of three university teachers from two countries. *E-Learning and Digital Media*, *18*(6), 557-580.

Jakkaew, P., & Hemrungrote, S. (2017, March). The use of UTAUT2 model for understanding student perceptions using Google classroom: A case study of introduction to information technology course. In *2017 international conference on digital arts, media and technology (ICDAMT)* (pp. 205-209). IEEE.

Jeljeli, R., Farhi, F., Setoutah, S., & Laghouag, A. (2022). Microsoft teams' acceptance for the e-learning purposes during Covid-19 outbreak: A case study of UAE. *International Journal of Data and Network Science*, *6*(3), 629-640.

Jiang, Q., Li, M., Han, W., & Yang, C. (2019). ICT promoting the improvement of education quality: Experience and practice. In *Ministerial Forum* (Vol. 158).

Jose, J., & Jose, M. B. J. (2021). Learners' Perception Of Using Microsoft Teams Predicted By Technology Acceptance Model At University Of Technology And Applied Sciences, Oman. *Webology (ISSN: 1735-188X)*, *18*(6).

Kadir, A., AlHosani, A. H., Ismail, F., & Sehan, N. (2019, September). The effect of compensation and benefits towards employee performance. In *Proceedings of the 1st Asian Conference on Humanities, Industry, and Technology for Society, ACHITS 2019, 30-31 July 2019, Surabaya, Indonesia*

Kaing, S. (2020). 14. What is needed to implement hybrid teaching and learning in Cambodian higher education. *Edited by Kimkong Heng Sopheap Kaing Vutha Ros Koemhong Sol*, 76.

Kaing, S. (2020). 14. What is needed to implement hybrid teaching and learning in Cambodian higher education. *Edited by Kimkong Heng Sopheap Kaing Vutha Ros Koemhong Sol*, 76.

Kalinkara, Y., & Talan, T. (2022). Rethinking Evaluating the Use of Distance Learning Systems in the Context of the Unified Theory of Acceptance and Use of Technology-2. *Journal of Learning for Development*, *9*(2), 229-252.

Keerio, M. U., Bajwa, M. S. B., Mugheri, N. H., Memon, R. H., Bhayo, M. A., & Samo, K. A. (2022). Evaluating Students' Perceptions of Microsoft Teams for Online Academics Improvement. *Pakistan Journal of Engineering and Technology*, *5*(1), 56-67.

Kentnor, H. E. (2015). Distance education and the evolution of online learning in the United States. *Curriculum and teaching dialogue*, *17*(1), 21-34.

Khalil, M., & Belokrys, G. (2020). OXALIC: an Open edX Advanced Learning Analytics Tool. In *2020 IEEE Learning With MOOCS (LWMOOCS)* (pp. 185-190). IEEE.

Khechine, H., Lakhal, S., Pascot, D., & Bytha, A. (2014). UTAUT model for blended learning: The role of gender and age in the intention to use webinars. *Interdisciplinary journal of E-Learning and Learning objects*, *10*(1), 33-52.

Kim, H. J., Hong, A. J., & Song, H. D. (2019). The roles of academic engagement and digital readiness in students' achievements in university e-learning environments. *International Journal of Educational Technology in Higher Education*, *16*(1), 1-18.

Kiselev, B., & Yakutenko, V. (2020). An overview of massive open online course platforms: personalization and semantic web technologies and standards. *Procedia Computer Science*, *169*, 373-379.

KOICA, (2020). Korea International Cooperation Agency. Summery on Cambodia ICT Master Plan 2020.

Krouska, A., Troussas, C., & Virvou, M. (2017, August). Comparing LMS and CMS platforms supporting social e-learning in higher education. In *2017 8th International Conference on Information, Intelligence, Systems & Applications (IISA)* (pp. 1-6). IEEE.

Kumar, J. A., & Bervell, B. (2019). Google Classroom for mobile learning in higher education: Modelling the initial perceptions of students. *Education and Information Technologies*, *24*(2), 1793-1817.

Lanvin, B., & Monteiro, F. (2020). The global talent competitiveness index 2020: Global talent in the age of artificial intelligence. *Global Urban Talent Competitiveness Index Report*, 69-78.

Laurencia, K., & Sudarto, S. (2021, August). Intention to use microsoft teams in the online learning system for students of Universitas Tarumanagara during the COVID-19 pandemic. In *International Conference on Economics, Business, Social, and Humanities (ICEBSH 2021)* (pp. 748-754). Atlantis Press.

Lima, M. & Baudier, P. (2017). Business Model Canvas Acceptance among French Entrepreneurship Students: Principles for Enhancing Innovation Artefacts in

Business Education. *Journal of Innovation Economics & Management*, 23, 159-183. https://doi.org/10.3917/jie.pr1.0008

Limayem, M., Hirt, S. G., & Cheung, C. M. (2007). How habit limits the predictive power of intention: The case of information systems continuance. *MIS quarterly*, 705-737.

Liu, Y., & Wang, H. (2009). A comparative study on e-learning technologies and products: from the East to the West. *Systems Research and Behavioral Science: The Official Journal of the International Federation for Systems Research*, *26*(2), 191-209.

Locard, H., & Ang, T. (2010). Higher education in Cambodia and the atypical example of the History Department at RUPP 2. *Comparative and International Education*, *39*(1).

López-Belmonte, J., Segura-Robles, A., Moreno-Guerrero, A. J., & Parra-González, M. E. (2021). Projection of e-learning in higher education: a study of its scientific production in web of science. *European Journal of Investigation in Health, Psychology and Education*, *11*(1), 20-32.

Lu, H.P., Yu, H.J., & Liu, J.Y. (2016). Influence of trust on customer acceptance of online peer-to-peer accommodation platforms: An integrated model. *International Journal of Hospitality Management*, 55, 70-81.

Ma, D., & Kauffman, R. J. (2014). Competition between software-as-a-service vendors. *IEEE Transactions on Engineering Management*, *61*(4), 717-729.

Maldonado, Paola Torres U., Feroz Khan, G., Moon, J., & Jeung Rho, J. (2011). E-learning motivation and educational portal acceptance in developing countries. *Online Information Review*, *35*(1), 66-85.

Maphosa, V. (2021). Factors influencing student's perceptions towards e-learning adoption during COVID-19 pandemic: A developing country context. *European Journal of Interactive Multimedia and Education*, *2*(2), e02109.

Masadeh, R. E., Almajali, D., Alrowwad, A. A., Alkhawaldeh, R., Khwaldeh, S., & Obeid, B. (2023). Evaluation of factors affecting university students' satisfaction with e-learning systems used dur-ing Covid-19 crisis: A field study in Jordanian higher education institutions. *International Journal of Data and Network Science*, *7*(1), 199-214.

Mehta, A., Morris, N. P., Swinnerton, B., & Homer, M. (2019). The influence of values on E-learning adoption. *Computers & Education*, *141*, 103617.

Mehta, A., Morris, N. P., Swinnerton, B., & Homer, M. (2019). The influence of values on E-learning adoption. *Computers & Education*, *141*, 103617.

Merhi, M., Hone, K., & Tarhini, A. (2019). A cross-cultural study of the intention to use mobile banking between Lebanese and British consumers: Extending UTAUT2 with security, privacy and trust. Technology in Society, 59, 101151.

Merino, P. J. M., Kloos, C. D., Seepold, R., & García, R. M. C. (2006, October). Rating the importance of different LMS functionalities. In *Proceedings. Frontiers in Education. 36th Annual Conference* (pp. 13-18). IEEE.

Merino, P. J. M., Kloos, C. D., Seepold, R., & García, R. M. C. (2006, October). Rating the importance of different LMS functionalities. In *Proceedings. Frontiers in Education. 36th Annual Conference* (pp. 13-18). IEEE.

Miftarević, S. B., & Paliaga, M. (2021). THE ROLE OF TRUST AND WORK RELATIONSHIP SATISFACTION ON PROJECT OUTCOMES. *Tourism in Southern and Eastern Europe...*, *6*, 69-79.

Misko, J., Choi, J., Hong, S. Y., & Lee, I. S. (2004). E-Learning in Australia and Korea: Learning from Practice. *National Centre for Vocational Education Research (NCVER)*.

Mohd Satar, N. S., Morshidi, A. H., & Dastane, D. O. (2020). Success factors for e-Learning satisfaction during COVID-19 pandemic lockdown. *International Journal of Advanced Trends in Computer Science and Engineering, ISSN*, 2278-3091.

Moorthy, K., Yee, T. T., T'ing, L. C., & Kumaran, V. V. (2019). Habit and hedonic motivation are the strongest influences in mobile learning behaviours among higher education students in Malaysia. *Australasian Journal of Educational Technology*, *35*(4).

MoEYS, (2021) Cambodia Secondary Education Blueprint 2030 (CAMSEB), *p. 11* https://planipolis.iiep.unesco.org/sites/default/files/ressources/cambodia-secondary-education-blueprint-2030-english.pdf

Moya, M., Nakalema, S. E., & Nansamba, C. (2018). Behavioural intention: Mediator of effort expectancy and actual system usage. *ORSEA JOURNAL*, *7*(1).

M. Piotrowski, what is an e-learning platform in Learning management system technologies and software solutions for online teaching: tools and applications. I. Global, Editor, 2010.

Muangmee, C., Kot, S., Meekaewkunchorn, N., Kassakorn, N., Tiranawatananun, S., & Khalid, B. (2021). Students' use behavior towards e-learning tools during COVID-19 pandemics: Case study of higher educational institutions of Thailand. *Int J Eval & Res Educ ISSN*, *2252*(8822), 1167.

Mueller, R. O., & Hancock, G. R. (2001). Factor analysis and latent structure, confirmatory.

Mueller, R. O., & Hancock, G. R. (2018). Structural equation modeling. In *The reviewer's guide to quantitative methods in the social sciences* (pp. 445-456). Routledge.

Navarro, D. J., & Foxcroft, D. R. (n.d.). Confirmatory Factor Analysis — Learning statistics with jamovi. Retrieved August 14, 2023, from https://lsj.readthedocs.io/en/latest/Ch15/Ch15_FactorAnalysis_3.html

Nawaz, A. (2012). E-Learning experiences of HEIs in advanced states, developing countries and Pakistan. *Universal Journal of Education and General Studies*, *1*(3), 72-83.

Neuwirth, M. M., Mattner, F., & Otchwemah, R. (2020). Adherence to personal protective equipment use among healthcare workers caring for confirmed COVID-19 and alleged non-COVID-19 patients. *Antimicrobial Resistance & Infection Control*, *9*(1), 1-5.

Ngampornchai, A., & Adams, J. (2016). Students' acceptance and readiness for E-learning in Northeastern Thailand. *International Journal of Educational Technology in Higher Education*, *13*(1), 1-13.

Ngoy, M., & Say, S. Un Leafing with Bunry Rinna, Chheng Sokunthy and Kao Sovansophal. 2019. *Governance in Public Higher Education in Cambodia*.

Nordhoff, S., Louw, T., Innamaa, S., Lehtonen, E., Beuster, A., Torrao, G., ... & Merat, N. (2020). Using the UTAUT2 model to explain public acceptance of conditionally automated (L3) cars: A questionnaire study among 9,118 car drivers from eight European countries. *Transportation research part F: traffic psychology and behaviour*, *74*, 280-297.

Norman, G. (2010). Likert scales, levels of measurement and the "laws" of statistics. Advances in Health Sciences Education, 15(5), 625-632.

Oliveira, P. C. D., Cunha, C. J. C. D. A., & Nakayama, M. K. (2016). Learning Management Systems (LMS) and e-learning management: an integrative review and research agenda. *JISTEM-Journal of Information Systems and Technology Management*, *13*, 157-180.

Omoda-Onyait, G., & Lubega, J. T. (2011, August). E-learning readiness assessment model: A case study of higher institutions of learning in Uganda. In *International conference on hybrid learning* (pp. 200-211). Springer, Berlin, Heidelberg.

Osei, H. V., Kwateng, K. O., & Boateng, K. A. (2022). Integration of personality trait, motivation and UTAUT 2 to understand e-learning adoption in the era of COVID-19 pandemic. *Education and Information Technologies*, 1-26.

Padilla, M. A., & Divers, J. (2016). A Comparison of Composite Reliability Estimators: Coefficient Omega Confidence Intervals in the Current Literature. *Educational and psychological measurement, 76*(3), 436–453. https://doi.org/10.1177/0013164415593776

Padilla-Meléndez, A., Garrido-Moreno, A., & Del Aguila-Obra, A. R. (2008). Factors affecting e-collaboration technology use among management students. *Computers & Education*, *51*(2), 609-623.

Pal, D., & Vanijja, V. (2020). Perceived usability evaluation of Microsoft Teams as an online learning platform during COVID-19 using system usability scale and technology acceptance model in India. *Children and youth services review*, *119*, 105535.

Palau-Saumell, R., Forgas-Coll, S., Sánchez-García, J., & Robres, E. (2019). User acceptance of mobile apps for restaurants: An expanded and extended UTAUT-2. *Sustainability*, *11*(4), 1210.

Phal, C., Chankoulika, B., & Ryuto, M. (2022). *Cambodian Secondary School Teachers' Readiness for Online Teaching During the Covid-19 Pandemic* (No. 134). CDRI Working Paper Series.

Pham, C., Vu, N., & Tran, G. (2020). The role of e-learning service quality and e-trust on e-loyalty. *Management Science Letters*, *10*(12), 2741-2750.

Poston, J., Apostel, S., & Richardson, K. (2020). Using microsoft teams to enhance engagement and learning with any class: It's fun and easy.

Puriwat, W., & Tripopsakul, S. (2021). The impact of e-learning quality on student satisfaction and continuance usage intentions during covid-19. *International Journal of Information and Education Technology*, *11*(8), 368-374.

Purwani, F., & Rukun, K. (2017, October). A review of cloud learning management system (CLMS) based on software as a service (SaaS). In *2017 International Conference on Electrical Engineering and Informatics (ICELTICs)* (pp. 205-210). IEEE.

Radha, R., Mahalakshmi, K., Kumar, V. S., & Saravanakumar, A. R. (2020). E-Learning during lockdown of Covid-19 pandemic: A global perspective. *International journal of control and automation*, *13*(4), 1088-1099.

Rahi, S., Mansour, M. M. O., Alghizzawi, M., & Alnaser, F. M. (2019). Integration of UTAUT model in internet banking adoption context: The mediating role of performance expectancy and effort expectancy. *Journal of Research in Interactive Marketing*.

Rahnev, A., Pavlov, N., & Kyurkchiev, V. (2014). Distributed Platform for e-Learning–DisPeL. *European International Journal of Science and Technology (EIJST)*, *3*(1), 95-109.

Rajeh, M. T., Abduljabbar, F. H., Alqahtani, S. M., Waly, F. J., Alnaami, I., Aljurayyan, A., & Alzaman, N. (2021). Students' satisfaction and continued intention toward e-learning: A theory-based study. *Medical education online*, *26*(1), 1961348.

Raman, A., & Thannimalai, R. (2021). Factors Impacting the Behavioural Intention to Use E-learning at Higher Education amid the Covid-19 Pandemic: UTAUT2 Model. *Psychological Science & Education*, *26*(3).

Ramkissoon, P., Belle, L. J., & Bhurosy, T. (2020). Perceptions and Experiences of Students on the Use of Interactive Online Learning Technologies in Mauritius. *International Journal of Evaluation and Research in Education*, *9*(4), 833-839.

Rao, C. R., Miller, J. P., & Rao, D. C. (2011). *Essential statistical methods for medical statistics*. In Handbook of Statistics: Epidemiology and Medical Statistics (pp. 1-351). Elsevier Inc.

Richardson, J. W. (2011). Challenges of adopting the use of technology in less developed countries: The case of Cambodia. *Comparative Education Review*, *55*(1), 008-029.

Riffai, M. M. M. A., Grant, K., & Edgar, D. (2012). Big TAM in Oman: Exploring the promise of on-line banking, its adoption by customers and the challenges of banking in Oman. *International journal of information management*, *32*(3), 239-250.

Rovira, M. P. (2020). Digital Political Participation and the Digital Divide: Insights from the Cambodia Case. *MJIR| Malaysian Journal of International Relations*, *8*(1), 66-86.

Rudhumbu, N. (2022). Applying the UTAUT2 to predict the acceptance of blended learning by university students. *Asian Association of Open Universities Journal*, *17*(1), 15-36.

Ruiz, J. G., Mintzer, M. J., & Leipzig, R. M. (2006). The impact of e-learning in medical education. *Academic medicine*, *81*(3), 207-212.

Ry Sochan. (2020, March 18). *Students get free e-education app*. The Phnom Penh Post. https://www.phnompenhpost.com/national/students-get-free-e-education-app

Saeed Al-Maroof, R., Alhumaid, K., & Salloum, S. (2021). The continuous intention to use e-learning, from two different perspectives. *Education Sciences*, *11*(1), 6.

Salloum, S. A., & Shaalan, K. (2018, September). Factors affecting students' acceptance of e-learning system in higher education using UTAUT and structural equation modeling approaches. In *International Conference on Advanced Intelligent Systems and Informatics* (pp. 469-480). Springer, Cham.

Salloum, S. A., & Shaalan, K. (2018, September). Factors affecting students' acceptance of e-learning system in higher education using UTAUT and structural equation modeling approaches. In *International Conference on Advanced Intelligent Systems and Informatics* (pp. 469-480). Springer, Cham.

Salloum, S. A., & Shaalan, K. (2018, September). Factors affecting students' acceptance of e-learning system in higher education using UTAUT and structural equation modeling approaches. In *International Conference on Advanced Intelligent Systems and Informatics* (pp. 469-480). Springer, Cham.

Sangra, A., Vlachopoulos, D., & Cabrera, N. (2015). Building an inclusive definition of e-learning: An approach to the conceptual framework. *International Review of Research in Open and Distributed Learning,* 16(1), 232-258.

Sanyal, B. C. (2001). New functions of higher education and ICT to achieve education for all.

Saunders-Wyndham, J. (2022). *Teacher beliefs about online learning during COVID-19: an application of the UTAUT2 model* (Doctoral dissertation, Macquarie University).

Sen, V., & Ros, S. (2013). Anatomy of higher education governance in Cambodia. Nguon, S. (2015). Information, communication and technology and higher education in Cambodia. *Human Behavior, Development and Society*, *11*(1), 58-63.

Sfenrianto, S., Tantrisna, E., Akbar, H., & Wahyudi, M. (2018). E-Learning effectiveness analysis in developing countries: East Nusa Tenggara, Indonesia perspective. *Bulletin of Electrical Engineering and Informatics*, *7*(3), 417-424.

Siemens, G. (2014). Where is research on massive open online courses headed? A data analysis of the MOOC Research Initiative. *International Review of Research in Open and Distributed Learning*, *15*(5), 134-176.

Singh, M., & Matsui, Y. (2017). How long tail and trust affect online shopping behavior: An extension to UTAUT2 framework. *Pacific Asia Journal of the Association for Information Systems*, *9*(4), 2.

Siritongthaworn, S., Krairit, D., Dimmitt, N. J., & Paul, H. (2006). The study of e-learning technology implementation: A preliminary investigation of universities in Thailand. *Education and Information Technologies*, *11*(2), 137-160.

Smoliński, P., Szostakowski, M., & Winiarski, J. (2023). E-learning software: comparing the use behavior among academicians and schoolteachers. *Electronic Journal of e-Learning*, *21*(2).

Sok, S., Un, L., & Bunry, R. (2019). Governance in "public administrative institution" universities: Towards public autonomous universities in Cambodia? In *The Governance and Management of Universities in Asia* (pp. 5-20). Routledge.

Steer, K., Garg, L., Layfield, C., & Borg, J. Assessment in e-Learning for Higher Education.

Steer, K., Garg, L., Layfield, C., & Borg, J. Assessment in e-Learning for Higher Education.

Subramanian, P., Zainuddin, N., Alatawi, S., Javabdeh, T., & Hussin, A. (2014). A study of comparison between Moodle and Blackboard based on case studies for better LMS. *Journal of Information Systems Research and Innovation*, *6*, 26-33.

Sudarsana, I. K., Putra, I. B. M. A., Astawa, I. N. T., & Yogantara, I. W. L. (2019, March). The use of Google classroom in the learning process. In *Journal of Physics: Conference Series* (Vol. 1175, No. 1, p. 012165). IOP Publishing.

Suwarno, S. (2022). Application of the UTAUT Model for Acceptance Analysis of COBIT Implementation in E-Learning Management with Microsoft Teams on Distance Learning in Batam City. *Khazanah Informatika: Jurnal Ilmu Komputer dan Informatika*, *8*(1), 25-33.

Suzuki, K. (2009). E-learning in Japan: Past, present, and future. *Proceedings, pp*, *9*, 17.

Tamilmani, K., Rana, N. P., Wamba, S. F., & Dwivedi, R. (2021). The extended Unified Theory of Acceptance and Use of Technology (UTAUT2): A systematic literature review and theory evaluation. *International Journal of Information Management*, *57*, 102269.

Tan, C., Casanova, D., Huet, I., & Alhammad, M. (2022). Online collaborative learning using microsoft teams in higher education amid COVID-19. *International Journal of Mobile and Blended Learning (IJMBL)*, *14*(1), 1-18.

Tann, B., & Tuy, S. (2021). Gendered Impacts of COVID-19 on Higher Education in Cambodia: Perspectives of Female Lecturers and Students. *Project team*.

Tarhini, A., Masa'deh, R. E., Al-Busaidi, K. A., Mohammed, A. B., & Maqableh, M. (2017). Factors influencing students' adoption of e-learning: A structural equation modeling approach. *Journal of International Education in Business*, *10*(2), 164-182.

Tarka, P. (2018). An overview of structural equation modeling: its beginnings, historical development, usefulness and controversies in the social sciences. *Quality & quantity*, *52*(1), 313-354.

Toma, I., Cotet, T. M., Dascalu, M., & Trausan-Matu, S. (2019). ReadME–a system for automated writing evaluation and learning management. *International Journal of User-System Interaction*, *12*(2), 99-119.

Tominaga, A., & Kogo, C. (2018). Attributes of good e-learning mentors according to learners. *Universal Journal of Educational Research*, *6*(8), 1777-1783.

Tseng, T. H., Lin, S., Wang, Y. S., & Liu, H. X. (2019). Investigating teachers' adoption of MOOCs: the perspective of UTAUT2. *Interactive Learning Environments*, 1-16.

Un, L., & Sok, S. (2016). *Higher education governance in Cambodia*. Ministry of Education, Youth, and Sport.

Un, L., & Sok, S. (2018). Higher education systems and institutions, Cambodia. *Higher Education*, *70*, 80.

Utomo, P., Kurniasari, F., & Purnamaningsih, P. (2021). The effects of performance expectancy, effort expectancy, facilitating condition, and habit on behavior intention in using mobile healthcare application. *International Journal of Community Service & Engagement*, *2*(4), 183-197.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.

Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 157-178.

Waller, R. E., Lemoine, P. A., Mense, E. G., & Richardson, M. D. (2019). Higher education in search of competitive advantage: Globalization, technology and e-learning. *International Journal of Advanced Research and Publications*, *3*(8), 184-190.

Wang, J., & Wang, X. (2019). *Structural equation modeling: Applications using Mplus*. John Wiley & Sons.

Wang, Y., Liu, X., & Zhang, Z. (2018). An overview of e-learning in China: History, challenges and opportunities. *Research in Comparative and International Education*, *13*(1), 195-210.

Watson, W. R., Kim, W., & Watson, S. L. (2016). Learning outcomes of a MOOC designed for attitudinal change: A case study of an Animal Behavior and Welfare MOOC. *Computers & Education*, *96*, 83-93.

Wentling, T. L., Waight, C., Strazzo, D., File, J., La Fleur, J., & Kanfer, A. (2000). The future of e-learning: A corporate and an academic perspective. *Knowledge and Learning Systems Group University of Illinois At Urbana-Champaign*.

Widjaja, H. A. E., Santoso, S. W., & Petrus, S. (2019, August). The enhancement of learning management system in teaching learning process with the UTAUT2 and trust model. In *2019 International Conference on Information Management and Technology (ICIMTech)* (Vol. 1, pp. 309-313). IEEE.

Willems, J., Farley, H., & Campbell, C. (2019). The increasing significance of digital equity in higher education. *Australasian Journal of Educational Technology*, *35*(6), 1-8.

Zacharis, G., & Nikolopoulou, K. (2022). Factors predicting University students' behavioral intention to use eLearning platforms in the post-pandemic normal: an UTAUT2 approach with 'Learning Value'. *Education and Information Technologies*, 1-18.

Zarei, S., & Mohammadi, S. (2022). Challenges of higher education related to e-learning in developing countries during COVID-19 spread: a review of the perspectives of students, instructors, policymakers, and ICT experts. *Environmental Science and Pollution Research*, *29*(57), 85562-85568.

Zhu, M., Bonk, C. J., & Sari, A. R. (2018). Instructor Experiences Designing MOOCs in Higher Education: Pedagogical, Resource, and Logistical Considerations and Challenges. *Online Learning*, *22*(4), 203-24

APPENDIX A

UTAUT2 questionnaire for Microsoft Teams Acceptance

Please read the following statements and indicate your level of agreement or disagreement on a scale of 1 to 5 based on your experience using the Microsoft Teams platform in the course of your study. 1 indicating a significant disagree and 5 indicating a strong agree.

Code	Item of Performance Expectancy	1	2	3	4	5
PE1	Using Microsoft Teams for my learning increasing productivity.					
PE2	Using Microsoft Teams helpful to my study.					
PE3	Using Microsoft Teams enhancement of my knowledge for e-learning.					
PE4	Microsoft Teams is usefulness for my study at RULE.					
Code	**Item of Effort Expectancy**	**1**	**2**	**3**	**4**	**5**
EE1	Learning how to use Microsoft Teams is easy for me.					
EE2	It is easy for me to become skillful to use Microsoft Teams in my study.					
EE3	My interaction in Microsoft Teams system is clear and understanding.					
EE4	It is not taken long time to learn about Microsoft Teams system in my study.					
Code	**Item of Social Influence**	**1**	**2**	**3**	**4**	**5**
SI1	People who are important to me think that I should use Microsoft Teams for my study.					
SI2	Most of my friends think that I should use Microsoft Teams platform for my study.					
SI3	Most of people around me are using Microsoft Teams platform for their study.					
SI4	Most of my classmate tell me to use Microsoft Teams platform for my study.					
Code	**Item of Facilitating Condition**	**1**	**2**	**3**	**4**	**5**
FC1	I have resources enough to use Microsoft Teams platform for my study.					
FC2	I have knowledge necessary to use Microsoft Teams platform for my study.					
FC3	I get help from others when I have some difficult of using Microsoft Teams.					
FC4	The internet access enough to Microsoft Teams for my study.					
Code	**Item of Hedonic Motivation**	**1**	**2**	**3**	**4**	**5**

HM1	Using Microsoft Teams for my study is fun.					
HM2	Using Microsoft Teams in my study is enjoyable.					
HM3	Using Microsoft Teams in my study is very entertaining.					
HM4	I feel excited to use Microsoft Teams platform in my study.					
Code	**Item of Price Value**	**1**	**2**	**3**	**4**	**5**
PV1	Microsoft Teams platform is reasonably prices to use for my study.					
PV2	Microsoft Teams is a good value for my study at RULE.					
PV3	Microsoft Teams platform provide a very good value to me.					
PV4	I can save money when I use Microsoft Teams for my study.					
Code	**Item of Habit**	**1**	**2**	**3**	**4**	**5**
H1	The use of Microsoft Teams has become a habit for me.					
H2	I am very addicted to using Microsoft Teams in my study.					
H3	I must use Microsoft Teams for my study.					
H4	Using the Microsoft Team has become natural to me.					
Code	**Item of Behavior Intention**	**1**	**2**	**3**	**4**	**5**
BI1	I intend to continue using the Microsoft Teams in the future.					
BI2	I will always try to use the Microsoft Teams in my study for daily life.					
BI3	I plan to continue to use the Microsoft Teams frequently.					
BI4	I will keep using Microsoft Teams as I am doing now.					
Code	**Item of Trust**	**1**	**2**	**3**	**4**	**5**
T1	I believe that Microsoft Teams is trustworthy.					
T2	I trust in Microsoft Teams platform for e-learning.					
T3	I do not doubt the honesty of the Microsoft Team in my study.					
T4	Microsoft Teams have ability to fulfill its task.					
Code	**Item of Satisfaction**	**1**	**2**	**3**	**4**	**5**
ST1	I am very content with Microsoft Teams system at RULE.					
ST2	I am very pleased with Microsoft Teams system at RULE.					
ST3	I am satisfied with Microsoft Teams system at RULE.					
ST4	I felt delighted with Microsoft Teams system at RULE.					

APPENDIX B

UTAUT2 questionnaire and interview questions for Microsoft Teams Platform at RULE (Translated to Khmer Language)

Please read the following statements and indicate your level of agreement or disagreement on a scale of 1 to 5 based on your experience using the Microsoft Teams platform in the course of your study. 1 indicating a significant disagree and 5 indicating a strong agree.

Corrected for Translation from English to Khmer

Code	Item of Performance Expectancy ការរំពឹងទុកនៃការអនុវត្ត	1	2	3	4	5
PE1	Using Microsoft Teams for my learning increases productivity. ការប្រើប្រាស់កម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារៀនសូត្ររបស់ខ្ញុំ បង្កើនផលិតភាព និងគុណភាពសិក្សា					
PE2	Using Microsoft Teams helpful to my studies. ការប្រើប្រាស់ Microsoft Teams ជួយច្រើនក្នុងការបំពេញការសិក្សារបស់ខ្ញុំ					
PE3	Using Microsoft Teams enhancement of my knowledge for e-learning. ការប្រើប្រាស់ Microsoft Teams បង្កើនចំណេះដឹងរបស់ខ្ញុំសម្រាប់ការរៀនតាមប្រព័ន្ធអេឡិចត្រូនិក (e-Learning)					
PE4	Microsoft Teams is usefulness for my studies at RULE កម្មវិធី Microsoft Teams. មានប្រយោជន៍សម្រាប់ការសិក្សារបស់ខ្ញុំនៅ RULE					

Code	Item of Effort Expectancy ការខិតខំនៃការប្រើប្រាស់	1	2	3	4	5
EE1	Learning how to use Microsoft Teams is easy for me. ការរៀនពីរបៀបប្រើប្រាស់កម្មវិធី Microsoft Teams គឺងាយស្រួលសម្រាប់ខ្ញុំ					
EE2	It is easy for me to become skillful to use Microsoft Teams in my study. វាងាយស្រួលសម្រាប់ខ្ញុំក្នុងការក្លាយជាអ្នកជំនាញលើការប្រើប្រាស់កម្មវិធី Microsoft Team ក្នុងការសិក្សារបស់ខ្ញុំ					
EE3	My interaction in Microsoft Team system is clear and understanding. អន្តរកម្មនៃការប្រើប្រាស់របស់ខ្ញុំនៅក្នុងប្រព័ន្ធកម្មវិធី Microsoft Teams គឺច្បាស់លាស់ និងងាយស្រួលយល់					
EE4	It is not taken long time to learn about Microsoft Teams system in my study. វាមិនចំណាយពេលយូរដើម្បីសិក្សាអំពីប្រព័ន្ធកម្មវិធី Microsoft Teams នៅក្នុងការសិក្សារបស់ខ្ញុំ					
Code	**Item of Social Influence កត្តានៃឥទ្ធិពលសង្គម**	**1**	**2**	**3**	**4**	**5**
SI1	People who are important to me think that I should use Microsoft Teams for my study. មនុស្សដែលសំខាន់សម្រាប់ខ្ញុំ គិតថាខ្ញុំគួរប្រើកកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ					
SI2	Most of my friends think that I should use Microsoft Teams platform for my study.					

	មិត្តភ័ក្តិរបស់ខ្ញុំភាគច្រើនគិតថាខ្ញុំគួរតែប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ					
SI3	Most of people around me are using Microsoft Teams platform for their study. មនុស្សភាគច្រើននៅជុំវិញខ្ញុំកំពុងប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ពួកគេ					
SI4	Most of my classmate tell me to use Microsoft Teams platform for my study. មិត្តរួមថ្នាក់របស់ខ្ញុំភាគច្រើនប្រាប់ខ្ញុំឱ្យប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ					
Code	**Item of Facilitating Condition** **លក្ខខណ្ឌសម្របសម្រួល**	**1**	**2**	**3**	**4**	**5**
FC1	I have resources enough to use Microsoft Teams platform for my study. ខ្ញុំមានធនធានគ្រប់គ្រាន់ដើម្បីប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ					
FC2	I have knowledge necessary to use Microsoft Teams platform for my study. ខ្ញុំមានចំណេះដឹងគ្រប់គ្រាន់ចាំបាច់ក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ					
FC3	I get help from others when I have some difficult of using Microsoft Teams. ខ្ញុំទទួលបានជំនួយពីអ្នកដទៃនៅពេលដែលខ្ញុំមានការលំបាកក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams					
FC4	The internet access enough to Microsoft Teams for my study.					

	ប្រព័ន្ធអ៊ីនធឺណេតមានទំហំគ្រប់គ្រាន់ក្នុងការប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ					
Code	**Item of Hedonic Motivation** **កត្តាជំរុញលើកទឹកចិត្ត**	**1**	**2**	**3**	**4**	**5**
HM1	Using Microsoft Teams for my study is fun. ការប្រើប្រាស់កម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំគឺសប្បាយណាស់					
HM2	Using Microsoft Teams in my study is enjoyable. ការប្រើប្រាស់កម្មវិធី Microsoft Teams ក្នុងការសិក្សារបស់ខ្ញុំគឺពេញចិត្ត					
HM3	Using Microsoft Teams in my study is very entertaining. ការប្រើប្រាស់ Microsoft Teams. ក្នុងការសិក្សារបស់ខ្ញុំគឺពិតជាសប្បាយរីករាយជាមួយមិត្តភ័ក្រទាំងអស់					
HM4	I feel excited to use the Microsoft Teams platform in my study. ខ្ញុំមានអារម្មណ៍រំភើបចិត្តក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams នៅក្នុងការសិក្សារបស់ខ្ញុំ					
Code	**Item of Price Value** **គុណតម្លៃ**	**1**	**2**	**3**	**4**	**5**
PV1	Microsoft Teams platform is reasonably prices to use for my study. ទម្រង់នៃកម្មវិធី Microsoft Teams មានតម្លៃ សមរម្យក្នុងការប្រើប្រាស់សម្រាប់ការសិក្សារបស់ខ្ញុំ					
PV2	Microsoft Teams is a good value for my study at RULE.					

	ទម្រង់នៃកម្មវិធី Microsoft Teams គឺជាគុណតម្លៃដ៏ល្អសម្រាប់ការសិក្សារបស់ខ្ញុំនៅ RULE					
PV3	Microsoft Teams platform provide a very good value to me ទម្រង់នៃកម្មវិធី Microsoft Teams. ផ្តល់នូវតម្លៃដ៏ល្អសម្រាប់ខ្ញុំផ្ទាល់					
PV4	I can save money when I use Microsoft Teams for my study ខ្ញុំអាចសន្សំលុយបាននៅពេលខ្ញុំប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ					
Code	**Item of Habit** **ទម្លាប់**	**1**	**2**	**3**	**4**	**5**
H1	The use of Microsoft Teams has become a habit for me. ការប្រើប្រាស់ Microsoft Teams បានក្លាយជាទម្លាប់សម្រាប់ខ្ញុំ					
H2	I am very addicted to using Microsoft Teams in my studies. ខ្ញុំជក់ចិត្តនឹងការប្រើប្រាស់ Microsoft Teams ក្នុងការសិក្សារបស់ខ្ញុំ					
H3	I must use Microsoft Teams for my studies. ខ្ញុំត្រូវតែប្រើ Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ					
H4	Using Microsoft Teams has become natural to me. ការប្រើប្រាស់កម្មវិធី Microsoft Team បានក្លាយជាទម្លាប់សម្រាប់ខ្ញុំហើយ					
Code	**Item of Behavior Intention** **ចេតនាក្នុងអាកប្បកិរិយានៃការប្រើប្រាស់**	**1**	**2**	**3**	**4**	**5**

BI1	I intend to continue using Microsoft Teams in the future. ខ្ញុំមានបំណងបន្តប្រើប្រាស់កម្មវិធី Microsoft Teams នាពេលអនាគត					
BI2	I will always try to use Microsoft Teams in my studies and daily life. ខ្ញុំនឹងព្យាយាមប្រើប្រាស់ Microsoft Teams ក្នុង ការសិក្សារបស់ខ្ញុំសម្រាប់ជីវិតប្រចាំថ្ងៃ					
BI3	I plan to continue to use Microsoft Teams frequently ខ្ញុំមានគម្រោងបន្តប្រើប្រាស់ Microsoft Teams ឱ្យបានញឹកញាប់					
BI4	I will keep using Microsoft Teams as I am doing now. ខ្ញុំនឹងបន្តប្រើប្រាស់ Microsoft Teams ដូចដែលខ្ញុំកំពុង ធ្វើឥឡូវនេះ					
Code	**Item of Trust** **ទំនុកចិត្ត**	**1**	**2**	**3**	**4**	**5**
T1	I believe that Microsoft Teams is trustworthy. ខ្ញុំជឿថាកម្មវិធី Microsoft Teams គឺគួរឱ្យទុកចិត្តបាន					
T2	I trust the Microsoft Teams platform for e-learning. ខ្ញុំជឿជាក់លើកម្មវិធី Microsoft Teams សម្រាប់ការរៀនតាមអេឡិចត្រូនិក					
T3	I do not doubt the honesty of Microsoft Teams in my study. ខ្ញុំមិនសង្ស័យលើកំហុសឆ្គងរបស់កម្មវិធី Microsoft Teams ក្នុងការ សិក្សារបស់ខ្ញុំទេ					

T4	Microsoft Teams has the ability to fulfill its task. កម្មវិធី Microsoft Teams មានសមត្ថភាពគ្រប់គ្រាន់ ក្នុងការបំពេញមុខងារបស់វាក្នុងកម្មវិធីសិក្សា					
Code	**Item of Satisfaction** **ភាពពេញចិត្ត**	**1**	**2**	**3**	**4**	**5**
ST1	I am very content with Microsoft Teams system at RULE. ខ្ញុំពិតជាពេញចិត្តជាមួយនឹងប្រព័ន្ធ Microsoft Teams នៅ RULE					
ST2	I am very pleased with Microsoft Teams system at RULE. ខ្ញុំទទួលយកបានការប្រើប្រាស់ប្រព័ន្ធ Microsoft Teams នៅ RULE					
ST3	I am satisfied with Microsoft Teams system at RULE. ខ្ញុំពេញចិត្តរបៀបប្រើប្រាស់ប្រព័ន្ធ Microsoft Teams នៅ RULE					
ST4	I felt delighted with Microsoft Teams system at RULE. ខ្ញុំមានអារម្មណ៍រីករាយជាមួយនឹងប្រព័ន្ធ Microsoft Teams នៅ RULE					

List	**Questions for interview lecturers**
1	How do undergraduate students in RULE adopt the Microsoft Teams learning system? តើនិស្សិតថ្នាក់បរិញ្ញាបត្រនៅ RULE ទទួលយកប្រព័ន្ធសិក្សារបស់កម្មវិធី Microsoft Teams យ៉ាងដូចម្តេច?
2	How did RULE set up the Microsoft Teams system for e-learning? What are the technical problems of e-learning via Microsoft Teams that RULE's students deal with? តើ RULE រៀបចំប្រព័ន្ធកម្មវិធី Microsoft Teams សម្រាប់ការរៀនតាមអេឡិចត្រូនិកដោយរបៀបណា? តើបញ្ហាបច្ចេកទេសអ្វីខ្លះនៃការរៀនតាមអេឡិចត្រូនិករបស់កម្មវិធី Microsoft Teams ដែលនិស្សិតនៅ RULE ជួបប្រទះ?

3	What are the difficulties for RULE students when joining an e-learning course via Microsoft Teams?តើមានការលំបាកអ្វីខ្លះសម្រាប់សិស្ស RULE អំឡុងពេលចូលរួមវគ្គសិក្សាតាម អេឡិចត្រូនិចជាមួយកម្មវិធី Microsoft Teams?
4	What are the common problems with e-learning through Microsoft Teams, both for professors and students?តើអ្វីជាបញ្ហារួមសម្រាប់សាស្ត្រាចារ្យ និងនិស្សិតក្នុងការរៀនតាមប្រព័ន្ធអេឡិចត្រូនិកតាមរយៈកម្មវិធី Microsoft Teams?
5	What are your thoughts on RULE's use of Microsoft Teams?តើអ្នកយល់យ៉ាងណាដែរចំពោះការប្រើប្រាស់កម្មវិធី Microsoft Teams នៅក្នុងការបណ្តុះបណ្តាលរបស់ RULE?
6	How would you advise improving the use of Microsoft Teams at RULE for both students and professors?តើអ្នកនឹងផ្តល់យោបល់យ៉ាងណាក្នុងការកែលម្អការប្រើប្រាស់កម្មវិធី Microsoft Teams នៅ RULE ទាំងនិស្សិត និងសាស្ត្រាចារ្យ?

APPENDIX C

UTAUT2 questionnaire for Microsoft Teams Platform at RULE

(Translated to Khmer Language)

Ph.D. in Teaching and Technology from Assumption University of Thailand's Graduate School of Business and Advanced Technology Management

Questionnaires

These questionnaires were designed by a Ph.D. student in Teaching and Technology at the Graduate School of Business and Advanced Technology Management, Assumption University of Thailand, to fulfill the academic purpose of individual research for a graduate Ph.D. study in Teaching and Technology.

កម្រងសំណួរទាំងនេះត្រូវបានរៀបចំឡើងដោយនិស្សិតថ្នាក់បណ្ឌិតផ្នែកការបង្រៀន
និងបច្ចេកវិទ្យា នៅសាលាក្រោយឧត្តមសិក្សាផ្នែកពាណិជ្ជកម្ម និងការគ្រប់គ្រងបច្ចេកវិទ្យា
កម្រិតខ្ពស់ នៃសាកលវិទ្យាល័យ Assumption ក្នុងប្រទេសថៃ ដើម្បីបំពេញគោលបំណងសិក្សា
នៃការស្រាវជ្រាវម្នាក់ៗផ្ទាល់ខ្លួនសម្រាប់បញ្ចប់ថ្នាក់បណ្ឌិតលើការបង្រៀន និងបច្ចេកវិទ្យា។

The purpose of these research questionnaires is to investigate perspectives on an e-Learning platform for higher education in Phnom Penh, Cambodia, via a case study at the Royal University of Law and Economics (RULE), specifically on the Microsoft Teams platform in RULE's e-Learning.The questionnaires are comprised of two parts, namely, demographic information and measurements of variables taken from the Unified Theory of Acceptance of Use Technology-2 (UTAUT-2).

គោលបំណងនៃកម្រងសំណួរស្រាវជ្រាវទាំងនេះគឺដើម្បីស៊ើបអង្កេតទស្សនៈលើការប្រើប្រាស់កម្មវិ
ធីសិក្សា e-Learning សម្រាប់ឧត្តមសិក្សាក្នុងរាជធានីភ្នំពេញ ប្រទេសកម្ពុជាលើករណីសិក្សា
នៅសាកលវិទ្យាល័យភូមិន្ទនីតិសាស្ត្រ និងវិទ្យាសាស្ត្រសេដ្ឋកិច្ច (RULE) ជាពិសេសលើកម្មវិធី

សិក្សាតាម Microsoft Teams នៅក្នុង RULE។កម្រងសំណួរមានពីរផ្នែកសំខាន់ៗ គឺទី១ ព័ត៌មានប្រជាសាស្ត្រ និងទី២ការវាស់ វែងនៃអថេរដែលបានយកចេញពីទ្រឹស្តី UTAUT-2 ។

The whole questionnaire takes approximately 10 minutes to complete, so please read each question carefully and provide answers for all questions. Please be noted that your answer and the collected information will be kept confidential and interpreted for technology in education purposes, especially for e-learning platforms. Thank you very much for your kind collaboration and help in filling out the questionnaires.

សូមបញ្ជាក់ថាកម្រងសំណួរទាំងមូលចំណាយពេលវេលាប្រហែល ១០ នាទីដើម្បីបញ្ចប់ ការបំពេញ ដូច្នេះសូមបងប្អូនអានសំណួរនីមួយៗ ដោយប្រុងប្រយ័ត្ន និងផ្តល់ចម្លើយ សម្រាប់សំណួរទាំងអស់។ សូមចំណាំថាចម្លើយរបស់បងប្អូន និងព័ត៌មាន ដែលប្រមូលបាន នឹងត្រូវបានរក្សាទុកជាសម្ងាត់ និងបកស្រាយសម្រាប់តែគោលបំណងបច្ចេកវិទ្យាក្នុងការ អប់រំប៉ុណ្ណោះ ជាពិសេសសម្រាប់កម្មវិធីសិក្សាតាមប្រព័ន្ធអេឡិចត្រូនិក។ ខ្ញុំសូមថ្លែងអំណរគុណ យ៉ាងជ្រាលជ្រៅចំពោះកិច្ចសហការដ៏ល្អរបស់ បងប្អូន និងជួយក្នុងការបំពេញកម្រងសំណួរ។

Based on your experience of using the Microsoft Teams platform in your study, please read the following sentences and rate, on a scale of 1–5, how much you disagree or agree with them. 1 being "strongly disagree," and 5 being "strongly agree."

ផ្អែកលើបទពិសោធន៍របស់បងប្អូនក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams ក្នុងការសិក្សា របស់អ្នក សូមអានប្រយោគខាងក្រោម និងវាយតម្លៃលើមាត្រដ្ឋាន ពី១ ដល់៥ ថាតើអ្នកមិនយល់ស្រប ឬយល់ព្រមជាមួយពួកគេប៉ុន្មាន។ ១ គឺ "មិនយល់ស្របទាំងស្រុង" និង ៥ "យល់ស្របទាំងស្រុង" ។

Please rate your opinion of each following statement by putting a Tick (✓) in the box which mostly corresponds to your answer. A five-point Likert scale is used for measurement of variables as follows:

1=Strongly disagree, 2= Disagree, 3=Neutral, 4= Agree, 5=Strongly agree

សូមផ្តល់ជាមតិយោបល់លើសេចក្តីថ្លែងខាងក្រោមនេះដោយដាក់សញ្ញា (✓)

នៅក្នុងចន្លោះចម្លើយពី១ដល់៥ សម្រាប់ផ្នែកទី២។

១=មិនយល់ស្របទាំងស្រុង, ២= មិនយល់ស្រប, ៣ =កណ្តាល/អព្យាក្រិត, ៤=យល់ស្រប,

៥=យល់ស្របទាំងស្រុង.

Please tick only one answer

សូមដាក់សញ្ញា (✓)ទៅលើចម្លើយតែមួយគត់។

PART I: Demographic questions.ផ្នែកទី១៖កម្រងសំណួរប្រជាសាស្ត្រ

1. What is your gender? សូមបញ្ជាក់ភេទរបស់លោកអ្នក។

☐ Male ប្រុស

☐ Female ស្រី

2-What year are you studying at RULE? តើអ្នកកំពុងសិក្សាក្នុងឆ្នាំទីប៉ុន្មាននៅ RULE

☐ 1st year ឆ្នាំទី១

☐ 2nd year ឆ្នាំទី២

☐ 3rd year ឆ្នាំទី៣

☐ 4th year ឆ្នាំទី៤

3-How old are you? តើអ្នកអាយុប៉ុន្មាន?

☐ 18 to 25 years old / ចន្លោះពី១៨ ដល់ ២៥ឆ្នាំ

☐ 25 to 30 years old / ចន្លោះពី២៥ ដល់ ៣០ឆ្នាំ

☐ 30 to 35 years old / ចន្លោះពី៣០ ដល់ ៣៥ឆ្នាំ

☐ Above 35 years old / លើសពី ៣៥ឆ្នាំ

4- Do you use Microsoft Teams in your learning at RULE? តើអ្នកកំពុងប្រើប្រាស់កម្មវិធី Microsoft Teams ក្នុងការសិក្សានៅ RULE?

☐ Yes

☐ No

PART II: Measurement of Variables ផ្នែកទី២៖កម្រងសំណួរសម្រាប់វាស់វែងអថេរ

Please rate your opinion of each following statement by putting a Tick (✓) in the box which mostly corresponds to your answer. A five-point Likert scale is used for measurement of variables as follows:

1=Strongly disagree, 2= Disagree, 3=Neutral, 4= Agree, 5=Strongly agree

សូមផ្តល់ជាមតិយោបល់លើសេចក្តីថ្លែងខាងក្រោមនេះដោយដាក់សញ្ញា (✓)
នៅក្នុងចន្លោះចម្លើយពី១ដល់៥ សម្រាប់ផ្នែកទី២នេះ។
១=មិនយល់ស្របទាំងស្រុង, ២= មិនយល់ស្រប, ៣ =កណ្តាល/អព្យាក្រិត, ៤=យល់ស្រប, ៥=យល់ស្របទាំងស្រុង.

1-Item of Performance Expectancy ការរំពឹងទុកនៃការអនុវត្ត

PE1: Using Microsoft Teams for my learning increasing productivity.
ការប្រើប្រាស់កម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារៀនសូត្ររបស់ខ្ញុំបង្កើនផលិតភាព និងគុណភាពសិក្សា

☐ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប
- □ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

PE2: Using Microsoft Teams helpful to my studies. ការប្រើប្រាស់ Microsoft Teams ជួយច្រើនក្នុងការបំពេញការសិក្សារបស់ខ្ញុំ

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប
- □ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

PE3: Using Microsoft Teams as an enhancement of my knowledge for e-learning. ការប្រើប្រាស់ Microsoft Teams បង្កើនចំណេះដឹងរបស់ខ្ញុំសម្រាប់ការរៀនតាមប្រព័ន្ធអេឡិចត្រូនិក (e-Learning)

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប
- □ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

PE4: Microsoft Teams is usefulness for my studies at RULE.

កម្មវិធី Microsoft Teams មានប្រយោជន៍សម្រាប់ការសិក្សារបស់ខ្ញុំនៅ RULE

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប
- □ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

2- Item of Effort Expectancy ការខិតខំនៃការប្រើប្រាស់

EE1: Learning how to use Microsoft Teams is easy for me.

ការរៀនពីរបៀបប្រើប្រាស់កម្មវិធី Microsoft Teams គឺងាយស្រួលសម្រាប់ខ្ញុំ

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប
- □ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

EE2: It is easy for me to become skillful to use Microsoft Team in my study.

វាងាយស្រួលសម្រាប់ខ្ញុំក្នុងការក្លាយជាអ្នកជំនាញលើការប្រើប្រាស់កម្មវិធី Microsoft Team ក្នុងការសិក្សារបស់ខ្ញុំ

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

EE3: My interaction in Microsoft Teams system is clear and understanding.

អន្តរកម្មនៃការប្រើប្រាស់របស់ខ្ញុំនៅក្នុងប្រព័ន្ធកម្មវិធី Microsoft Teams គឺច្បាស់លាស់

និងងាយស្រួលយល់

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

EE4: It is not taken long time to learn about Microsoft Teams system in my studies.

វាមិនចំណាយពេលយូរដើម្បីសិក្សាអំពីប្រព័ន្ធកម្មវិធី Microsoft Teams នៅក្នុងការសិក្សារបស់ខ្ញុំ

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

3- Item of Social Influence កត្តានៃឥទ្ធិពលសង្គម

SI1: People who are important to me think that I should use Microsoft Teams for my studies.

មនុស្សដែលសំខាន់សម្រាប់ខ្ញុំ គិតថាខ្ញុំគួរប្រើកកម្មវិធី Microsoft Teams សម្រាប់ការ

សិក្សារបស់ខ្ញុំ

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

SI2: Most of my friends think that I should use Microsoft Teams platform for my studies.

មិត្តភ័ក្តិរបស់ខ្ញុំភាគច្រើនគិតថាខ្ញុំគួរតែប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

SI3: SI3-Most of people around me are using Microsoft Teams platform for their studies.

មនុស្សភាគច្រើននៅជុំវិញខ្ញុំកំពុងប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ពួកគេ

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

SI4: Most of my classmate tell me to use Microsoft Teams platform for my studies.

មិត្តរួមថ្នាក់របស់ខ្ញុំភាគច្រើនប្រាប់ខ្ញុំឱ្យប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប
- □ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

4- Item of Facilitating Condition លក្ខខណ្ឌសម្របសម្រួល

FC1: I have resources enough to use Microsoft Teams platform for my studies.

ខ្ញុំមានធនធានគ្រប់គ្រាន់ដើម្បីប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប
- □ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

FC2: I have knowledge necessary to use Microsoft Teams platform for my studies.

ខ្ញុំមានចំណេះដឹងគ្រប់គ្រាន់ចាំបាច់ក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

FC3: I get help from others when I have some difficult of using Microsoft Teams.
ខ្ញុំទទួលបានជំនួយពីអ្នកដទៃនៅពេលដែលខ្ញុំមានការលំបាកក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

FC4: The internet access enough to Microsoft Teams for my study.
ប្រព័ន្ធអ៊ីនធឺណេតមានទំហំគ្រប់គ្រាន់ក្នុងការប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

5-Item of Price Value គុណតម្លៃ

PV1: Microsoft Teams platform is reasonably prices to use for my study.
ទម្រង់នៃកម្មវិធី Microsoft Teams មានតម្លៃសមរម្យក្នុងការប្រើប្រាស់សម្រាប់ការសិក្សារបស់ខ្ញុំ

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប
- □ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

PV2: Microsoft Teams is a good value for my study at RULE.

ទម្រង់នៃកម្មវិធី Microsoft Teams គឺជាគុណតម្លៃដ៏ល្អសម្រាប់ការសិក្សារបស់ខ្ញុំនៅ RULE

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប
- □ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

PV3: Microsoft Teams platform provide a very good value to me.

ទម្រង់នៃកម្មវិធី Microsoft Teams ផ្តល់នូវតម្លៃដ៏ល្អសម្រាប់ខ្ញុំផ្ទាល់

- □ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- □ 2= Disagree/២= មិនយល់ស្រប
- □ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- □ 4= Agree/៤=យល់ស្រប
- □ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

PV4: I can save money when I use Microsoft Teams for my study.

ខ្ញុំអាចសន្សំលុយបាននៅពេលខ្ញុំប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ

- ☐ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- ☐ 2= Disagree/២= មិនយល់ស្រប
- ☐ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- ☐ 4= Agree/៤=យល់ស្រប
- ☐ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

6- Item of Habit ទម្លាប់

H1: The use of Microsoft Teams has become a habit for me.

ការប្រើប្រាស់ Microsoft Teams បានក្លាយជាទម្លាប់សម្រាប់ខ្ញុំ

- ☐ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- ☐ 2= Disagree/២= មិនយល់ស្រប
- ☐ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- ☐ 4= Agree/៤=យល់ស្រប
- ☐ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

H2: I am very addicted to using Microsoft Teams in my study.

ខ្ញុំជក់ចិត្តនឹងការប្រើប្រាស់ Microsoft Teams ក្នុងការសិក្សារបស់ខ្ញុំ

- ☐ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- ☐ 2= Disagree/២= មិនយល់ស្រប
- ☐ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- ☐ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/๕=យល់ស្របទាំងស្រុង

H3: I must use Microsoft Teams for my study.

ខ្ញុំត្រូវតែប្រើ Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ

□ 1=Strongly disagree/๑=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/๒= មិនយល់ស្រប

□ 3=Neutral/๓ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/๔=យល់ស្រប

□ 5=Strongly agree/๕=យល់ស្របទាំងស្រុង

H4: Using the Microsoft Team has become natural to me.

ការប្រើប្រាស់កម្មវិធី Microsoft Team បានក្លាយជាទម្លាប់សម្រាប់ខ្ញុំហើយ

□ 1=Strongly disagree/๑=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/๒= មិនយល់ស្រប

□ 3=Neutral/๓ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/๔=យល់ស្រប

□ 5=Strongly agree/๕=យល់ស្របទាំងស្រុង

7- Item of Behavior Intention ចេតនាក្នុងអាកប្បកិរិយានៃការប្រើប្រាស់

BI1: I intend to continue using the Microsoft Teams in the future.

ខ្ញុំមានបំណងបន្តប្រើប្រាស់កម្មវិធី Microsoft Teams នាពេលអនាគត

□ 1=Strongly disagree/๑=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/๒= មិនយល់ស្រប

□ 3=Neutral/๓ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

BI2: I will always try to use Microsoft Teams in my studies for daily life.

ខ្ញុំនឹងព្យាយាមប្រើប្រាស់ Microsoft Teams ក្នុងការសិក្សារបស់ខ្ញុំសម្រាប់ជីវិតប្រចាំថ្ងៃ

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

BI3: I plan to continue to use the Microsoft Teams frequently.

ខ្ញុំមានគម្រោងបន្តប្រើប្រាស់ Microsoft Teams ឱ្យបានញឹកញាប់

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

BI4: I will keep using Microsoft Teams as I am doing now.

ខ្ញុំនឹងបន្តប្រើប្រាស់ Microsoft Teams ដូចដែលខ្ញុំកំពុងធ្វើឥឡូវនេះ

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/๔=យល់ស្រប

□ 5=Strongly agree/๕=យល់ស្របទាំងស្រុង

8- Item of Trust ទំនុកចិត្ត

T1: I believe that Microsoft Teams is trustworthy.

ខ្ញុំជឿថាកម្មវិធី Microsoft Teams គឺគួរឱ្យទុកចិត្តបាន

□ 1=Strongly disagree/๑=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/๒= មិនយល់ស្រប

□ 3=Neutral/๓ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/๔=យល់ស្រប

□ 5=Strongly agree/๕=យល់ស្របទាំងស្រុង

T2: I trust in Microsoft Teams platform for e-learning.

ខ្ញុំជឿជាក់លើកម្មវិធី Microsoft Teams សម្រាប់ការរៀនតាមអេឡិចត្រូនិក

□ 1=Strongly disagree/๑=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/๒= មិនយល់ស្រប

□ 3=Neutral/๓ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/๔=យល់ស្រប

□ 5=Strongly agree/๕=យល់ស្របទាំងស្រុង

T3: I do not doubt the honesty of the Microsoft Teams in my studies.

ខ្ញុំមិនសង្ស័យលើកំហុសឆ្គងរបស់កម្មវិធី Microsoft Teams ក្នុងការ សិក្សារបស់ខ្ញុំទេ

□ 1=Strongly disagree/๑=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

T4: Microsoft Teams have ability to fulfill its task.

កម្មវិធី Microsoft Teams មានសមត្ថភាពគ្រប់គ្រាន់ក្នុងការបំពេញមុខងារបស់វាក្នុងកម្មវិធីសិក្សា

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

9- Item of Satisfaction ភាពពេញចិត្ត

ST1 I am very content with Microsoft Teams system at RULE.

ខ្ញុំពិតជាពេញចិត្តជាមួយនឹងប្រព័ន្ធ Microsoft Teams នៅ RULE

□ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង

□ 2= Disagree/២= មិនយល់ស្រប

□ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត

□ 4= Agree/៤=យល់ស្រប

□ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

ST2 I am very pleased with Microsoft Teams system at RULE.

ខ្ញុំទទួលយកបានការប្រើប្រាស់ប្រព័ន្ធ Microsoft Teams នៅ RULE

- ☐ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- ☐ 2= Disagree/២= មិនយល់ស្រប
- ☐ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- ☐ 4= Agree/៤=យល់ស្រប
- ☐ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

ST3 I am satisfied with Microsoft Teams system at RULE.

ខ្ញុំពេញចិត្តរបៀបប្រើប្រាស់ប្រព័ន្ធ Microsoft Teams នៅ RULE

- ☐ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- ☐ 2= Disagree/២= មិនយល់ស្រប
- ☐ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- ☐ 4= Agree/៤=យល់ស្រប
- ☐ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

ST4 I felt delighted with Microsoft Teams system at RULE.

ខ្ញុំមានអារម្មណ៍រីករាយជាមួយនឹងប្រព័ន្ធ Microsoft Teams នៅ RULE

- ☐ 1=Strongly disagree/១=មិនយល់ស្របទាំងស្រុង
- ☐ 2= Disagree/២= មិនយល់ស្រប
- ☐ 3=Neutral/៣ =កណ្តាល/អព្យាក្រិត
- ☐ 4= Agree/៤=យល់ស្រប
- ☐ 5=Strongly agree/៥=យល់ស្របទាំងស្រុង

កម្រងសំណួរការប្រើប្រាស់កម្មវិធី Microsoft Teams **ក្នុងការសិក្សានៅ** RULE

កម្រងសំណួរទាំងនេះត្រូវបានរៀបចំឡើងដោយនិស្សិតថ្នាក់បណ្ឌិតផ្នែកការបង្រៀន
និងបច្ចេកវិទ្យា នៅសាលាក្រោយឧត្តមសិក្សាផ្នែកពាណិជ្ជកម្ម និងការគ្រប់គ្រងបច្ចេកវិទ្យា
កម្រិតខ្ពស់ នៃសាកលវិទ្យាល័យ Assumption ក្នុងប្រទេសថៃ ដើម្បីបំពេញគោលបំណងសិក្សា
នៃការស្រាវជ្រាវម្នាក់ៗផ្ទាល់ខ្លួនសម្រាប់បញ្ចប់ថ្នាក់បណ្ឌិតលើការបង្រៀន និងបច្ចេកវិទ្យា។
គោលបំណងនៃកម្រងសំណួរស្រាវជ្រាវទាំងនេះគឺដើម្បីស៊ើបអង្កេតទស្សនៈលើការប្រើប្រាស់កម្មវិ
ធីសិក្សា e-Learning សម្រាប់ឧត្តមសិក្សាក្នុងរាជធានីភ្នំពេញ ប្រទេសកម្ពុជា
លើករណីសិក្សានៅសាកលវិទ្យាល័យភូមិន្ទនីតិសាស្ត្រ និងវិទ្យាសាស្ត្រសេដ្ឋកិច្ច (RULE)
ជាពិសេសលើកម្មវិធីសិក្សាតាម Microsoft Teams នៅក្នុង
RULE។កម្រងសំណួរមានពីរផ្នែកសំខាន់ៗ គឺទី១ ព័ត៌មានប្រជាសាស្ត្រ និងទី២ការវាស់
វែងនៃអថេរដែលបានយកចេញពីទ្រឹស្តី UTAUT-2 ។

សូមបញ្ជាក់ថាកម្រងសំណួរទាំងមូលចំណាយពេលវេលាប្រហែល ១០ នាទីដើម្បីបញ្ចប់
ការបំពេញ ដូច្នេះសូមបងប្អូនអានសំណួរនីមួយៗ ដោយប្រុងប្រយ័ត្ន និងផ្តល់ចម្លើយ
សម្រាប់សំណួរទាំងអស់។ សូមចំណាំថាចម្លើយរបស់បងប្អូន និងព័ត៌មាន ដែលប្រមូលបាន
នឹងត្រូវបានរក្សាទុកជាសម្ងាត់ និងបកស្រាយសម្រាប់តែគោលបំណងបច្ចេកវិទ្យាក្នុងការ
អប់រំប៉ុណ្ណោះ ជាពិសេសសម្រាប់កម្មវិធី សិក្សាតាមប្រព័ន្ធអេឡិចត្រូនិក។ ខ្ញុំសូម
ថ្លែងអំណរគុណយ៉ាងជ្រាលជ្រៅចំពោះកិច្ចសហការដ៏ល្អរបស់ បងប្អូន
និងជួយក្នុងការបំពេញកម្រងសំណួរ។

ផ្អែកលើបទពិសោធន៍របស់បងប្អូនក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams ក្នុងការសិក្សា
របស់អ្នក សូមអានប្រយោគខាងក្រោម និងវាយតម្លៃលើមាត្រដ្ឋាន ពី១ ដល់៥

ថាតើអ្នកមិនយល់ស្រប ឬយល់ព្រមជាមួយពួកគេប៉ុន្មាន។ ១ គឺ "មិនយល់ស្របទាំងស្រុង" និង ៥ "យល់ស្របទាំងស្រុង" ។

សូមផ្តល់ជាមតិយោបល់លើសេចក្តីថ្លែងខាងក្រោមនេះដោយដាក់សញ្ញា (✓)
នៅក្នុងចន្លោះចម្លើយពី១ដល់៥ សម្រាប់ផ្នែកទី២។
១=មិនយល់ស្របទាំងស្រុង, ២= មិនយល់ស្រប, ៣ =កណ្តាល/អព្យាក្រិត, ៤=យល់ស្រប, ៥=យល់ស្របទាំងស្រុង.
សូមដាក់សញ្ញា (✓)ទៅលើចម្លើយតែមួយគត់។

PART I: ផ្នែកទី១៖កម្រងសំណួរប្រជាសាស្ត្រ

1. សូមបញ្ជាក់ភេទរបស់លោកអ្នក។

☐ ប្រុស

☐ ស្រី

2- តើអ្នកកំពុងសិក្សាក្នុងឆ្នាំទីប៉ុន្មាននៅ RULE

☐ 1st year ឆ្នាំទី១

☐ 2nd year ឆ្នាំទី២

☐ 3rd year ឆ្នាំទី៣

☐ 4th year ឆ្នាំទី៤

3- តើអ្នកអាយុប៉ុន្មាន ?

☐ ចន្លោះពី១៨ ដល់ ២៥ឆ្នាំ

☐ ចន្លោះពី២៥ ដល់ ៣០ឆ្នាំ

☐ ចន្លោះពី៣០ ដល់ ៣៥ឆ្នាំ

☐ លើសពី ៣៥ឆ្នាំ

4- តើអ្នកកំពុងប្រើប្រាស់កម្មវិធី Microsoft Teams ក្នុងការសិក្សានៅ RULE?

☐ Yes

☐ No

PART II: ផ្នែកទី២៖កម្រងសំណួរសម្រាប់វាស់វែងអថេរ

សូមផ្តល់ជាមតិយោបល់លើសេចក្តីថ្លែងខាងក្រោមនេះដោយដាក់សញ្ញា (✓)

នៅក្នុងចន្លោះចម្លើយពី១ដល់៥ សម្រាប់ផ្នែកទី២នេះ។

១=មិនយល់ស្របទាំងស្រុង, ២= មិនយល់ស្រប, ៣ =កណ្តាល/អព្យាក្រិត, ៤=យល់ស្រប, ៥=យល់ស្របទាំងស្រុង.

1- ការរំពឹងទុកនៃការអនុវត្ត (PE)

PE1: ការប្រើប្រាស់កម្មវិធី Microsoft Teams គឺបង្កើនគុណភាពសិក្សារបស់ខ្ញុំ

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

PE2: ការប្រើប្រាស់ Microsoft Teams ជួយច្រើនដល់ការសិក្សារបស់ខ្ញុំ

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

PE3: ការប្រើប្រាស់ Microsoft Teams ជួយឲ្យយល់ពីការរៀនតាមប្រព័ន្ធអេឡិចត្រូនិក (e-Learning)

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

PE4: កម្មវិធី Microsoft Teams មានប្រយោជន៍ណាស់សម្រាប់ការសិក្សានៅ RULE

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

2- វិពឹងទុកនៃការប្រើប្រាស់ (EE)

EE1: របៀបប្រើប្រាស់កម្មវិធី Microsoft Teams គឺងាយស្រួលសម្រាប់ខ្ញុំ

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

EE2: ខ្ញុំក្លាយជាអ្នកជំនាញលើការប្រើប្រាស់កម្មវិធី Microsoft Team យ៉ាងឆាប់

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

EE3: ប្រព័ន្ធកម្មវិធី Microsoft Teams គឺច្បាស់លាស់ និងងាយស្រួលយល់

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

EE4: វាមិនចំណាយពេលយូរដើម្បីសិក្សាអំពីប្រព័ន្ធកម្មវិធី Microsoft Teams

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

3-កត្តានៃឥទ្ធិពលសង្គម (SI)

SI1: មនុស្សជិតស្និតនិងខ្ញុំឲ្យខ្ញុំប្រើកកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សា

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

SI2: មិត្តភ័ក្តិរបស់ខ្ញុំភាគច្រើនក៏ឲ្យខ្ញុំប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារដែរ

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

SI3: មនុស្សជុំវិញខ្ញុំកំពុងប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ ពួកគេដែរ

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

SI4: មិត្តរួមថ្នាក់របស់ខ្ញុំភាគច្រើនប្រាប់ខ្ញុំឱ្យប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សា

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

4- លក្ខខណ្ឌសម្របសម្រួល (FC)

FC1: ខ្ញុំមានធនធានគ្រប់គ្រាន់ដើម្បីប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សា

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

FC2: ខ្ញុំមានចំណេះដឹងគ្រប់គ្រាន់ក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams សម្រាប់ការសិក្សា

- ☐ ១=មិនយល់ស្របទាំងស្រុង

- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

FC3: ខ្ញុំទទួលបានជំនួយពីអ្នកដទៃនៅពេលដែលខ្ញុំមានការលំបាកក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

FC4: ប្រព័ន្ធអ៊ីនធឺណេតមានទំហំគ្រប់គ្រាន់ក្នុងការប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សា

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

5-គុណតម្លៃ (PV)

PV1: ខ្ញុំមិនចំណាយលុយច្រើនទេ ពេលរៀនតាមកម្មវិធី Microsoft Teams

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

PV2: ទម្រង់កម្មវិធី Microsoft Teams គឺពិតជាសាកសមសម្រាប់ការសិក្សារបស់ខ្ញុំនៅ RULE

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

PV3: ទម្រង់កម្មវិធី Microsoft Teams មានគុណតម្លៃសម្រាប់ខ្ញុំផ្ទាល់

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

PV4: ខ្ញុំអាចសន្សំលុយបាននៅពេលខ្ញុំប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

6- **ទម្លាប់ (H)**

H1: ការប្រើប្រាស់ Microsoft Teams បានក្លាយជាទម្លាប់សម្រាប់ខ្ញុំ

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

H2: ខ្ញុំជក់ចិត្តនឹងការប្រើប្រាស់ Microsoft Teams ក្នុងការសិក្សារបស់ខ្ញុំ

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

H3: ខ្ញុំត្រូវតែប្រើ Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

H4: ការប្រើប្រាស់កម្មវិធី Microsoft Team បានក្លាយជាទម្លាប់សម្រាប់ខ្ញុំហើយ

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

7- ចេតនាក្នុងអាកប្បកិរិយានៃការប្រើប្រាស់ (BI)

BI1: ខ្ញុំមានបំណងបន្តប្រើប្រាស់កម្មវិធី Microsoft Teams នាពេលអនាគត

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

BI2: ខ្ញុំនឹងព្យាយាមប្រើប្រាស់ Microsoft Teams ក្នុងការសិក្សារបស់ខ្ញុំសម្រាប់ជីវិតប្រចាំថ្ងៃ

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

BI3: ខ្ញុំមានគម្រោងបន្តប្រើប្រាស់ Microsoft Teams ឱ្យបានញឹកញាប់

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

BI4: ខ្ញុំនឹងបន្តប្រើប្រាស់ Microsoft Teams ដូចដែលខ្ញុំកំពុងធ្វើឥឡូវនេះ

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

8- ទំនុកចិត្ត (T)

T1: ខ្ញុំជឿថាកម្មវិធី Microsoft Teams គឺគួរឱ្យទុកចិត្តបាន

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

T2: ខ្ញុំជឿជាក់លើកម្មវិធី Microsoft Teams សម្រាប់ការរៀនតាមអេឡិចត្រូនិក

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

T3: ខ្ញុំមិនសង្ស័យលើកំហុសឆ្គងរបស់កម្មវិធី Microsoft Teams ក្នុងការ សិក្សារបស់ខ្ញុំទេ

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

T4: កម្មវិធី Microsoft Teams មានសមត្ថភាពគ្រប់គ្រាន់ ក្នុងការបំពេញមុខងារបស់វា

☐ ១=មិនយល់ស្របទាំងស្រុង

☐ ២= មិនយល់ស្រប

☐ 3=កណ្តាល/អព្យាក្រិត

☐ ៤=យល់ស្រប

☐ ៥=យល់ស្របទាំងស្រុង

9- ភាពពេញចិត្ត (ST)

ST1 ខ្ញុំពិតជាពេញចិត្តជាមួយនឹងប្រព័ន្ធ Microsoft Teams នៅ RULE

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

ST2 ខ្ញុំទទួលយកបានការប្រើប្រាស់ប្រព័ន្ធ Microsoft Teams នៅ RULE

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

ST3 ខ្ញុំពេញចិត្តរបៀបប្រើប្រាស់ប្រព័ន្ធ Microsoft Teams នៅ RULE

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

ST4 ខ្ញុំមានអារម្មណ៍រីករាយជាមួយនឹងប្រព័ន្ធ Microsoft Teams នៅ RULE

- ☐ ១=មិនយល់ស្របទាំងស្រុង
- ☐ ២= មិនយល់ស្រប
- ☐ 3=កណ្តាល/អព្យាក្រិត
- ☐ ៤=យល់ស្រប
- ☐ ៥=យល់ស្របទាំងស្រុង

APPENDIX D

INDEX OF ITEM-OBJECTIVE CONGRUENCE (IOC) RATING FORM AND RESULT (English Version and translated to Khmer)

Dear expert:

This survey examines perceptions about an online learning environment for higher education in Cambodia's capital city of Phnom Penh. The five-point Likert scale (strongly disagree = 1 point, disagree = 2 points, uncertain = 3 points, agree = 4 points, and strongly agree = 5 points) was used to score each question.

I would like to ask you to give a validity score for each question (item) of the questionnaire to ensure the content validity of the questionnaire. Please mark with "✓" in the space below. If the question can reach the goal of measuring this variable, please select +1. If you are not sure whether the question can reach the goal of measuring, please select 0. If the question cannot reach the goal of measuring this variable, please select -1. In addition, if you have suggestions, you can write them in the comments. I will be very appreciated to get your advice.

Item of Performance Expectancy ការរំពឹងទុកនៃការអនុវត្ត People believe that utilizing the system will boost their performance and provide benefits from applying technology in performance activities to the extent that they consider using the system will improve their academic achievement (Abbad et al., 2021).		**+1**	**0**	**-1**	**Comment**
1	Using Microsoft Teams for my learning increases productivity. ការប្រើប្រាស់កម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារៀនសូត្ររបស់ខ្ញុំ បង្កើនផលិតភាព និងគុណភាពសិក្សា				
2	Using Microsoft Teams helpful to my studies. ការប្រើប្រាស់ Microsoft Teams ជួយច្រើនការបំពេញការសិក្សារបស់ខ្ញុំ				
3	Using Microsoft Teams enhancement of my knowledge for e-learning. ការប្រើប្រាស់ Microsoft Teams បង្កើនចំណេះដឹងរបស់ខ្ញុំសម្រាប់ការរៀនតាមប្រព័ន្ធអេឡិចត្រូនិក (e-Learning)				

4	Microsoft Teams is usefulness for my studies at RULE កម្មវិធី Microsoft Teams. មានប្រយោជន៍សម្រាប់ការសិក្សារបស់ខ្ញុំនៅ RULE				
Item of Effort Expectancy ការខិតខំនៃការប្រើប្រាស់ The degree of ease with which the system can be used. It has to do with how simple it is to use technology (Venkatesh et al., 2012; Zhou et al., 2010).		**+1**	**0**	**-1**	**Comment**
5	Learning how to use Microsoft Teams is easy for me. ការរៀនពីរបៀបប្រើប្រាស់កម្មវិធី Microsoft Teams គឺងាយស្រួលសម្រាប់ខ្ញុំ				
6	It is easy for me to become skillful to use Microsoft Teams in my study. វាងាយស្រួលសម្រាប់ខ្ញុំក្នុងការក្លាយជាអ្នកជំនាញលើការប្រើប្រាស់កម្មវិធី Microsoft Team ក្នុងការសិក្សារបស់ខ្ញុំ				
7	My interaction in Microsoft Team system is clear and understanding. អន្តរកម្មនៃការប្រើប្រាស់របស់ខ្ញុំនៅក្នុងប្រព័ន្ធកម្មវិធី Microsoft Teams គឺច្បាស់លាស់ និងងាយស្រួលយល់				
8	It is not taken long time to learn about Microsoft Teams system in my study. វាមិនចំណាយពេលយូរដើម្បីសិក្សា អំពីប្រព័ន្ធកម្មវិធី Microsoft Teams នៅក្នុងការសិក្សារបស់ខ្ញុំ				
Item of Social Influence កត្តានៃឥទ្ធិពលសង្គម The extent to which a person believes significant others think they should use the new technological system (Venkatesh et al., 2003). The idea that a person should accept a system is one that is held by important others, such as family and friends (Graf-Vlachy et al., 2018).		**+1**	**0**	**-1**	**Comment**
9	People who are important to me think that I should use Microsoft Teams for my study.				

	មនុស្សដែលសំខាន់សម្រាប់ខ្ញុំ គិតថាខ្ញុំគួរប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ				
10	Most of my friends think that I should use Microsoft Teams platform for my study. មិត្តភ័ក្តិរបស់ខ្ញុំភាគច្រើនគិតថាខ្ញុំគួរតែប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ				
11	Most of people around me are using Microsoft Teams platform for their study. មនុស្សភាគច្រើននៅជុំវិញខ្ញុំកំពុងប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ពួកគេ				
12	Most of my classmate tell me to use Microsoft Teams platform for my study. មិត្តរួមថ្នាក់របស់ខ្ញុំភាគច្រើនប្រាប់ខ្ញុំឱ្យប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ				
Item of Facilitating Condition លក្ខខណ្ឌសម្របសម្រួល The extent to which a person thinks that the system is supported by a technical and organizational infrastructure (Venkatesh et al., 2003)		**+1**	**0**	**-1**	**Comment**
13	I have resources enough to use Microsoft Teams platform for my study. ខ្ញុំមានធនធានគ្រប់គ្រាន់ដើម្បីប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ				
14	I have knowledge necessary to use Microsoft Teams platform for my study. ខ្ញុំមានចំណេះដឹងគ្រប់គ្រាន់ចាំបាច់ក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ				
15	I get help from others when I have some difficult of using Microsoft Teams.				

	ខ្ញុំទទួលបានជំនួយពីអ្នកដទៃនៅពេលដែលខ្ញុំមានការលំបាកក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams				
16	The internet access enough to Microsoft Teams for my study. ប្រព័ន្ធអ៊ីនធឺណេតមានទំហំគ្រប់គ្រាន់ក្នុងការប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ				
Item of Hedonic Motivation កត្តាជំរុញលើកទឹកចិត្ត Is described as the happiness and enjoyment a person experiences when using technology (Venkatesh et al., 2012).		**+1**	**0**	**-1**	**Comment**
17	Using Microsoft Teams for my study is fun. ការប្រើប្រាស់កម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំគឺសប្បាយណាស់				
18	Using Microsoft Teams in my study is enjoyable. ការប្រើប្រាស់កម្មវិធី Microsoft Teams ក្នុងការសិក្សារបស់ខ្ញុំគឺពេញចិត្ត				
19	Using Microsoft Teams in my study is very entertaining. ការប្រើប្រាស់ Microsoft Teams. ក្នុងការសិក្សារបស់ខ្ញុំគឺពិត ជាសប្បាយរីករាយជាមួយមិត្តភ័ក្រទាំងអស់				
20	I feel excited to use the Microsoft Teams platform in my study. ខ្ញុំមានអារម្មណ៍រំភើបចិត្តក្នុងការប្រើប្រាស់កម្មវិធី Microsoft Teams នៅក្នុងការសិក្សារបស់ខ្ញុំ				
Item of Price Value គុណតម្លៃ It will be expected that utilizing an e-learning system will have a positive impact on students' perceptions of their autonomy, relatedness, expenditure, and competence (Gunasinghe et al., 2019).		**+1**	**0**	**-1**	**Comment**

21	Microsoft Teams platform is reasonably prices to use for my study. ទម្រង់នៃកម្មវិធី Microsoft Teams មានតម្លៃសមរម្យក្នុងការប្រើប្រាស់សម្រាប់ការសិក្សារបស់ខ្ញុំ				
22	Microsoft Teams is a good value for my study at RULE. ទម្រង់នៃកម្មវិធី Microsoft Teams គឺជាគុណតម្លៃដ៏ល្អសម្រាប់ការសិក្សារបស់ខ្ញុំនៅ RULE				
23	Microsoft Teams platform provide a very good value to me ទម្រង់នៃកម្មវិធី Microsoft Teams. ផ្តល់នូវតម្លៃដ៏ល្អសម្រាប់ខ្ញុំផ្ទាល់				
24	I can save money when I use Microsoft Teams for my study ខ្ញុំអាចសន្សំលុយបាននៅពេលខ្ញុំប្រើកម្មវិធី Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ				
Item of Habit ទម្លាប់ Students' competency will increase with habitual use, which will further encourage real use of the e-learning platform (Osei et al., 2022).		**+1**	**0**	**-1**	**Comment**
25	The use of Microsoft Teams has become a habit for me. ការប្រើប្រាស់ Microsoft Teams បានក្លាយជាទម្លាប់សម្រាប់ខ្ញុំ				
26	I am very addicted to using Microsoft Teams in my studies. ខ្ញុំជក់ចិត្តនឹងការប្រើប្រាស់ Microsoft Teams ក្នុងការសិក្សារបស់ខ្ញុំ				
27	I must use Microsoft Teams for my studies. ខ្ញុំត្រូវតែប្រើ Microsoft Teams សម្រាប់ការសិក្សារបស់ខ្ញុំ				
28	Using Microsoft Teams has become natural to me. ការប្រើប្រាស់កម្មវិធី Microsoft Team បានក្លាយជាទម្លាប់សម្រាប់ខ្ញុំហើយ				
Item of Behavior Intention ចេតនាក្នុងអាកប្បកិរិយានៃការប្រើប្រាស់		**+1**	**0**	**-1**	**Comment**

The use of the e-learning system will be carried out if students demonstrate an intention to take action (Osei et al., 2022).					
29	I intend to continue using Microsoft Teams in the future. ខ្ញុំមានបំណងបន្តប្រើប្រាស់កម្មវិធី Microsoft Teams នាពេលអនាគត				
30	I will always try to use Microsoft Teams in my studies and daily life. ខ្ញុំនឹងព្យាយាមប្រើប្រាស់ Microsoft Teams ក្នុង ការសិក្សារបស់ខ្ញុំ សម្រាប់ជីវិតប្រចាំថ្ងៃ				
31	I plan to continue to use Microsoft Teams frequently ខ្ញុំមានគម្រោងបន្តប្រើប្រាស់ Microsoft Teams ឱ្យបានញឹកញាប់				
32	I will keep using Microsoft Teams as I am doing now. ខ្ញុំនឹងបន្តប្រើប្រាស់ Microsoft Teams ដូចដែលខ្ញុំកំពុង ធ្វើឥឡូវនេះ				
Item of Trust ទំនុកចិត្ត The ability to constantly maintain trust is one facet of e-learning and online learning, and trust can affect both the intention to use something and the way that someone uses it (Singh et al., 2017).		**+1**	**0**	**-1**	**Comment**
33	I believe that Microsoft Teams is trustworthy. ខ្ញុំជឿថាកម្មវិធី Microsoft Teams គឺគួរឱ្យទុកចិត្តបាន				
34	I trust the Microsoft Teams platform for e-learning. ខ្ញុំជឿជាក់លើកម្មវិធី Microsoft Teams សម្រាប់ការរៀនតាមអេឡិចត្រូនិក				
35	I do not doubt the honesty of Microsoft Teams in my study. ខ្ញុំមិនសង្ស័យលើកំហុសឆ្គងរបស់កម្មវិធី Microsoft Teams ក្នុងការ សិក្សារបស់ខ្ញុំទេ				
36	Microsoft Teams has the ability to fulfill its task. កម្មវិធី Microsoft Teams មានសមត្ថភាពគ្រប់គ្រាន់ ក្នុងការបំពេញមុខងារបស់វាក្នុងកម្មវិធីសិក្សា				
Item of Satisfaction ភាពពេញចិត្ត		**+1**	**0**	**-1**	**Comment**

Students' degree of satisfaction with their online education has a significant impact on their decision to choose a particular platform for e-learning, and it also contributes to higher levels of learner enthusiasm (Jakkaew et al., 2017).					
37	I am very content with Microsoft Teams system at RULE. ខ្ញុំពិតជាពេញចិត្តជាមួយនឹងប្រព័ន្ធ Microsoft Teams នៅ RULE				
38	I am very pleased with Microsoft Teams system at RULE. ខ្ញុំទទួលយកបានការប្រើប្រាស់ប្រព័ន្ធ Microsoft Teams នៅ RULE				
39	I am satisfied with Microsoft Teams system at RULE. ខ្ញុំពេញចិត្តរបៀបប្រើប្រាស់ប្រព័ន្ធ Microsoft Teams នៅ RULE				
40	I felt delighted with Microsoft Teams system at RULE. ខ្ញុំមានអារម្មណ៍រីករាយជាមួយនឹងប្រព័ន្ធ Microsoft Teams នៅ RULE				

Result of IOC from 3 experts

Variable	1st Expert	2nd Expert	3rd Expert	$\sum R$	$IOC = \frac{\sum R}{N}$	Result and remark
PE1	1	1	1	3	1	Passed
PE2	1	1	1	3	1	Passed
PE3	0	1	1	2	0,67	Passed
PE4	1	1	1	3	1	Passed
EE1	0	1	1	2	0,67	Passed
EE2	1	1	1	3	1	Passed
EE3	1	1	1	3	1	Passed
EE4	0	1	1	2	0,67	Passed
SI1	0	1	1	2	0,67	Passed
SI2	1	1	1	3	1	Passed
SI3	0	1	1	2	0,67	Passed
SI4	0	1	1	2	0,67	Passed (SI4 and SI1 are the same meaning in Khmer _ Duplicates)
FC1	1	1	1	3	1	Passed
FC2	1	1	1	3	1	Passed
FC3	0	0	1	1	0,33	Fail (FC1 and FC2 are very general meaning in Khmer _ have to be specific)
FC4	1	1	1	3	1	Passed
HM1	0	1	1	2	0,67	Passed

MH2	0	0	1	1	0,33	Fail (MH1, MH2 and MH3 are almost the same meaning in Khmer_ need to modify_ in English are very OK)
HM3	1	1	1	3	1	Passed
HM4	1	1	1	3	1	Passed
PV1	1	1	1	3	1	Passed
PV2	1	0	1	2	0,67	Passed
PV3	1	1	1	3	1	Passed
PV4	1	1	1	3	1	Passed
H1	1	1	1	3	1	Passed
H2	0	1	1	2	0,67	Passed
H3	0	1	1	2	0,67	Passed
H4	1	1	1	3	1	Passed
BI1	1	1	1	3	1	Passed
BI2	1	1	1	3	1	Passed
BI3	1	1	1	3	1	Passed
BI4	1	0	1	2	0,67	Passed
T1	1	1	1	3	1	Passed
T2	1	1	1	3	1	Passed
T3	1	1	1	3	1	Passed
T4	1	1	1	3	1	Passed
ST1	1	1	1	3	1	Passed
ST2	1	1	1	3	1	Passed
ST3	1	1	1	3	1	Passed
ST4	1	1	1	3	1	Passed

Results from 3 experts for interview questions

List	**Questions for interview lecturers**	1st Expert	2nd Expert	3rd Expert	$\sum R$	$IOC = \frac{\sum R}{N}$	Results
1	How do undergraduate students in RULE adopt the Microsoft Teams learning system? តើនិស្សិតថ្នាក់បរិញ្ញាបត្រនៅ RULE ទទួលយកប្រព័ន្ធសិក្សារបស់កម្មវិធី Microsoft Teams យ៉ាងដូចម្តេច ?	1	1	1	3	1	Passed
2	How did RULE set up the Microsoft Teams system for e-learning? What are the technical problems of e-learning via Microsoft Teams that RULE's	1	1	1	3	1	Passed

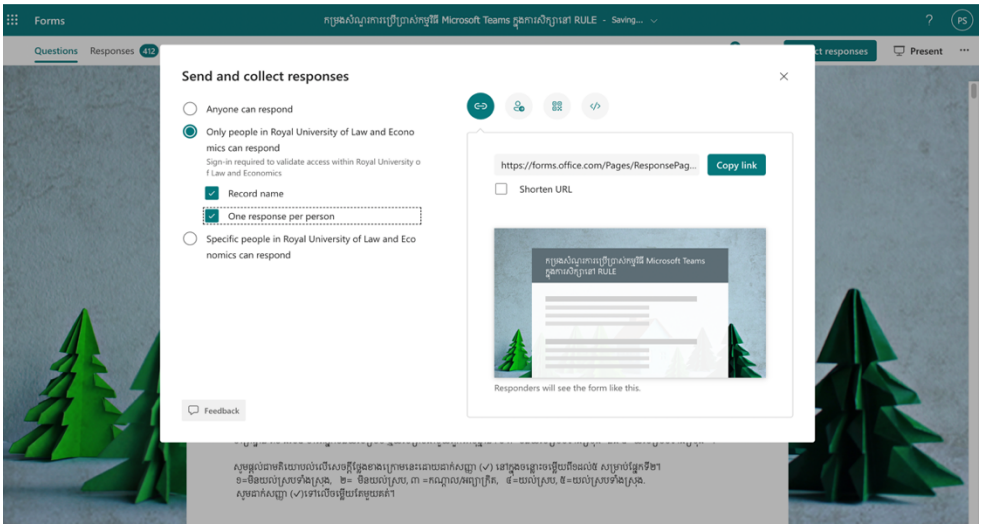
	students deal with? តើ RULE រៀបចំប្រព័ន្ធកម្មវិធី Microsoft Teams សម្រាប់ការរៀនតាមអេឡិចត្រូនិកដោយរបៀបណា? តើបញ្ហាបច្ចេកទេសអ្វីខ្លះនៃការរៀនតាមអេឡិចត្រូនិករបស់កម្មវិធី Microsoft Teams ដែលនិស្សិតនៅ RULE ជួបប្រទះ?						
3	What are the difficulties for RULE students when joining an e-learning course via Microsoft Teams?តើមានការលំបាកអ្វីខ្លះសម្រាប់សិស្ស RULE អំឡុងពេលចូលរួមវគ្គសិក្សាតាមអេឡិចត្រូនិចជាមួយកម្មវិធី Microsoft Teams?	1	1	1	3	1	Passed
4	What are the common problems with e-learning through Microsoft Teams, both for professors and students?តើអ្វីជាបញ្ហារួមសម្រាប់សាស្ត្រាចារ្យនិងនិស្សិតក្នុងការរៀនតាមប្រព័ន្ធ	1	1	1	3	1	Passed

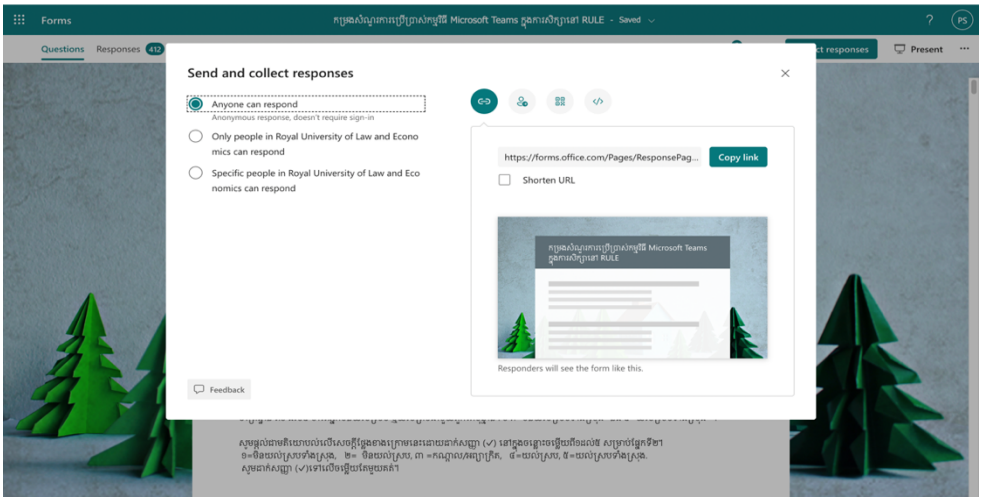
	អេឡិចត្រូនិកតាមរយៈកម្មវិធី Microsoft Teams ?						
5	What are your thoughts on RULE's use of Microsoft Teams?តើអ្នកយល់យ៉ាងណាដែរចំពោះការប្រើប្រាស់កម្មវិធី Microsoft Teams នៅក្នុងការបណ្តុះបណ្តាលរបស់ RULE ?	1	1	1	3	1	Passed
6	How would you advise improving the use of Microsoft Teams at RULE for both students and professors?តើអ្នកនឹងផ្តល់យោបល់យ៉ាងណាក្នុងការកែលម្អការប្រើប្រាស់កម្មវិធី Microsoft Teams នៅ RULE ទាំងនិស្សិត និងសាស្ត្រាចារ្យ ?	1	1	1	3	1	Passed

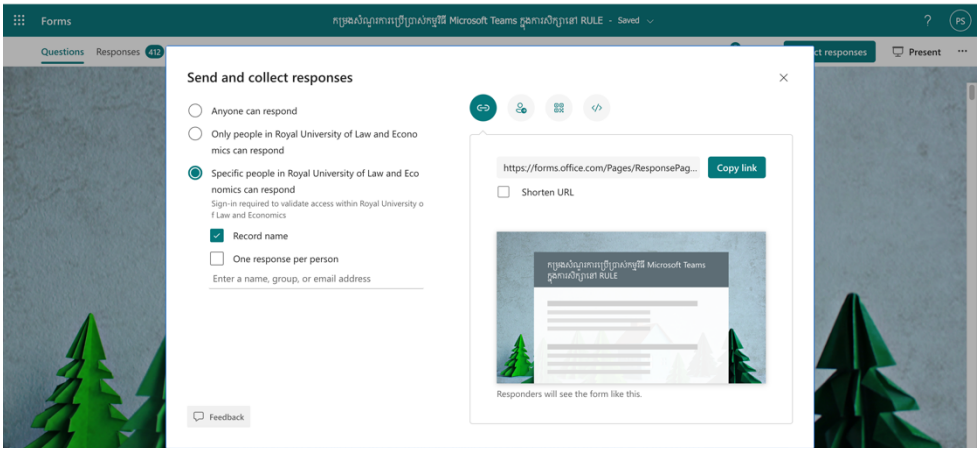
APPENDIX E

PROCEDURE TO PROTECT DATA COLLECTION

Procedure to protect data collection from students' response on Microsoft form







APPENDIX F

PERMISSION LETTER FOR RESEARCH

GRADUATE SCHOOL OF
BUSINESS AND ADVANCED TECHNOLOGY MANAGEMENT

Tuesday, March 22, 2022

Letter No. OGS Certified 028/2022

Re: H.E. Dr. Hang Chuon Naron, Minister of Education, Youth and Sport of Cambodia

Subject: Request permission to allow Mr. Phon Sophal to collect data at Royal University of Law and Economics, Phnom Penh city, Cambodia

Attachment: Academic report of Mr.Phon Sophal

Graduate School of Business and Advanced Technology Management, Assumption University of Thailand would like to request for your permission to grant Mr. Phon Sophal to collect data for his dissertation at Royal University of Law and Economics, Phnom Penh city, Cambodia during May 2022 to January 2023.

Mr. Phon Sophal (Student I.D. 6173805) is the Ph.D. candidate whom currently working on his dissertation to fulfill the requirements of the Doctor of Philosophy in Teaching and Technology Program. At present, he has completed all the courses required by the Program as well as passed the Qualifying Examination. Along with this letter, the academic record is hereby attached.

We would like to ascertain you that Mr. Phon Sophal is currently conduct research entitled *"Perspectives on an e-Learning Platform for Higher Education in Phnom Penh City, Cambodia"* as his dissertation in fulfillment the Doctor of Philosophy in Teaching and Technology. With this regard, he is in the process of gathering data from the Faculty of Informatics Economics at Royal University of Law and Economics, Phnom Penh city, Cambodia during May 2022 to January 2023.

Therefore, the Graduate School of Business and Advanced Technology Management, Assumption University of Thailand would like to request for your kind permission to allow Mr. Phon Sophal to conduct research at Royal University of Law and Economics to complete his Ph.D. in Teaching and Technology.

Thank you for your kind consideration and approval.

Your Sincerely,

Thanawan Phongsatha

(Asst.Prof.Dr.Thanawan Phongsatha)

Program Director
Ph.D. in Teaching and Technology Program

Assumption University of Thailand, Hua Mak Campus, Building 'A', Floor 3, Ramkhamhaeng Road Soi 24, Bangkok 10240 Thailand
Tel) .66 (2 300 4543-62 ext .1360-1361 E-mail :**grad@au.edu** Website :www.grad.au.edu

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

ព្រះសហគមន៍កាតូលិកកម្ពុជា ភូមិភាគភ្នំពេញ
Apostolic Vicariate of Phnom Penh
លេខ:០៣៥/២០២២-អក

សូមគោរពជូន

ឯកឧត្តមបណ្ឌិតសភាចារ្យ ហង់ ជួន ណារ៉ុន
រដ្ឋមន្ត្រីក្រសួងអប់រំ យុវជន និងកីឡា ជាទីគោរពដ៏ខ្ពង់ខ្ពស់

កម្មវត្ថុ: សំណើសុំការអនុញ្ញាតដ៏ខ្ពង់ខ្ពស់ពីឯកឧត្តមបណ្ឌិតសភាចារ្យ ដល់លោក ផុន សុផល បេក្ខភាពបណ្ឌិត ពីសាកលវិទ្យាល័យ អាស្សាំស្សុន នៃប្រទេសថៃ (Assumption University of Thailand) ប្រមូលទិន្នន័យ ស្រាវជ្រាវបញ្ចប់ថ្នាក់បណ្ឌិតនៅសាកលវិទ្យាល័យភូមិន្ទនីតិសាស្ត្រ និងវិទ្យាសាស្ត្រសេដ្ឋកិច្ច ក្នុងចន្លោះខែឧសភា ឆ្នាំ២០២២ ដល់ខែមករា ឆ្នាំ២០២៣។

យោង: លិខិតលេខ OGS Certifies 028/2022 ពីសាកលវិទ្យាល័យ អាស្សាំស្សុន ចុះថ្ងៃទី២២ ខែមីនា ឆ្នាំ២០២២។

សេចក្តីដូចមានចែងក្នុងកម្មវត្ថុ និងយោងខាងលើខ្ញុំបាទមានកិត្តិយស សូមគោរពជម្រាបជូនឯកឧត្តមបណ្ឌិតសភាចារ្យរដ្ឋមន្ត្រីមេត្តាជ្រាបថា៖ លោក ផុន សុផល បច្ចុប្បន្នជានាយកវិទ្យាស្ថានសន្តប៉ូលនៅក្នុងខេត្តតាកែវ ដោយមើលឃើញពីភាពចាំបាច់ក្នុងការបង្កើនសមត្ថភាពផ្ទាល់ខ្លួន ក៏ដូចជាការចូលរួមចំណែកអភិវឌ្ឍវិស័យអប់រំក្នុងវិទ្យាស្ថាន រូបខ្ញុំផ្ទាល់បានសម្រេចឧបត្ថម្ភគាំទ្រដោយផ្តល់អាហារូបករណ៍ថ្នាក់បណ្ឌិតដល់លោក ផុន សុផល។

លោក ផុន សុផល បានបំពេញគ្រប់លក្ខ័ណ្ឌសម្រាប់ការសិក្សាដោយជោគជ័យ និងបច្ចុប្បន្នជាបេក្ខភាពបណ្ឌិតលើការបង្រៀន និងបច្ចេកវិទ្យា (Ph.D. in Teaching and Technology) ដែលតម្រូវឲ្យសរសេរនិក្ខេបបទបញ្ចប់ការសិក្សា។ ខ្ញុំសូមបញ្ជាក់ថា លោកផុន សុផល កំពុងរៀបចំឯកសារស្រាវជ្រាវលើប្រធានបទ *"Perspectives on an e-Learning Platform for Higher Education in Phnom Penh City, Cambodia"* ដើម្បីបញ្ចប់ថ្នាក់បណ្ឌិត ។

សេចក្តីដូចបានគោរពជម្រាបជូនខាងលើសូម **ឯកឧត្តមបណ្ឌិតសភាចារ្យរដ្ឋមន្ត្រី** មេត្តាពិនិត្យ និងសម្រេចអនុញ្ញាតដោយក្តីអនុគ្រោះ។

សូម **ឯកឧត្តមបណ្ឌិតសភាចារ្យរដ្ឋមន្ត្រី** មេត្តាទទួលនូវការគោរពដ៏ខ្ពង់ខ្ពស់ពីរូបខ្ញុំ។

ថ្ងៃព្រហស្បតិ៍ ៧រោច ខែផល្គុន ឆ្នាំឆ្លូវ ត្រីស័ក ព.ស.២៥៦៥
រាជធានីភ្នំពេញ,ថ្ងៃទី២៤ ខែមីនា ឆ្នាំ២០២២
អភិបាលព្រះសហគមន៍កាតូលិកកម្ពុជា ភូមិភាគភ្នំពេញ

លោកអភិបាល អូលីវីយេ ស្មីតហាស្លេ

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

សូមគោរពជូន

ឯកឧត្តមបណ្ឌិតសភាចារ្យ រដ្ឋមន្ត្រីក្រសួងអប់រំ យុវជន និងកីឡា

កម្មវត្ថុ: សំណើសុំការអនុញ្ញាតដ៏ខ្ពង់ខ្ពស់ពីឯកឧត្តមបណ្ឌិតសភាចារ្យចុះប្រមូលទិន្នន័យស្រាវជ្រាវបញ្ចប់ថ្នាក់បណ្ឌិតនៅសាកលវិទ្យាល័យភូមិន្ទនីតិសាស្ត្រ និងវិទ្យាសាស្ត្រសេដ្ឋកិច្ច ក្នុងចន្លោះខែឧសភា ឆ្នាំ២០២២ ដល់ខែមករា ឆ្នាំ២០២៣។

យោង: លិខិតលេខ OGS Certifies 028/2022 ពីសាកលវិទ្យាល័យអាសុំសុន (Assumption University of Thailand) ចុះថ្ងៃទី២២ ខែមីនា ឆ្នាំ២០២២ និងលិខិតលេខ០៣៥/២០២២-អភ របស់លោកអភិបាលព្រះសហគមន៍កាតូលិកភូមិភាគភ្នំពេញ ចុះថ្ងៃទី២៤ ខែមីនា ឆ្នាំ២០២២។

សេចក្តីដូចមានចែងក្នុងកម្មវត្ថុ និងយោងខាងលើខ្ញុំបាទមានកិត្តិយសសូមគោរពជម្រាបជូនឯកឧត្តមបណ្ឌិតសភាចារ្យរដ្ឋមន្ត្រីមេត្តាជ្រាបថា៖ ខ្ញុំបាទឈ្មោះ ជុន សុផល បច្ចុប្បន្នជាបេក្ខភាពបណ្ឌិតលើជំនាញបង្រៀន និងបច្ចេកវិទ្យា (Ph.D. in Teaching and Technology) ដែលតម្រូវឲ្យសរសេរនិក្ខេបទបញ្ចប់ការសិក្សាក្នុងឆ្នាំសិក្សា ២០២៣ខាងមុខនេះទាក់ទងនឹងបច្ចេកវិទ្យាក្នុងការបង្រៀន ឬការរៀន។ ខ្ញុំបាទសូមបញ្ជាក់ថា ខ្ញុំបានបំពេញគ្រប់លក្ខ័ណ្ឌទាំងអស់សម្រាប់ការសិក្សាដោយជោគជ័យលើគ្រប់មុខវិជ្ជា និងបានប្រឡងជាប់ជាស្ថាបនរក្នុងគ្រប់តម្រូវការរបស់មហាវិទ្យាល័យនៅសាកលវិទ្យាល័យអាសុំសុន (Assumption University of Thailand) ។

រូបខ្ញុំនឹងសរសេរនិក្ខេបទលើប្រធានបទ *"Perspectives on an e-Learning Platform for Higher Education in Phnom Penh City, Cambodia"* ដើម្បីបញ្ចប់ថ្នាក់បណ្ឌិត ។ ការចុះប្រមូលទិន្នន័យស្រាវជ្រាវនឹងធ្វើនៅក្នុងមហាវិទ្យាល័យសេដ្ឋកិច្ចព័ត៌មានវិទ្យានៃសាកលវិទ្យាល័យភូមិន្ទនីតិសាស្ត្រ និងវិទ្យាសាស្ត្រសេដ្ឋកិច្ចដោយរូបខ្ញុំផ្ទាល់ម្នាក់ឯង ពីចន្លោះខែឧសភា ឆ្នាំ២០២២ ដល់ខែមករា ឆ្នាំ២០២៣។

សេចក្តីដូចបានគោរពជម្រាបជូនខាងលើសូម **ឯកឧត្តមបណ្ឌិតសភាចារ្យរដ្ឋមន្ត្រី** មេត្តាពិនិត្យ និងសម្រេចដោយក្តីអនុគ្រោះ។

សូម ឯកឧត្តមបណ្ឌិតសភាចារ្យរដ្ឋមន្ត្រី មេត្តាទទួលនូវការគោរពដ៏ខ្ពង់ខ្ពស់ពីរូបខ្ញុំ

ថ្ងៃសុក្រ ៨រោច ខែផល្គុន ឆ្នាំឆ្លូវ ត្រីស័ក ព.ស. ២៥៦៥
រាជធានីភ្នំពេញ ថ្ងៃទី២៥ ខែមីនា ឆ្នាំ២០២២

ហត្ថលេខា

ជុន សុផល

លេខទំនាក់ទំនង ០៩២ ៨៩៨ ៣៨១

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

សូមគោរពជូន
លោកសាស្ត្រាចារ្យនាយកប្រតិបត្តិសាលាជំនាន់ថ្មីនៃវិទ្យាល័យព្រះស៊ីសុវត្ថិ
(Digital education and promote e-learning program at the Preah Sisowath High School)

កម្មវត្ថុ: សំណើសុំការអនុញ្ញាតពីលោកសាស្ត្រាចារ្យដើម្បីចុះស្វែងយល់បន្ថែម និងសិក្សាស្រាវជ្រាវអំពីដំណើរការនៃការរៀបចំ និងការគ្រប់គ្រងចាត់ចែងលើបច្ចេកទេសក្នុងការដាក់ដំណើរការកម្មវិធីសិក្សាតាមឌីជីថល (Digital education and promote e-learning program) នៅថ្ងៃអង្គារ ៧កើត ខែអាសាឍ ឆ្នាំខាល ចត្វាស័ក ព.ស ២៥៦៦ **ត្រូវនឹងថ្ងៃទី៥ ខែកក្កដា ឆ្នាំ២០២២ វេលាម៉ោង ៩ព្រឹក**។

យោង: លិខិតលេខ OGS Certifies 028/2022 ពីសាកលវិទ្យាល័យអាសុំសុន (Assumption University of Thailand) ចុះថ្ងៃទី២២ ខែមីនា ឆ្នាំ២០២២ លិខិតលេខ០៣៥/២០២២-អភ របស់លោកអភិបាលព្រះសហគមន៍កាតូលិកភូមិភាគភ្នំពេញ ចុះថ្ងៃទី២៤ ខែមីនា ឆ្នាំ២០២២ និងលិខិតលេខ ២៧៩៤ អយក.រប របស់បណ្ឌិតសភាចារ្យ ហង់ជូន ណារ៉ុន ចុះថ្ងៃទី២៦ ខែឧសភា ឆ្នាំ២០២២។

សេចក្តីដូចមានចែងក្នុងកម្មវត្ថុ និងយោងខាងលើខ្ញុំបាទមានកិត្តិយសសូមគោរពជម្រាបជូនលោកសាស្ត្រាចារ្យជ្រាបថា៖ ខ្ញុំបាទឈ្មោះ ផុន សុផល បច្ចុប្បន្នជាបេក្ខភាពបណ្ឌិតលើជំនាញបង្រៀន និង បច្ចេកវិទ្យា (Ph.D. in Teaching and Technology) ដែលតម្រូវឲ្យសរសេរនិក្ខេបទបញ្ចប់ការសិក្សាក្នុងឆ្នាំសិក្សា ២០២៣ខាងមុខនេះទាក់ទងនឹងបច្ចេកវិទ្យាក្នុងការបង្រៀន ឬការរៀន។ រូបខ្ញុំនឹងសរសេរនិក្ខេបបទលើប្រធានបទ *"Perspectives on an e-Learning Platform for Higher Education in Phnom Penh City, Cambodia"* ដើម្បីបញ្ចប់ថ្នាក់បណ្ឌិត ។

បញ្ជាក់៖ នៅថ្ងៃទី៥ ខែកក្កដា ឆ្នាំ២០២២ លោកបណ្ឌិត **ទិន ហេង** ប្រធានដេប៉ាតឺម៉ង់ព័ត៌មានវិទ្យានៃសាកលវិទ្យាល័យភូមិន្ទនីតិសាស្ត្រ និងវិទ្យាសាស្ត្រសេដ្ឋកិច្ច នឹងរួមដំណើរជាមួយរូបខ្ញុំ (២រូប)។

សេចក្តីដូចបានគោរពជម្រាបជូនខាងលើ សូមលោកសាស្ត្រាចារ្យមេត្តាជួយសម្រួលដោយក្តីអនុគ្រោះ។

សូមលោកសាស្ត្រាចារ្យ មេត្តាទទួលនូវការគោរពដ៏ខ្ពង់ខ្ពស់ពីរូបខ្ញុំ។

ថ្ងៃព្រហស្បតិ៍ ២កើត ខែអាសាឍ ឆ្នាំខាល ចត្វាស័ក ព.ស. ២៥៦៦
រាជធានីភ្នំពេញ ថ្ងៃទី៣០ ខែមិថុនា ឆ្នាំ២០២២
ហត្ថលេខា

ផុន សុផល

APPENDIX G
ACCEPTANCE LETTER

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

ក្រសួងអប់រំ យុវជន និងកីឡា
លេខៈ [illegible] អយក. [illegible]

ថ្ងៃ [illegible] ខែ [illegible] ឆ្នាំខាល ចត្វាស័ក ព.ស. ២៥៦៦
រាជធានីភ្នំពេញ ថ្ងៃទី ២៦ ខែ ឧសភា ឆ្នាំ២០២២

ជម្រាបជូន
ឯកឧត្តម សាកលវិទ្យាធិការ នៃសាកលវិទ្យាល័យភូមិន្ទនីតិសាស្ត្រ
និងវិទ្យាសាស្ត្រសេដ្ឋកិច្ច

កម្មវត្ថុ៖ សំណើសុំសម្របសម្រួលដល់ការចុះប្រមូលទិន្នន័យស្រាវជ្រាវបញ្ចប់ថ្នាក់បណ្ឌិត របស់លោក **ផុន សុផល** បេក្ខជនបណ្ឌិតពីសាកលវិទ្យាល័យ អាស៊ុំសុន នៃប្រទេសថៃ។

យោង៖ លិខិតលេខ ០៣៥/២០២២-អក ចុះថ្ងៃទី២៤ ខែមីនា ឆ្នាំ២០២២ របស់ព្រះសហគមន៍កាតូលិកកម្ពុជា ភូមិភាគភ្នំពេញ។

តបតាមកម្មវត្ថុ និងយោងខាងលើ ខ្ញុំសូមជម្រាបជូន**ឯកឧត្តម**ជ្រាបថា៖ ព្រះសហគមន៍កាតូលិកកម្ពុជា ភូមិភាគភ្នំពេញ បានស្នើសុំការអនុញ្ញាតពីក្រសួងអប់រំ យុវជន និងកីឡា ឲ្យលោក **ផុន សុផល** បេក្ខជនបណ្ឌិតពីសាកល-វិទ្យាល័យ អាស៊ុំសុន នៃប្រទេសថៃ ប្រមូលទិន្នន័យស្រាវជ្រាវបញ្ចប់ថ្នាក់បណ្ឌិត ក្រោមប្រធានបទ "Perspectives on an e-Learning Platform for Higher education in Phnom Penh City, Cambodia" នៅសាកលវិទ្យាល័យភូមិន្ទនីតិសាស្ត្រ និងវិទ្យាសាស្ត្រសេដ្ឋកិច្ច។ ការប្រមូលទិន្នន័យរបស់លោក ផុន សុផល ចាប់ផ្តើមក្នុង**ចន្លោះខែឧសភា ឆ្នាំ២០២២ ដល់ខែមករា ឆ្នាំ២០២៣**។ ក្រសួងអប់រំ យុវជន និងកីឡា យល់ព្រមលើសំណើរបស់ព្រះសហគមន៍កាតូលិក ភូមិភាគភ្នំពេញខាងលើ។

អាស្រ័យដូចបានជម្រាបជូនខាងលើ សូម **ឯកឧត្តម** សម្របសម្រួលដល់ដល់ការចុះប្រមូលទិន្នន័យស្រាវជ្រាវបញ្ចប់ថ្នាក់បណ្ឌិត របស់លោក ផុន សុផល តាមការគួរ។

សូម **ឯកឧត្តមសាកលវិទ្យាធិការ សាកលវិទ្យាល័យភូមិន្ទនីតិសាស្ត្រ និងវិទ្យាសាស្ត្រសេដ្ឋកិច្ច** ទទួលនូវការរាប់អានដ៏ស្មោះពីខ្ញុំ។

រដ្ឋមន្ត្រីក្រសួងអប់រំ យុវជន និងកីឡា

បណ្ឌិតសភាចារ្យ **ហង់ជួន ណារ៉ុន**

ចម្លងជូន៖
-អគ្គនាយកដ្ឋានរដ្ឋបាល និងហិរញ្ញវត្ថុ
-ខុទ្ទកាល័យឯកឧត្តមបណ្ឌិតសភាចារ្យរដ្ឋមន្ត្រី
-ព្រះសហគមន៍កាតូលិកកម្ពុជា ភូមិភាគភ្នំពេញ
"ដើម្បីជ្រាបជាព័ត៌មាន"
-កាលប្បវត្តិ
-ឯកសារ៖ នាយកដ្ឋានរដ្ឋបាល

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No. IJSASR.044 Date: 13 February 2024

Acceptance Letter

Dear: **Phon Sophal and Thanawan Phongsatha**

Paper Title: **Perspectives on an E-learning Platform for Higher Education in Phonm Penh City, Cambodia**

This is to enlighten you that the above manuscript was reviewed and appraised by the reviewer committee members of the **International Journal of Sociologies and Anthropologies Science Reviews (online)** [IJSASR], Old ISSN 2774-0366 (Online): New ISSN 2985-2730 (Online), indexed by **Thai Journal Citation Index Centre (TCI) Tier 2, DOI Crossref Member, and ResearchGate**. It is acceptable for the purpose of publication in the IJSASR, which will be available in Volume 4 Issue 3 (May-June 2024) at https://so07.tci-thaijo.org/index.php/IJSASR/about

Sincerely

Asst. Prof. Dr. Sanya Kenaphoom
Editor-In-Chief

APPENDIX H

PHOTOS RELATED RESEARCH PROJECT

The researcher submitted letter to H.E. Dr. Hang Chuon Naron, Minister of Education, Youth, and Sport of Cambodia, to get approval for research at RULE (April, 2022).

The researcher submitted letter to H.E. Bishop Olivier **Schmitthaeusler,** Apostolic Vicar of Phnom Penh, Founder and Chancellor of Saint Paul Institute for supporting letter to do research (March, 2022).

The researcher met and presented a research project to Dr. Soeun Sophorn, vice-rector responsible for academic affairs at RULE (December 2022).

The researcher met and presented research project to Dr. Tin Heng, head of the information technology department in the faculty of informatics and economics at the Royal University of Law and Economics (RULE) (July, 2022)

The researcher visited e-learning video record room at Sisowath High School, Phnom Penh, Cambodia (July, 2022)

Royal University of Law and Economics (RULE), Phnom Penh, Cambodia (May, 2023)

The researcher met and received schedule for data collection as well as interview schedule from Prof. Sau Sivutha, Head of Academic Affairs at RULE (June, 2023)

Student at RULE (July, 2023)

IT student at RULE attend classes with Microsoft Team (December, 2023)

CURRICULUM VITAE RELATED TO ACADEMIC

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PERSONAL DATA

Sex	:	Male
Date of Birth	:	10 January 1983
Place of birth	:	Kompong Thom Province, Cambodia
Marital Status	:	Married with two daughters and one son
Nationality	:	Cambodian

EDUCATION

August 2019- March 2024:		Doctor of Philosophy (Ph.D.) in Teaching and Technology at Graduate School of Business and Advanced Technology Management, Assumption University of Thailand. **Thesis topic:** College Students' Behavior Intention and Influencing Factors on E-Learning Platform of Higher Education in Phnom Penh city, Cambodia.
2013-2015	**:**	Graduated Master Degree in Royal University of Law and Economics in major of General Management focus on Business Administration.
Feb 2007- May 2008	**:**	1st Completed leadership skills and social formation in Fondacio Institute of Formation, Asia in Philippines (diploma). 2nd Completed Introduction Theological Formation in SVST of Adamson University, Philippines (Certificate).
2002-2006	**:**	Completed Bachelar Degree Student at Royal University of Agriculture, Faculty of Agricultural Economic and Rural Development.
1998-2001	**:**	Graduation at Kompong Thom High School.

PROFESSIONAL EXPERIENCES

February 1st 2017 – Now (2024)	:	Director/Rector of Saint Paul Institute
May 30th, 2008- 2016	:	Project Coordinator of Youth, Teenager and children in Phnom Penh Vicariate, CAMBODIA
2011-2016	:	Executive Director of Saint Justin School (Phnom Penh Vicariate Project)
May, 2008-May, 2010	:	1st Assistant Director in Catholic Church Student Center 2nd Teaching on Leadership and Management.
2002-2006	:	English Teacher
Currently involvement (2017-Currently 2024)	:	1- Steering Committee Member of Catholic Alliance for Charity and Development (CACD) 2- Member of Board of Association of Southeast and East Asian Catholic Colleges and Universities (ASEACCU)

TRAINING, SHOLARSHIP, INTERNATIONAL PROGRAM

-January 22- 24th, 2024	:	Dissertation and journal publication, Bangkok, Thailand.
-July 26-28th, 2022	:	Higher education development at Boston, United State of America.
-August 20-28th, 2019	:	Internationalization and leadership, Seoul, South Korea
-August 6-10th, 2018	:	Executive Leadership Essentials, Manila, Philippine.
-September 11-16th, 2017	:	Proposal Writing and Project Development, Manila, Philippine.
-August-Sept, 2015	:	Leadership and Project Management in Manila, Philippine.
-Nov20-Dec2, 2014	:	Project Management in Manila, Philippine.
-April 3-5, 2013	:	Making Decision process, Phnom Penh Cambodia.
-Dec 5-7, 2012	:	Event management, Phnom Penh Cambodia.
-Nov 6-16, 2012	:	Proposal writing and project management training, Manila, Philippines
-Aug 26-Sep 3, 2011	:	Leadership Training, France.
-Jan25-29, 2010	:	Social Development Plan training, Pattaya, Thailand.
-April29-May4, 2009	:	Discernment Process and planning, Ipoh, Malaysia.

-April22-29, 2009	:	Youth Ministry Concerning, Penang, Malaysia.
-January6-9, 2008	:	Peace Building, in Philippines
-May 30-31, 2007	:	Miriam College Institutional Network for Social Action (INSA), Philippines about "Developing an Environment- Friendly Lifestyle"
-July, 2006	:	Training with COMPED about Compost fertilizer use on farm production.

ATTENDING INTERNATIONAL EVENT

-August 21-26th, 2023	:	29th ASEACCU conference, Baguio, Philippine.
-August 19-22th, 2019	:	27th ASEACCU conference, Seoul, South Korea.
-August 21-26th, 2018	:	26th ASEACCU conference, Hiroshima, Japan
-August 21-27th, 2017	:	25th ASEACCU conference, Bangkok, Thailand.
-September, 2017	:	Asian Youth Day 7th (AYD7) in Indonesia.
-August 8-22, 2014	:	Asian Youth Day 6th (AYD6) in Deajon, South Korea.
-Nov 15-24, 2012	:	Asian Youth Congress in Manila, Philippine
-August 9-24, 2011	:	Jointed the World Youth Day in Spain (ITALY, SPAIN)
-Nov 20-27, 2009	:	Asian Youth Day 5th (AYD5) in Imus, Philippines
-May1-9, 2009	:	International Youth Exchange, KL, Malaysia.
-15-31August 2005	:	Jointed the World Youth Day in German (ITALY and German).

Phnom Penh, Cambodia

24th April, 2024

PHON SOPHAL Ph.D.

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