

Doctoral Dissertation

**Factors Influencing Engagement of Private Tutoring at Cambodian Upper
Secondary Schools**

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Factors Influencing Engagement of Private Tutoring at Cambodian Upper Secondary Schools

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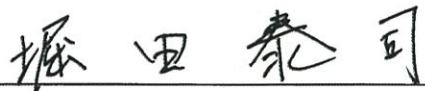
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We hereby recommend that the dissertation by Mr. SOEUNG SOPHA entitled "Factors Influencing Engagement of Private Tutoring at Cambodian Upper Secondary Schools" be accepted in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY.

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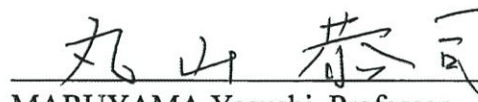
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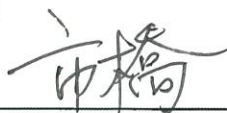
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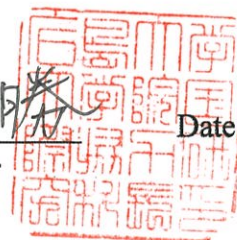
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Soeung Sopha

*To my dearest father, **Soeung Samhan** (1952-1977), and
my respected uncle, **Ung Saroeun** (1944 - 2004), in loving memory!*

ABSTRACT

Private tutoring (hereafter PT) has gained popularity across continents in different forms and scales. Some studies pointed out that PT expansion is prominent in Asia—especially in countries driven by Confucian culture—under competitive educational environments (e.g., leaving/standardized examination and university entrance examination). Specifically, Cambodian students have been facing challenges in learning the entire curriculum by studying only in public schools. Thus, students invested their financial capital in PT before or after official school hours to be able to continue the school syllabus in effective or appropriate teaching. This pushed students who could not afford the same at a disadvantage, especially in the secondary school leaving examination. In this regard, studies and media reports criticized the quality of public education, including teacher unprofessionalism and inequity issue in Cambodian society.

Cambodian authorities succeeded in expanding school access to all geographical areas, yet its education faced other hindrances such as equity and quality of education. Studies and media criticized the government's low educational expenses, which imposed financial burden on individual households, including PT expenses. Parents and students invested both money and time before and after the official school hours through PT to continue learning to ensure academic success. It also compelled schoolteachers to look for additional job(s), including offering PT to their own students to supplement their family's daily needs. Due to insufficient salaries, Cambodian schoolteachers engaged in PT with their own students. Their engagement has been unfortunately categorized as unprofessional and oppressive. The Royal Government of Cambodia (hereafter, RGC) and the Ministry of Education Youth and Sport (hereafter, MoEYS) have launched a series of programs (i.e., abolished school fee and informal payment including PT, increased schoolteachers' salaries, amended professional ethic code of conduct

which was known as “discouragement” scenario to regulate PT in literature, and been through some educational reforms); nonetheless PT practices are prevalent. Furthermore, the rate of students who undertook PT outside school hours was approximately 76% from 2015 to 2020, according to the national survey of Cambodia’s Socio-Economic Survey. Therefore, the question to be posed is *why PT is still in demand at Cambodian upper secondary schools*. In response to this, this study aimed to answer two research questions:

- (1) Why did schoolteachers continue to offer PT at Cambodian upper secondary schools?
- (2) Why did students and parents continue to invest in PT at Cambodian upper secondary schools?

To answer these research questions, the study employed both interview and survey approaches for data collection and analysis to gain insights into the issue of PT at Cambodian upper secondary schools. Narrative data were collected from 89 interviewees, including different educational stakeholders (i.e., schoolteachers, Grade-12 students and their parents, school principals, (vice-)directors of the Provincial Office of Education, and staff at the policy level), and 198 schoolteachers and 862 paired students and parents through a self-reported survey. These data were collected from 12 upper secondary schools in Phnom Penh and four different provinces through online applications due to the school closure following the COVID-19 pandemic.

Key findings of research question #1: The first research question aimed to gain insights into why schoolteachers at upper secondary schools continue offering PT to their Grade-12 students. Overall, *shortage of instructional time* to complete the school syllabus, *low salaries*, *teacher specialization*, and *parents’ and school principals’ requests*, were the primary reasons

influencing Cambodian schoolteachers to continue engaging in PT with their students. The study unexpectedly found that *anti-cheating examinations ironically impacted schoolteachers to continue PT* in response to increased demand because students and parents feared failure in their baccalaureate examinations.

Key findings of research question #2: The second question intended to investigate why Cambodian Grade-12 students and their parents continue investing in PT. The study yielded some key findings, such as *schoolteachers' uncaring pedagogies* and *oppression in school* and *feeling of fear caused by the anti-cheating examination*. Additionally, *peer influence* and *inability to provide academic support at home* were reasons parents continued investing in PT for their children. This current study also observed the association of students' learning tracks (science and social science) with their PT engagement rather than only observing the rates of students taking PT of each academic subject as the previous studies did. This insight could contribute toward the understanding of the policy development as well as MoEYS on the challenges in promoting science track at upper secondary school. As a result, the study unveiled that students' learning track significantly impacted their decision to engage in PT. Both data analyses consistently revealed that students in science were more likely to undertake PT than their peers in social science because their mathematics and science tests were more challenging. However, some students in social science who switched their track at university also invested in PT of subjects not for their baccalaureate examination but for their university entrances.

Key findings for the main research question: Although the anti-cheating examination policy provides Cambodian Grade-12 students with an equitable opportunity, it was ironically found to expand PT engagement and burden some students and parents, particularly students who followed science track in this study. Students and parents feared failure at their baccalaureate

examination since they did not trust in only learning in school. PT remained in demand due to the insufficient instructional time to complete all contents of the MoEYS syllabus. Additionally, PT was the only available additional education choice. Contradictorily, from leadership positions' viewpoint, they criticized schoolteachers' lateness and absenteeism in their daily teaching as a cause of lack of instructional time. In this aspect, they viewed the shortage of instructional time as a malpractice/trick of schoolteachers to blackmail their students for PT, as discussed in the literature. This could imply that lack of school accountability and monitoring system and poor school leadership of school principals were why schoolteachers could engage in PT, as studies found in different developing countries.

Students' learning track was also found to impact their continuation with PT. Students in science track faced more financial burdens and challenges gaining passing grades. On the contrary, students in social science were less likely to do these because they did not need to undertake PT for their core examination subjects. They could learn most of those subjects through memorization skills while their peers required more practice (i.e., mathematics, physics, chemistry, and biology). About 90% of social science also took mathematics and Khmer composition, compulsory subjects for both learning tracks. Nevertheless, they received less burden in terms of finances and tests. These fewer burdens might affect the declined rates of students enrolled in science at upper secondary school. For example, the rates of Cambodian upper secondary school students enrolled in science track dropped from about 96% in 2014 to over 36% in 2021, according to Cambodia's Department of General Education. The decline in science track showed the great concern for MoEYS when attempting to promote science and mathematics. Nonetheless, some students may return to the science track when enrolling in university, as shown in this study. However, local studies pointed out only a small percentage; for example, about 10% of students in social science at upper secondary schools enrolled in science-related fields at university.

In brief, PT for Grade-12 students, in particular, remained in great demand among schoolteachers and students and their parents in Cambodia due to factors such as fear of failure in the anti-cheating examination and students' learning track. PT played a role in the continuation of the school syllabus and the supplementation of what was excluded in the school, especially practical skills. Ironically, implementing an anti-cheating examination, one of the 2014 educational reform agenda, contributed toward the PT growth in Cambodia, although it could give the nation the equitable opportunity in the Grade-12 baccalaureate examination. This expansion was associated with the limited trust in the teaching and learning quality during public school through the common excuses of insufficient instructional time. This was considered a “teacher trick” from the leadership position's viewpoint. This growth in PT demand imposed financial burdens upon students' families, especially science track. Although the PT fee remained affordable for many Cambodian households, its expansion developed an inequitable opportunity for particular disadvantaged groups. This expansion would push them into debt and shift some students from a science track to social science to gain social mobility through their baccalaureate examination.

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ABBREVIATIONS

ADB	: Asia Development Bank
CPP	: Cambodia's People Party
COVID	: Coronavirus Disease
CSES	: Cambodia Socio-Economic Survey
DOE	: District Office of Education
EMIS	: Education Management Information System
EFA	: Education for All
FUNCINPEC	: Front uni National pour un Cambodge Indépendant, Neutre, Pacifique, et Coopératif (<i>in French</i>), which translated <i>in English</i> as National United front for an Independent, Neutral, Peaceful, and Cooperative Cambodia
GDP	: Gross Domestic Products
JICA	: Japan International Cooperation Agency
KAPE	: Kampuchea Action to Promote Education
MoEYS	: Ministry of Education Youth and Sport
MoP	: Ministry of Planning
NIS	: National Institute of Statistics
POE	: Provincial Office of Education
PT	: Private (supplementary) Tutoring
RGC	: The Royal Government of Cambodia
STEM	: Science, Technology, Engineering and Mathematics
UN	: United Nations
USAID	: United States Agency for International Development
UNTAC	: United Nations Transitional Authority in Cambodia
WB	: World Bank

Chapter 1: INTRODUCTION

This chapter presents the current study's intent and briefly describes the ways in which the intent was investigated. First, it introduces private tutoring (hereafter, PT) by schoolteachers and its overall impacts on education before highlighting the problem to be studied in the Cambodian context. Second, it presents the study's purpose and questions aimed to be addressed with a brief explanation of how they were answered. Finally, the significance of the study, delimitation, and some related terminologies are presented.

1.1 Statement of problem

In many countries, PT was commonly known as “shadow education” in the early 1990s. The “*shadow*” metaphor dated since the early 1990s, following Stevenson and Baker's pioneer work in 1992 (Bray et al., 2018). This term is widely used to describe PT as its curriculum mimics the mainstream one (Bray, 1999b). Although the definition of PT varies based on context (Brehm, 2017), a standard definition of PT is teaching academic subjects in exchange for a fee from individual students and parents (Bray, 2009). This study employed this common definition of PT but scoped it to only PT by schoolteachers. PT's goal is to assist students in learning subjects of the school curriculum better. In its literature, activities related to PT have been widely categorized as supplementation, academic, and privateness (Bray, 2017). The present study primarily focuses on the first two classifications—supplementation and academic—as they are related to academic subjects taught at and examined by the school, which were aligned with the current study's intent.

1.1.1 An overview of the problem

PT caused significant issues on equity and quality of education, although some positive contributions had been noted. Previous studies reported some positive contributions of PT

toward education; for instance, supporting slow learners to catch up with their peers (Baker et al., 2001), providing additional instructions and fostering academic achievement (Brehm et al., 2012; Entrich, 2020; Ghosh & Bray, 2020), enhancing self-esteem (Hajar, 2018), improving parental involvement (Silova et al., 2006), and supplementing schoolteachers' income (Bray, 1999a; Dang & Rogers, 2008). However, its negative effects are focused upon in the literature because PT created equity in education through schoolteacher unprofessionalism due to insufficient salaries (see Bray, 2013b, 2020; Guill et al., 2021). In this regard, researchers and educators have alerted relevant authorities and policymakers to pay attention to the quality and equity of education at national and international levels. Nevertheless, some governments and policymakers seem to be reluctant to take action on PT expansion; some also consider it out of their scope (Bray, 1999b, 2003; Bray et al., 2016; Jayachandran, 2014; Lee, 2005; Mori & Baker, 2010). These impacts could be observed from three dimensions: society, students and their parents, and schoolteachers. For the *society*, the expansion of PT has been detrimental to social equality, which contradicts the 1966 International Covenant on Economic, Social and Cultural Rights: "Secondary education in its different forms, including technical and vocational secondary education, shall be made generally available and accessible to all by every appropriate means, and in particular by the progressive introduction of free education" (Article 13) (Bray & Kwo, 2013; Brehm & Silova, 2014a; Jung, 2018; Manzon & Areepattamannil, 2014). Furthermore, socioeconomic status and geographical areas affected *students'* choices to access PT. For instance, well-to-do families invested in PT in different forms for their children to ensure their academic success, unlike their economically underprivileged peers (Bray, 2009; Dang & Rogers, 2008; Kwok, 2010; Mahmud & Kenayathulla, 2018; Zhang & Bray, 2017). Moreover, students in urban areas had more access to various forms of PT compared to their rural counterparts (Bray, 2009, 2017; Bray & Bunly, 2005; Brehm et al., 2012). Simply put, students may not be able to learn the school curriculum properly unless they availed PT.

Therefore, PT pushed underprivileged students to a disadvantage—particularly in secondary examination—increased financial burdens and students’ workload, and diminished their interest in public school (Hammond, 2018; Jayachandran, 2014). Similarly, *schoolteachers’* effective teaching and professionalism in public schools are hampered by PT, which is an avenue for supplementary income for them (Bray, 2013; Bray et al., 2016, 2018; Brehm et al., 2012; Brehm & Silova, 2014b; Hammond, 2018). Specifically, PT undermined the teaching profession in low-income countries where schoolteachers generally engaged in PT for additional income. The primary reasons for engaging in PT include low salaries and lenient or non-existing PT regulations, compared to their counterparts in more developed countries where schoolteachers were offered sufficient salaries (Bray, 2015; Kobakidze & Suter, 2020; Manzon, 2018).

The expansion of PT and schoolteacher unprofessionalism generated *social inequity*, eroded *societal trust* in public education, and *intensified academic competition* through standardized examination (see Bray, 2017; Bray & Kwo, 2013; Silova, 2009). This phenomenon digresses public education from its original purpose: “education *of* the public, *for* the public, and accountable *to* the public” through too much focus on academic performance/test scores and other forces such as “marketization, privatization, and commercialization” (Biesta et al., 2021 p.1-2). Therefore, when learning competition and high-stakes examinations have become the government’s intent, PT starts to expand (Entrich, 2014; Tesar et al., 2021; Yung, 2021).

1.1.2 Issues in the Cambodian context

Cambodia, a low-income country, has also been influenced by international donors and the global education agenda (e.g., Education For All [EFA], Millennium Development Goals [MDGs], Sustainable Development Goals [SDGs], specifically SDG4), which urged the

country to reform its education and practices quickly. With support from various international donors/agents (e.g., USAID, JICA, World Bank, ADB), these adaptations propelled school access for the nation between the 1990s and late 2000s before concerns about educational quality were brought into its reform agenda in the 2010s. The 2014 educational reform is an example of steps taken to preserve the quality of public school education (see Bredenberg, 2022).

Although Cambodian authorities succeeded in expanding school access to all geographical areas, they faced hindrances such as equity and quality of education (Bredenberg, 2022; Brehm et al., 2012; Keng, 2009; Ogisu & Williams, 2015). Noticeably, studies and media criticized the government's low educational budgets (see Figure 2.3), which imposed financial burden on individual households for informal payments—including PT fees—within the fee-free education system. Parents and students invested money and time after the official school hours through PT to continue learning the entire school syllabus and ensure academic success (Brehm et al., 2012; Brehm & Silova, 2014b; de Guzman, 2007). Additionally, it compelled schoolteachers to seek additional job(s), including supplying PT to their own students for some extra income (Brehm, 2015; Brehm & Aktas, 2020; Cambodia Independent Teachers Association [CITA], 2010; Naren & Blomberg, 2014; Tandon & Fukao, 2015). The pass rate of Grade-12 students rapidly declined in the 2014 baccalaureate examination. Bredenberg (2022, p. 70) criticized that the huge plummet in pass rate signaled an ineffectiveness of both public secondary school and PT classes in preparing students for their baccalaureate examination. However, this rate has gradually recovered in subsequent years (see Table 2.4). The Ministry of Education Youth and Sport (hereafter, MoEYS) (2018b) reported positive changes in schoolteachers' and students' behavior and performance in their teaching and

learning. However, to the best of our knowledge, none of the empirical studies have analyzed these changes. Therefore, this study aimed to bridge this gap.

Studies have reported *low salaries* as one of the primary causes of the PT expansion and unprofessional or corrupt practices in education (e.g., shortening syllabus contents during school hours, absenteeism for another additional job for supplementary income) (Benveniste et al., 2008a; Bray, 2003; Bray et al., 2016, 2018; Dang & King, 2016; Tandon & Fukao, 2015). Cambodia is no exception to these issues among low-income countries. Empirical studies, reports, and media reported a strong relationship between teachers' unprofessionalism and PT expansion, as noted from the 1990s during (re)modernizing its education system and committing toward EFA (see Brehm & Silova, 2014). Dawson (2009) noted that the PT expansion had a significant negative influence on Cambodian families' expenditures, and placed underprivileged students at a disadvantage (e.g., missing some parts of the school syllabus, repeating grades, and dropping out). NGO Education Partnership (2007, p. 17) and de Guzman (2007, p. 13) reported that a family's total expenses on PT per child at Cambodia's basic education level was 72% of the total school fee per year. The expense was much higher in Phnom Penh than in other areas. Although Cambodia does not have any specific policy on regulating PT, as a response to the society and media's criticism, the RGC and MoEYS have aimed to stop PT since the mid-1990s through implementing several programs (e.g., abolishing school registration fee, forbidding all types of informal payments including PT fee, decentralizing school management and amending professional ethics code of conduct) to minimize schoolteachers' unprofessionalism and PT engagement (see Bray & Bunly, 2005; Brehm & Silova, 2014b; Dawson, 2009). For instance, Articles 13, 17, 25, and 27 of teaching professional ethics code of conduct instruct teachers not to engage in personal gain, including offering PT (RGC, 2008). In the literature, using this form of regulation to instruct

schoolteachers not to engage in PT is known as *discouragement*—one of the PT regulations or scenarios (Bray & Kwo, 2014, pp. 44–45). Additionally, RGC increased the rates of expenditure on education and teachers’ salaries sequentially. For example, schoolteachers’ salaries have also substantially increased about threefold as MoEYS’ education budget increased from USD 343 million in 2014 to USD 848 million in 2019. About 80% of this increase was attributed to the growth of the public wage; for example, the starting salaries for lower secondary schoolteachers increased from USD 1,259–3,876 to USD 1,814–4,222 per year within the same period (MoEYS, 2021b; World Bank, 2020b). Yet, empirical studies and media reports revealed continuation of unprofessional behavior among schoolteacher for supplementary income through PT engagement (see Dawson, 2009; Khy, 2019). For instance, they withheld educational content and slowed down their teaching during public school, embarrassed non-tutored students, and tended to favor their tutees by giving them higher grades and allowing them to cheat during examinations (e.g., Bray, 2013; Bray et al., 2016, 2018; Brehm et al., 2012; Brehm & Silova, 2014b; Dawson, 2009). Maeda (2019) also depicted that schoolteachers’ teaching pedagogies and unprofessionalism influenced students’ engagement in unethical and corrupt practices, mainly cheating. Cheating in the examination was often mentioned as a part of research on PT (e.g., Bray et al., 2015; Brehm, 2015; Dawson, 2009, 2011). In the same line, studies and media indicated that Cambodian students engage in such unethical practices from a young age (Channyda & Cuddy, 2015; Dawson, 2009, pp. 62, 71). In this regard, society and stakeholders called for serious action from the government against unethical practices to promote equity and quality in education and reinstate trust in public schools (see Channyda & Cuddy, 2015; Khiev & Ty, 2011). RGC and MoEYS responded to schoolteachers’ low salaries and employed “discouragement” to deal with PT, which was labeled as an unethical practice by RGC in 2008. Nevertheless, national surveys and media studies revealed that schoolteachers and students continued engaging in PT. The rate of

students undertaking PT was approximately 76% in upper secondary school from 2015 to 2020, according to Cambodia Socio-Economic Survey (hereafter, CSES) (see Figure 2.2). Therefore, the question as to why PT is still in high demand at the school level in Cambodia needs to be addressed.

1.2 Purpose and research questions

This study investigated the relevant educational stakeholders' perceptions of PT to identify the reasons they engage in PT at Cambodian upper secondary schools. Therefore, this study aimed to answer the main research question: ***Why do schoolteachers, students, and their parents still engage in PT at Cambodian upper secondary schools?***

To realize this research intent, the study aimed to address the following sub-research questions:

- (1) Why did schoolteachers continue to offer private tutoring at Cambodian upper secondary schools?
- (2) Why did students and parents continue to invest in private tutoring at Cambodian upper secondary schools?

The study employed interview and survey approaches for data collection and analysis. Data were collected from schoolteachers, students, and parents who engaged and did not engage in PT, and other relevant stakeholders such as school principals, (vice-)directors of the targeted Provincial Office of Education, and staff in charge of secondary education at the policy level. The inductive approach for content analysis was employed for interview data by coding concepts according to the frequency of words or phrases appearing in the transcripts. Adding to this approach, the interactive model was employed to ensure the enrichment of the information or data since this model allows the researcher to move backward and forward during the analysis. Regarding the survey data, a binary logistic regression was employed as

the outcome variable of this study was dichotomously coded. Then both findings and results were combined and compared for an insightful discussion.

1.3 Significance of the study

First, although previous studies' findings emphasize the causes and effects of PT in Cambodia, they paid more attention to this phenomenon in basic education. However, the actual situation and policy implications regarding PT at Cambodian upper secondary schools for equity issues have not been specified. Therefore, this study aims to bridge this gap. Second, existing literature emphasized both positive and negative aspects of PT, which could caution relevant stakeholders, researchers, and policymakers toward PT expansion in general. However, there is still limited discourse among them, perhaps due to the limitation of methodological use to understand PT. Several existing studies have employed a quantitative approach. Therefore, the studies did not understand in-depth phenomena such as how PT emerged or developed in a specific context (Jung, 2018). Thus, this study combined both interview and survey approaches for its design to gain insight into the PT development in the Cambodian context. Third, this study will project more concrete pictures of how PT for their own students is deteriorating to the conditions of equitable distribution of educational opportunities to upper secondary school students. Furthermore, this study will elucidate the effectiveness and repercussions of secondary education policies and explain why PT in Cambodia still exists and is in demand. Finally, to the best of our knowledge, this empirical study is the first of its kind to investigate the effect of learning tracks—science and social science—on PT engagement in the Cambodian context.

1.4 Definition of terms

Some important terms were frequently used in this study report, as listed below. Moreover, some definitions of terms were adjusted accordingly to ensure contextual understanding during

the interpretation and translation since most of the terms used in this field of study were written in English.

- ***Schoolteachers*** or ***teachers*** refer to public or government teachers.
- ***Tutees*** or ***tutored students*** are those who take PT classes.
- A ***tutor*** is a schoolteacher who provides tutoring regardless of the tutoring type s/he offers.
- A ***non-tutee*** or ***non-tutored student*** is a student who does not undertake PT classes.
- A ***non-tutor*** is defined as a schoolteacher who does not engage in private tutoring.
- A ***mainstream school*** is defined as a public or government school in this study.

Some terms should be identified when referring to outside-school learning activities in the Cambodian context. Cambodians commonly address the learning process outside official school hours as “***supplementary***” ([*banthem*] in the native language, Khmer) regardless of its arrangement to cover their practices. *Four* common terms are used to refer to *supplementary* or any outside-school learning activities; however, they differ from one another.

- ***Supplementary*** classes are learning groups formed by students for academic subjects. It also means *study club* ([*kloeb seksaa*] in Khmer), where students teach other students of the same or cross-age/grade free of charge. It is a self-study group in which students learn together by taking turns explaining and supporting each other without schoolteachers' involvement. One student who is good at one subject leads that learning session accordingly. The term “***supplementary***” also refers to study sessions beyond official hours that students pay to attend. It is commonly known as fee-paid tutoring or fee-extra class ([*rien kuor*] in Khmer).
- ***Remedial*** courses or classes are offered by schoolteachers of concerned subjects to provide more instructional hours to slow learners. It is called [*rien bampon*] in Khmer. Teachers of this course are assigned by the school principal. The payment scales vary according to

school areas and possibilities of each school, while some schools may receive some financial contribution from the concerned students' parents based on their agreement.

- **Preparation** is a learning course that is arranged by schools some months before the national/baccalaureate examination. It is called [*rien trieam*] in Khmer. This course is offered to every student in the diploma-granting grades (i.e., Grades 9 and 12) to revise and practice knowledge and skills before their national/baccalaureate examination. Some schools invite teachers to teach this course voluntarily, whereas teachers in other schools are financially supported by a politician in charge of their area. This course is not compulsory, but the Provincial Office of Education (hereafter referred to as POE) encourages each school to conduct it.

This study only covered *supplementary* learning, [*rein kuor*], which students must pay for. It is purposively termed as **PT** to avoid misinterpretation of the term “*supplementary*” by informants, although the term “private supplementary tutoring” has been used in the study of PT in the same context so far. Additionally, PT in this study is defined as ***fee-paid learning of academic subjects outside official/school hours offered by public school teachers to their students for additional income.***

- **Private tutoring types:** Brehm (2021) described five available types of PT in Cambodia in his latest book. These types are also widely used in studies focusing on PT.
 - **Regular PT** is a tutoring type that mimics mainstream school curricula and resembles mainstream schools in both class size and layout.
 - **Special PT** is a tutoring class that targets different markets in the form of one-to-one or small groups of students.

- ***PT during holidays*** is a tutoring class conducted before the new school year commences.
 - ***PT at private school*** refers to a tutorial school or center offering various tutoring classes. This type is growing significantly in city center.
 - ***Online PT*** is offered through online platforms, and its popularity is increasing due to growing disposable incomes and the COVID-19 pandemic.
- ***PT regulations:*** Regarding the context in which schoolteachers provide PT, *four* basic scenarios are used when referring to PT regulations (Bray & Kwo, 2014 pp. 44–45; Liu & Bray, 2020, p. 364).
 - ***Official prohibition*** is a scenario in which mainstream schoolteachers are not allowed to offer PT. They cannot supply this service to students for whom they are responsible at the mainstream school or students studying in both the school in which they are employed and other schools (e.g., Bhutan, Japan, Korea).
 - ***Discouragement*** is a scenario in which professional codes of ethics, rather than regulations, deter teachers from offering PT. This scenario is only used to prompt the teachers to not offer PT (e.g., Cambodia, China, Georgia).
 - ***Permission if approved*** is a situation wherein teachers cannot offer PT unless they are permitted by the school or education authorities based on several conditions (e.g., Malaysia, Singapore, Vietnam).
 - ***Laissez-faire*** is a scenario that leaves the decision in the hand of teachers and their clients (e.g., Macao, Philippines, Thailand).

1.5 Delimitations of the study

This study had several limitations. First, the focus of the study was on students' and teachers' decisions on PT engagement at the upper secondary school level, particularly only grade 12.

Therefore, data representing students and teachers from other grades, such as primary and lower secondary school as well as other grades at upper secondary school, were not included. Additionally, the scope of PT was limited to only academic subjects (i.e., subjects required for the national/baccalaureate examination) rather than PT of non-academic subjects (e.g., computer, music, sports), which are not related to this purpose. Therefore, the study's inferences and conclusions were restricted within this capacity. Second, the data for this current study were collected virtually during the school closure following the COVID-19 outbreak. Thus, there were limitations in terms of obtaining information and data due to the instability of internet connectivity. Third, some selected schools in targeted areas could not be approached for data collection because they were used as quarantine centers or were in the red zone. At the same time, some schools decided not to participate after discussing the topic of the study and its purposes, although the researcher submitted the MoEYS' permit. Some of them requested to wait until data could be collected face-to-face. Therefore, this reduced both research sites and sample size, which may affect the possibility of generalizing the study findings. Finally, as the data for this study were self-reported and auto-biographical, the study acknowledged that some informants might have generated false/inaccurate memories (Schwarz & Sudman, 1994).

1.6 Research ethics

Since this is a cross-sectional study involving data collection from relevant individuals, research ethics were met through the following steps. First, we sent a letter to request a research permit to Cambodia's MoEYS for approval to conduct the field study from the targeted upper secondary schools. Then the approved research permit was sent to the selected Provincial Office of Education Youth and Sport to inform about the targeted schools and research process as well as the duration for data collection; following this, the permit was sent to the targeted upper secondary schools including piloting provinces and schools (Appendix 1). Since the data

for the study was collected online, the researcher approached each school principal for approval to work with teachers responsible for the selected grades. Next, we contacted students for their consent to participate as respondents before the links for survey questionnaires (for students and parents) were sent out to them. A similar process was also conducted with targeted schoolteachers. In addition to this, prior to the fieldwork, the researcher was approved by the Research Ethics Committees of Hiroshima University to claim that the research abides by the research ethics (Appendix 2).

1.7 Organization of the dissertation

This dissertation is structured into eight chapters. Each chapter presented relevant issues of the study's intent that PT is still in demand in Cambodia. Chapter *one* introduces the focus of the study by presenting the research problem, study's purpose, and research questions, including how they would be investigated in brief. Then it highlights the study's significance, followed by definitions of related terms, delimitation of the study, and research ethics. Chapter *two* exhibits the Cambodian case by highlighting its education situation and historical development, including the examination system, the incidence and consequences of PT, and commitment toward regulating PT. Chapter *three* presents the relevant literature by highlighting the overall concepts and nature of PT, evidence from previous local and international studies on driving factors influencing teachers to engage and students as well as parents to invest in PT, and conceptualizes the current study's conceptual framework. Chapter *four* explains the study design, sampling process, instruments, and data analysis. Chapter *five* and chapter *six* report the results and findings of each current study's research question. Each chapter presents a brief research methodology used to address its aim before presenting its results and ends with a brief summary. Chapter *seven* discusses results and findings from each research question respectively and draws a conclusion and final remarks for implications in Chapter *eight*.

Chapter 2: CAMBODIA'S EDUCATION AND PRIVATE TUTORING

This chapter presents a brief overview of Cambodia's general education system and PT in particular to understand its opportunities and challenges toward the research topic. This chapter starts with historical development in Cambodia's education by presenting an overview of the general goal, followed by a specific education level. Moreover, it shows particular syllabus patterns, especially differences in the learning tracks, followed by examination systems and PT. Additionally, this chapter highlights the efforts made by the MoEYS and RGC toward improving equality in education.

2.1 Overview of Cambodia's education

Before presenting the current education system, the section presents a brief historical development of the country and its education system to elucidate some perspectives which may influence its later educational implications.

2.1.1. Brief historical development

Cambodia has a long history since it was known as a Khmer Empire in the 19th century. From the mid-19th century to 1953, Cambodia was a French colony. During colonization, Cambodia's education could only operate inside Buddhist pagodas. This only could educate some Cambodian males who became Buddhist monks rather than the other males and their female population. Cambodia obtained independence from France in 1953 under the leadership of King Norodom Sihanouk; a formal education system was then installed for the nation. About two decades after the independence, Cambodia's education system was remarkably improved as the king's ambitious plans to build many schools and universities for human resource development. No later than 1970, King Sihanouk was overthrown through the coup d'état led by General Lon Nol. However, Lon Nol's success could last only about five years before Pol

Pot took power from April 1975 until January 1979. This period was known as the genocide regime. Cambodia's education system was stopped during this regime. About two million people out of about seven million people were killed, including the most educated people and skilled laborers. With support from Vietnam and the former Soviet Union, the People's Republic of Kampuchea defeated the genocide regime in 1979. Nevertheless, Cambodia was in the civil war until the 1991 Paris Peace Agreement Accords, which led to the free national election in 1993 organized by the United Nations. The election resulted in two Prime Ministers – Prince Norodom Ranariddh from the FUNCINPEC party and Hun Sen from Cambodia People's Party (CPP). Later, Hun Sen won the majority of the seats in Cambodia's parliament and assumed the office of the Prime Minister, a position he still holds as of 2022. However, scholars noted the changing trend in education, which led to the current education reform in 2014, was immediately launched after CPP experienced a considerable loss of seats at the national parliamentary in the 2013 national election¹ as gaining back the youth's votes was identified as crucial political strategies for CPP (Bredenberg, 2020; Kampuchea Action to Promote Education [KAPE], 2014; Maeda, 2019). However, Cambodia's education has been through some other reforms, as briefly described below, before reaching this current one.

Cambodia's general education aims to fully develop all talents and capacities so that they grow and develop intellectually, spiritually, mentally, and physically (MoEYS, 2004, 2006). According to Articles 65–68 of Cambodia's constitution law and Article 31 of its Educational law, the RGC attempts to provide all citizens with free education and ensure equality in education accessibility and quality as well as freedom of education, including the teaching of technology and foreign languages (RGC, 2004, 2007). The current Cambodian education system has been through two reforms. So as to reinstall human resources for the nation after

¹ according to the media reports (see BBC News, 2013; Hunt, 2013; Kung, 2013)

the collapse of the Pol Pot regime, from 1980 to 1987, during the People's Republic of Kampuchea, Cambodia operated its education system based on a "4+3+3" formulation. Its first reform was launched in the academic year 1987–1988. Cambodia operated its general education based on a "5+3+3" configuration. Its second education reform was in the academic year 1996–1997. Cambodia formulated its general education system based on a "6+3+3" configuration (Appendix 3). This refers to the fact that Cambodian students are required to take 12 years to complete its general education certificate while the first nine years are comprised of a "6+3" system, known as Basic Education level.

2.1.2 Basic education

This level is a compulsory education according to Cambodia's constitution law. The basic education level comprises three cycles, enabling students to achieve the academic and extracurricular targets to further their studies at the upper grades, participate in other vocational training, or participate in social life. Two cycles of which are in primary school and another in lower secondary school. Students at the age of six can enroll in primary school.

The first cycle is at primary school, starting from Grade 1 to 3, aiming to ensure that every child has a strong foundation in literacy and numeracy and that they develop their health, physical appearance, moral understanding, learning skills, and life skills. Similarly, the second cycle covers Grade 4 until 6, aimed at expanding and consolidating students' knowledge and understanding of Khmer language, mathematics, learning skills, life skills, moral, and personal development that will enable them to pursue life-long learning and introduce students to content in the areas of science and social studies. In addition, the third cycle is a lower secondary school (Grades 7 – 9). This cycle curriculum is to provide all students with a breadth of knowledge, skills, Khmer language, mathematics, sciences, social studies, life skills,

learning skills, vocational education, moral education, and personal development necessary to enable them to contribute as productive members to the growth of the Cambodian society and continue higher studies, participate in other vocational training or to participate in social life (MoEYS, 2004, pp. 9–10). By the end of Grade 9, students take a leaving examination to continue to the upper secondary school. Students are given an overall pass grade: A (Good), B (Fairly good), C (Average) or D (Failed). There are 10 core examination subjects: Khmer language, mathematics, physics, chemistry, biology, history, geography, earth and environmental studies, moral-civics, and selective foreign language (English or French). The national curriculum is taught for 38 weeks per academic year. Students are scheduled to study five days a week and five study hours per day at primary school, whereas six days a week and four to seven study hours per day at lower secondary school (MoEYS, 2016b). Table 2.1 illustrates the study subjects and hours of each cycle (MoEYS, 2004, 2006).

Table 2.1: Distribution of subjects and instructional hours for Basic Education

N ^o	Subjects	Primary school		Lower sec. school	
		1 st cycle	2 nd cycle	3 rd cycle	
		Grades			
		1 - 3	4	5 - 6	7 - 9
1	Khmer language	9	10	8	6
2	Mathematics	6	6	6	6
3	Science	3	3	4	6
4	Social studies		4	5	6
4	Physical education and sport	2	2	2	2
5	Foreign languages	-	-	*** (a)	4
Total national curriculum		25	25	25	30
5	Local life skills program ^(b)	2 - 5	2 - 5	2 - 5	2 - 5
Total weekly hours		27-30	27-30	27-30	32-35

Note: ^(a) It operates according to the possibilities in terms of means and the human resources of each school at the primary level.

^(b) A supplement program developed by the school in partnership with parents, local communities, community organizations, and non-government organizations.

2.1.3 Secondary education

The last stage in Cambodia's general education system is an upper secondary school that spans three years (Grades 10 – 12). The national curriculum divides this stage into two levels. The first level (Grade 10) aims to expand and consolidate students' knowledge obtained from lower secondary education; to ensure the provision of significant learning track advice for students to study in Grades 11 and 12 (MoEYS, 2004, p. 11). To ensure better preparation for learning tracks, students take 12 study subjects, and accumulated 32 hours per week as indicated in Table 2.2 (MoEYS, 2010b). During the second semester of each academic year, students start to select the learning track for their second level of upper secondary school. They can choose either science or social science track according to their preference or academic achievement.

Table 2.2: Distribution of subjects and instructional hours for Grade 10

No.	Subjects	Number of instructional hours
1	Khmer composition	6
2	Mathematics	6
3	Languages (English/French)	4
4	Physical education and sport	2
5	Physics	2
6	Chemistry	1.5*
7	Biology	1.5*
8	Earth environmental studies	1
9	History	1.5*
10	Geography	1.5*
11	Moral-Civics	1.5*
12	Home economics	1.5*
13	Elective vocational education program ^(a)	2
Total weekly hours		32

Note: * It can be arranged according to the possibilities of each school

^(a)Subject can be offered such as ICT/Technology, Accounting/Business Management, Local Vocational/Technical subjects, Tourism or Art education; it depends on students' choice, teacher, and resource availability.

Offering learning tracks aims to develop strong competence in science and mathematics at the final stage of general education and provide a clear pathway for students to select majors in higher education (MoEYS, 2010b). Although this guideline requires students to continue with their selected track, students are allowed to switch their track if they wish to, with approval from their school principal.

Table 2.3: Distribution of subjects and instructional hours for Grades 11 and 12

N ^o	Subjects	Instructional hours for Grades 11-12	
		Science track	Social science track
Compulsory			
1	Khmer composition	3	5
2	Mathematics	5	3
3	Languages (English/French)	2	2
4	Physical education and sport	1	1
Electives			
5	Physics	3	2
6	Chemistry	3	2
7	Biology	3	2
8	Earth environmental studies	2	2
9	History	2	3
10	Geography	2	3
11	Moral-Civics	2	3
12	Economics	2	2
13	Elective vocational education program*	2	2
Total weekly hours		32	32

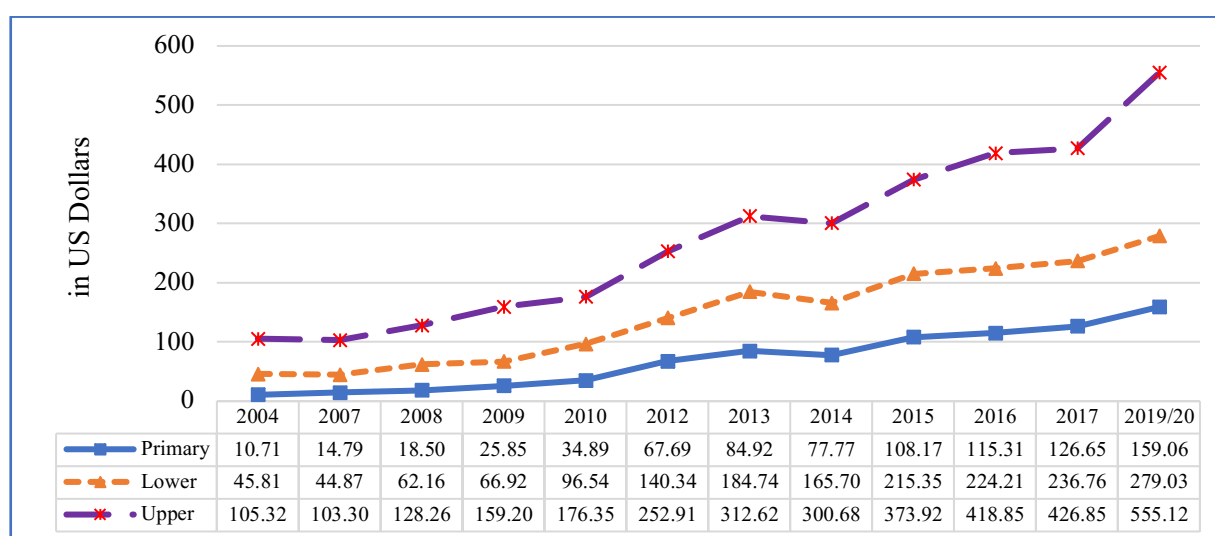
Note: *Subject can be offered such as ICT/Technology, Accounting/Business Management, Local Vocational/Technical subjects, Tourism or Art education; it depends on students' choice, teacher, and resource availability.

The second level (Grades 11-12) aims to provide students with the opportunity for increased specialization through learning track to develop a depth of knowledge in particular subjects or to take training-based vocational subjects to continue higher education, study vocational

subjects, or participate in social life (MoEYS, 2004, p. 12). Students are required to follow one of the learning tracks—science or social science, and their subjects are divided into compulsory and elective. However, some subjects' study hours per week differ based on their track, as seen in Table 2.3 (MoEYS, 2004, 2006, 2010b).

Although Cambodia attempts to offer free education and to enhance equality of education as a response to its constitution law and education law (see RGC, 2004, 2007), results of the nationwide survey conducted by the CSES of the National Institute of Statistics (NIS) found that each household's expenses in education kept increasing every year regardless of education level. The higher level of education their children participated in, the higher expenses each household spent. The expenses raised about double or even more when moving to one higher level, as indicated in Figure 2.1. Although the detailed items of the expenses were not listed in some of the CSES reports, it could be understood from the available ones that alongside school supplies and fees, the expenses included PT fees and costs of gifts for schoolteachers, which MoEYS attempted to abolish since the mid-1990s.

Figure 2.1: Average annual expenses in education per household



Created by author

Source: National Institute of Statistics (2012, 2013, 2014, 2015, 2016, 2017, 2018, 2020)

Note: converted from Khmer riels to US dollars by using an exchange rate of world bank (2022)

2.2 Examination system

2.2.1 Impetus

During schooling, Cambodian students have to take two types of assessment: school-based and national (baccalaureate) examinations. To move to the next grade within the education level (i.e., basic education and secondary education), students must gain at least the average scores in their annual school-based achievement. Their annual achievement is an accumulation of the results of monthly tests and two semester examinations. These school-based assessments are prepared, administered, and marked by the (subject) schoolteachers.

Cambodia used to have the leaving examination at the senior grade (Grade 6) in the primary education level until 1997. This examination was removed in 1997, aiming to increase the promotion rate toward lower secondary education levels as responding to the Education For All (EFA) goals. For the senior grade of basic education (Grade 9) and upper secondary school (Grade 12), students are called to sit for the national examination to achieve a basic and general education certificate accordingly. Not until 2014 did the examination of basic education level become the national standardized one. Its examination was prepared and administered by the MoEYS and invigilated and marked by schoolteachers from other schools in the same province under the supervision of the POE in collaboration with MoEYS (MoEYS, 2010c, 2019e). As stated in 2014, MoEYS delegated the Grade 9 leaving examination to the individual schools. This practice could assist MoEYS in saving around half of the administration costs, which could contribute toward the MoEYS' efforts to raise teachers' salaries (Barron, 2014; Bredenberg, 2022; MoEYS, 2015b, 2019d, 2019f; Naren & Blomberg, 2014).

Regarding the Grade-12 baccalaureate examination, students are required to take an examination of six compulsory subjects and one elective subject which is based on the lucky

draw following the examination reform in the academic year 2013–2014. The compulsory subjects for science track students are mathematics, physics, chemistry, biology, Khmer composition, foreign language (English/French), and one elective subject. Whereas students in social science track take examinations of Khmer composition, history, moral-civics, geography, mathematics, foreign language (English/French), and one elective subject. Students are given an overall pass grade such as A (Excellence), B (Very good), C (Good), D (Fairly good), or E (Average) (MoEYS, 2014b, 2019d).

Table 2.4: Comparison of scores by exam subjects *before* and *after* the 2014 reform

Examination subjects	Science track		Social Science track	
	2010–2013	2014–Present	2010–2013	2014–Present
Khmer composition	75	75	125	125
Mathematics	125	125	75	75
Physics	75	75	50	-
Chemistry	75	75	50	-
Biology	75	75	50	-
Earth-environmental study	50	-	50	-
History	50	-	75	75
Geography	50	-	75	75
Moral-Civics	50	-	75	75
Language (English/French)	50	50	50	50
Subject based on lucky draw ²	-	50	-	50

Created by author

Source: MoEYS (2013, 2019c)

Notably, students were examined on the same subjects prior to the examination reform, particularly between 2010 and 2013, regardless of their learning track (MoEYS, 2014b). However, maximum scores were given differently to subjects that were central foci of their track. Similarly, the maximum scores for compulsory subjects such as mathematics and the

² MoEYS releases the name of subject at least 45 days prior to the examination date.

Khmer composition differ following the examination reform (Table 2.4). The different weight of the subject in Grade 12 baccalaureate examination as well as the removal of examination subjects by learning track may raise some concerns related to students' focus on both inside and outside-school learning activities.

2.2.2 Consequences

The changes in the leaving examinations have been both criticized and appreciated by scholars and media reports. Dawson (2009) criticized that the removal of the Grade-6 leaving examination expanded the PT market among schoolteachers and their own students because the former were given authority that could impact the (passed/failed) end-year result of their students. Additionally, this PT expansion was likely to harm education quality in Cambodia (p. 62). Furthermore, albeit students are required to obtain at least an annual average score in their school-based achievement to move to the next grade, Dawson criticized that almost all (about 90%) primary students were promoted regardless of their performance as MoEYS pressured schools toward EFA goals (p. 60). Dawson (Dawson, 2010, 2011) also pointed out that PT expansion had a strong association with unprofessionalism or corruption of both schoolteachers and school-related authorities. However, Brehm and Silova (2014, p. 109) unveiled that Cambodia's education quality at public schools was less likely to achieve without support from PT.

Similarly, Naren and Blomberg (2014) reported that delegating Grade-9 leaving examination spawns more teachers' unprofessionalism at public schools, resulting in students being called to invest more in PT while MoEYS could save on its budget. However, Bredenberg (2022, p. 70) viewed this delegation not only could reduce teachers' possibility to offer PT but also offered schoolteachers, particularly at lower secondary education levels, more flexibility in

their teaching. The Grade-9 leaving examination is recently like a school-based assessment, although staff from POE and District Office of Education (DOE) inspect during the examination. Since then, the pass rates of Grade 9 candidates reached approximately 90% (Brehm, 2015, p. 107; MoEYS, 2017, p. 43).

Noteworthy, the current examination system results from the 2014 education reform, which aimed to reinstall trust in public education after this system, including corruption in baccalaureate examination, has been criticized. Examination reform scheduled to kick off in 2014 is one of the eight education reform agendas under the leadership of the new Minister, Hang Chuon Naron, appointed in 2013 (see MoEYS, 2015b). This examination aimed to eliminate all types of corruption in examinations, and to ensure fairness and justice as stated in Article 26 of Cambodia's education law "... Examination shall be conducted with fairness and justice. The stand in the examination and cheating in all images are prohibited." (MoEYS, 2019d, art. 1; Royal Government of Cambodia [RGC], 2007). To ensure its effectiveness, anti-corruption laws were integrated in this examination reform, and staff from the anti-corruption unit inspected the examination process (see MoEYS, 2014c, 2016c). Chhinh et al. (2015) viewed it as the RGC's efforts toward eliminating unprofessional practices of both candidates and proctors (e.g., cheating and leakage of the test papers).

Regarding the Grade-12 baccalaureate examination, the impetus of examination in 2014 brought a sharp decline in rates of successful Grade-12 candidates as it was in the mid-1990s. As evidence of this, in the academic year 1993-1994, Cambodia's MoEYS strengthened

fairness and justice in the examination of all education levels (Grades 5, 8, and 11)³ to eliminate all types of corruption. Only could 4.05% out of 17,000 candidates at upper secondary school and 13% of over 50,000 at lower secondary school pass the examination (Francis, 1994). Similarly, during the academic year 2013-2014, the pass rates of registered Grade-12 candidates sharply declined from approximately 87% in 2013 to 40.7%⁴ in 2014 (Koyanagi, 2017; Radio Free Asia, 2014; Robertson, 2014). However, the pass rates gradually increased in sequential years, as presented in Table 2.5 below. Since 2014, the passed/failed result of Grade-12 candidates is based on only how well they performed in the tests during the two-day baccalaureate examination because their annual achievements obtained from the school-based assessments were not added to the sum scores of the baccalaureate examination as it was done from 2008 to 2013. However, this annual average achievement is only used to ensure students' eligibility for Grade-12 baccalaureate examination. They are required to earn at least average score points resulting of monthly tests and two semester examinations (MoEYS, 2013, 2014b). The massive decrease in passing rates in 2014 indicated students' poor preparation for baccalaureate examinations and questionable quality of teaching and learning at the public school, including the ineffectiveness of PT classes (Bredenberg, 2022). Conversely, the subsequent increase in passing rates may illustrate the better performance of both public school and PT classes. Furthermore, MoEYS (2018) reported that this 2014 examination system signaled positive behavior changes in both students' learning and teachers' teaching performance in public schools. However, Asian Foundation's report indicated that improving

³ These grades are now known as Grades 6, 9, and 12. During that time, Cambodia's education was based on a "5+3+3" configuration.

⁴ It is total passing rates of both chances of the examinations. Since more than 70% of the total 89,937 registered candidates failed the 2014 Grade-12 baccalaureate examination (only 23,126 candidates accounted for 25.72% passed), Prime Minister Hun Sen requested MoEYS to offer a second chance to the unsuccessful candidates, resulting 10,871 candidates (about 18%) passing (see RFA, 2014; Robertson, 2014).

the quality of education and increasing teachers' salaries were in need, although about 96% of its survey samples agreed with that effectiveness (Everett & Kaing, 2014). Since 2014, media reports have consistently published about the positive changes in teachers' and students' behavior, particularly during examination (see Koyanagi, 2017; The Guardian, 2014; VOA, 2015). However, very few empirical studies have evidenced this.

Table 2.5: Passing rates of Grade 12 students from 2013 to 2021

Exam year	2013	2014 ^(a)	2015	2016	2017	2018	2019	2020 ^(b)	2021
Total candidates	108,288	89,937	83,325	91,051	99,728	115,268	117,043	121,108	114,187
Pass rate	86.8%	41.7%	55.9%	62.2%	63.8%	66.2%	68.6%	100%	66.7%

Note: ^(a) the year started the current examination system.

^(b) all registered candidates were given the same pass grade due to school closure following the Pandemic.

Source: MoEYS (2014a, 2015a, 2016a, 2017a, 2018a, 2019a, 2021); Premium Time (2020)

2.3 Private tutoring in Cambodia

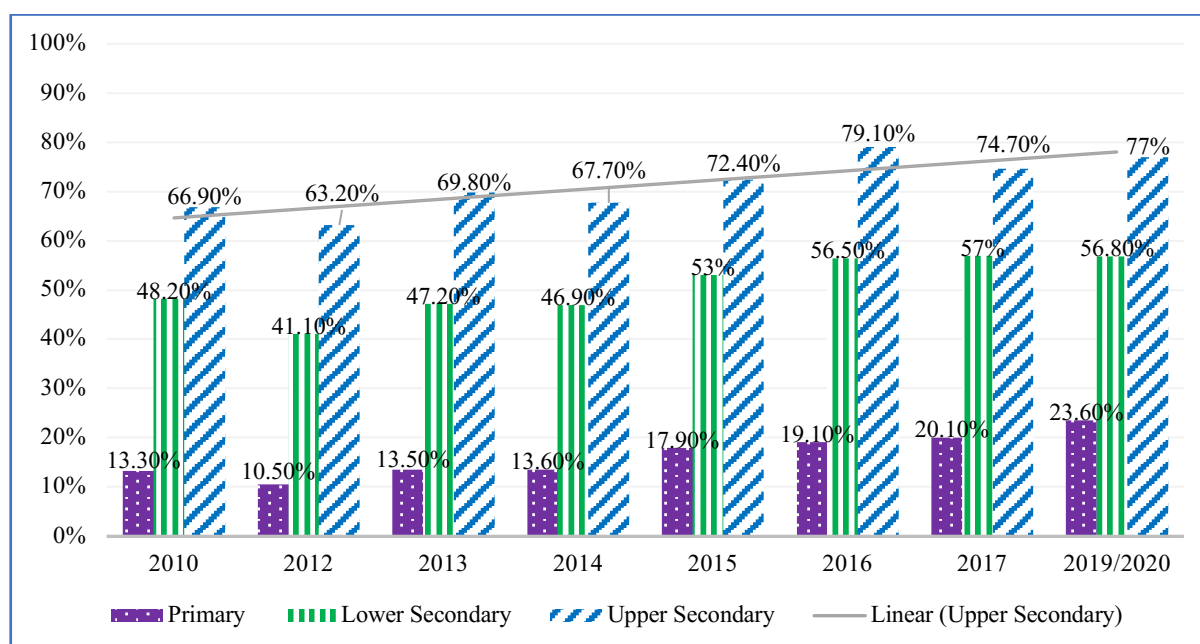
2.3.1 Incidence and consequences

Although it cannot be precisely dated, Bray et al. (2015) stated that PT existed as the start of schooling. However, PT in Cambodia was seen in the literature in the 1990s following Bray's (1999) study. After the collapse of the former Soviet Union, fee-paid tuition or PT (called [*rien kuor*] in the native language, Khmer) emerged in Cambodia's public schools in the early 1990s as was noted in other countries which followed the same socialist model. Cambodian public schoolteachers functioned as private tutors and offered PT inside the public school building to supplement family income (Bray, 1999b; Brehm & Silova, 2014b). Recently, Brehm (2021) divided PT in Cambodia into five types: *regular PT*, *special PT*, *PT during holiday*, *PT at private school* and *online PT*.

Cambodia's commitment toward the EFA goals seemed to contribute toward private tutoring expansion in Cambodia. Dawson (2009) criticized that PT was likely to harm EFA and the *education quality* in Cambodia. In the same line, Brehm and Silova (2014) revealed that lack of qualified teachers during a rapid increase of school number was seen as one of the main issues which shrank the education quality. To deal with this issue, schools employed a double-shift program and increased class size. Schoolteachers had to be responsible for multi grades and students could have only a half-day schedule. The half-day schedule could affect the amount of instructional time (MoEYS, 2010a). Brehm and Silova (2014, p. 109), additionally, showed that the education quality at public schools is not likely to realize without the support from PT. During public school hours, schoolteachers aimed to complete the national curriculum, albeit they realized that their students could not understand it properly (Soeung, 2021a). Teachers rushed to complete their daily plan by giving students fewer examples or practical exercises of the prescribed knowledge and skills. As a result, students cannot master skills unless they undertake PT. Additionally, parents felt that their children would be punished or repeated their grade unless they took PT classes with the schoolteachers who were responsible for them at the public school (Bray, 1999b, 2013). Therefore, parents and students demanded PT as a complement to maximize their chances of boosting academic achievement and succeeding in the examinations. Cambodian parents who were concerned about their children's learning and future viewed investing in PT as a necessity (Bray & Kwo, 2014), or a kind of human capital investment, as stated by Heyneman (2011). By observing data from the Cambodia Socio-Economic Survey (CSES) of the National Institute of Statistics between 2010 and 2020, Figure 2.2 indicates that the rate of students taking PT after school hours steadily increases at every education level. The rate increases in lower secondary schools and even higher in upper secondary schools. Therefore, these factors present the need for PT among Cambodian students at all education levels.

Besides the concern of the effects on the quality of education at the public schools, empirical evidence (see Dang & Rogers, 2008; Dang, 2013; Kwok, 2010) on PT proves the effects on social inequality and inequity due to the differences of socio-economic status (SES) and place of origin/geographical areas. Students from well-to-do families can learn formal subjects effectively through different forms of PT compared to their underprivileged counterparts (Bray, 2009). PT obtained higher demand in urban areas than in rural areas due to a higher competitive society and average income (Bray & Bunly, 2005). Similarly, students in urban areas had more PT choices since there was higher availability of tutorial centers/schools (Brehm et al., 2012).

Figure 2.2: Students taking private tutoring after school hours, by school level



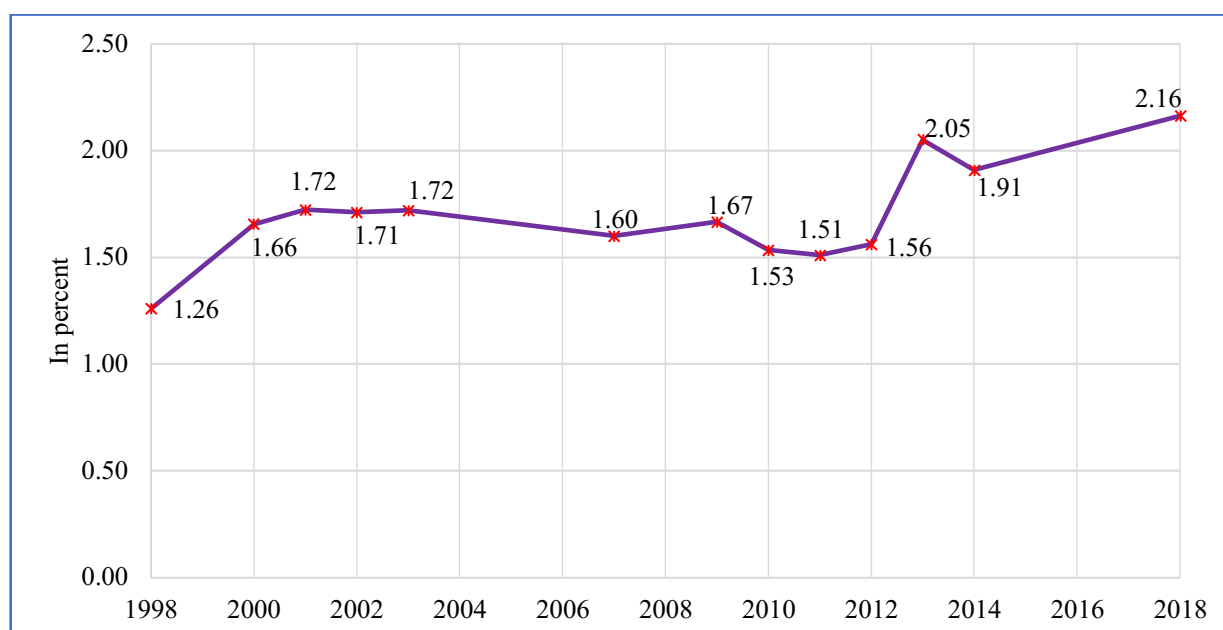
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Source: National Institute of Statistics (2012, 2013, 2014, 2015, 2016, 2017, 2018, 2020)

General findings from the literature on PT studies show that *teachers' low salaries* and *high-stakes examinations* impact teachers' and students' engagement of PT, respectively. Moreover, low expenditure on education of RGC contributed to schoolteachers' engagement of PT.

Cambodia's government expenditure on education exhibited an overall notable gain from 1.26% to 2.16% of GDP⁵ in 1998 and 2018, respectively, as shown in Figure 2.2. Despite this gain, it is below UNESCO's World Education Forum, suggesting 6% of GDP, resulting in a low rank of 10th among ASEAN and 46th among Asian countries (UNESCO, 2020; World Bank, 2020a) (Appendix 4).

Figure 2.3: Government expenditures (% of GDP) on education in total



Source: World Bank (2020a)

2.3.2 Different stakeholders' engagement in private tutoring

Generally, Heyneman (2009, p. 3) and Bray (2003, p. 27) viewed supplying PT to their own students and the ways schoolteachers abuse their authority to create PT demand among their students as schoolteacher professional misconduct or corruption in education. Schoolteacher professionalism has become a key concern regarding the opportunity to offer PT to their students for additional income. Over decades, studies and media in Cambodia have reported

⁵ Cambodia's annual GDP was approximately 3,130 million USD in 1998 and 24,599 million USD in 2018 (Country Economy, 2020)

the association between PT and schoolteachers' unprofessionalism due to overloaded syllabi, low salaries, and high-stakes examinations (Bray, 1999b, 2013; Bray et al., 2015, 2016, 2018; Brehm et al., 2012; Brehm & Silova, 2014; Dawson, 2009; Koyanagi, 2017; Naren & Blomberg, 2014). Beyond discussing the positive or negative effects, this study viewed PT as a social phenomenon from the lenses of various stakeholders, such as education providers, students and parents, and society.

From *education providers*, studies have reported that not only schoolteachers but also school principals and higher-level officials engaged in the PT phenomenon in Cambodia. These could be reflected from two lenses: classroom learning and school leadership. First, in classroom learning, schoolteachers were reported to split the formal syllabus by withholding some contents, slowing down their teaching, and offering brief explanations with fewer practical exercises at the public school for their supplementary income from tutoring classes (see Brehm & Silova, 2014a, 2014b; Soeung, 2021). In addition, some schoolteachers favor their own tutored students by allowing them to cheat during the examination, giving them better grades, embarrassing non-tutored students, and emphasizing some test items in advance during the tutoring classes (Bray et al., 2015, 2019; Dawson, 2009). They also levied a daily fee for PT during public school, although some students may not require PT. Second, researchers found that schoolteachers' PT also resulted from the hierarchical corruption and poor school leadership of school principals (Bredenberg, 2022; Brehm, 2021; Dawson, 2010, 2011). This was similar to what Biswal (1999) found across developing countries: a lack of school accountability and monitoring system from relevant authorities or stakeholders. Dawson (2010, 2011) revealed that a percentage of the fee earned by schoolteachers was given to school administrative staff, including higher-level officials (e.g., DOE and POE staff). He viewed the engagement of different actors as a political “web of corruption” which continue to affect

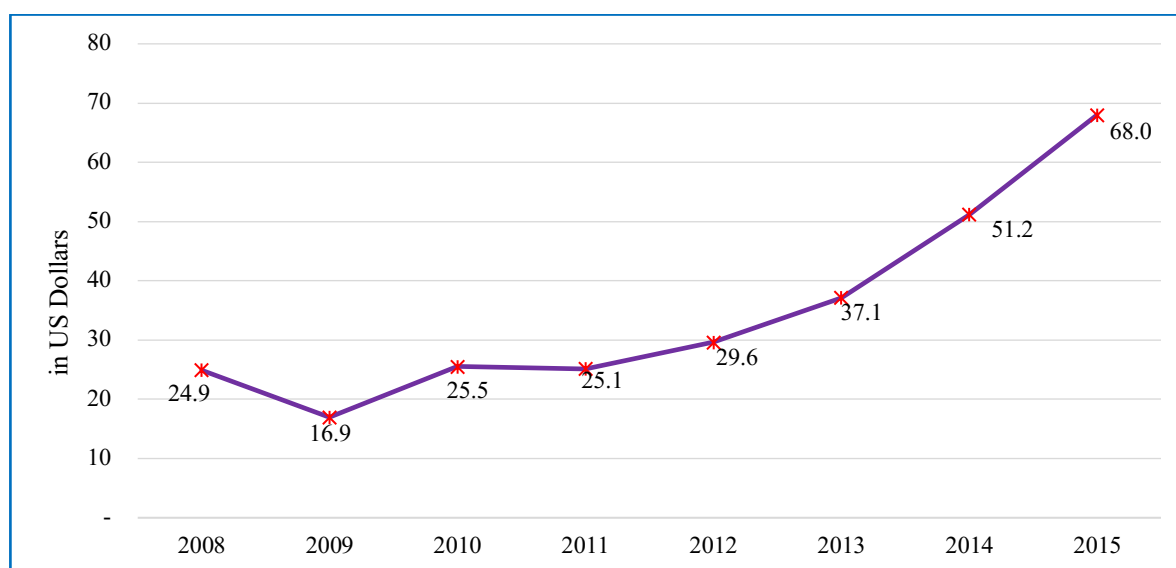
education quality (2010, p. 20); it also leads some school principals to ignore the unprofessional practices of their schoolteachers (Bredenberg, 2022). Therefore, these practices of education providers put students whose families could not afford either time or money for PT at a disadvantage (see Brehm et al., 2012).

From the *students' and families' side*, PT increases the household's financial burden, social inequality and reduces families' opportunity costs (Bray & Bunly, 2005; Brehm & Silova, 2014b; Edwards et al., 2020). The cost of PT varies across areas and subjects. For example, it cost between 100 and 300 riels as reported (approximately 0.024USD and 0.073USD) in Bray's (1999b) study among primary school pupils, but it went up to 500 riels in average (approximately 0.12USD) for one tutoring hour among lower and upper secondary school in Siem Riep (Bray et al., 2016). Furthermore, the cost for subjects such as mathematics and physics was 500 riels (approximately 0.12USD) in urban areas, and about 300 or 400 riels (approximately 0.073USD or 0.098USD) in rural areas while costs for other subjects were lower. On average, each urban household paid approximately three times higher for PT per child than their rural peers in the same grade between Grades 7-9 (Bray & Bunly, 2005, pp. 42–43). Since previous studies have not yet reported the expenses in PT nationally, we calculated using the CSES microdata obtained from NIS to observe the average private tuition⁶ expenses per household between 2008 and 2015. As exhibited in Figure 2.4, the expenses steadily increased starting from 2010; its fast growth could be noted in the following year (i.e., 2013). This could present the increase of PT among Cambodian household on the one hand and the economy on another. The growth of economy can be marked as the increase of the middle-class population. The middle-class and well-off household demanded better education for their children (Hanushek & Wößmann, 2007; Khiev & Ty, 2011). For example, 5.50% of

⁶ This tuition expense is included not only PT for academic subjects but also non-academic ones.

students enrolled in private upper secondary schools, while 23.51% of total urban students registered in private schools nationwide (MoEYS, 2019g, 2019h). As evidence, Cambodia’s gross domestic product (GDP) has increased from 2010 to 2019 at an annual average of 7.7% (World Bank, 2019). This growth marked a reduction in poverty rates from 47.8% in 2007 to 13.5% in 2014. With these GDP trends, Cambodia is optimistic about achieving its national goals of 2030 and 2050⁷ as expected (MoEYS, 2019c).

Figure 2.4: Average private tuition expenses per household



Created by author

Source: National Institute of Statistics (2008 – 2015)

Note: Converted from Khmer riels to US dollars by using a yearly exchange rate of the World Bank (2022)

2.3.3 Responses toward private tutoring

RGC and MoEYS have paid attention to the fast growth of PT as responses to the criticism of scholars, media reports, and society on teachers’ unprofessionalism in terms of PT engagement

⁷ To develop itself into an upper-middle-income country by 2030 and high-income country by 2050 (RGC, 2015). With an alignment to these goals as well as the Rectangular Strategy Phase III (2014-2018) and IV (2019-2023), MoEYS developed a Cambodia’s Sustainable development Goal 4-Education 2030 Roadmap to envision for realization of the 2030 and 2050 national goals through aiming “to ensure inclusive and equitable quality education and promote life-long learning opportunities for all” (MoEYS, 2019b, p. 16).

for their supplementary income (e.g., Bray, 2013b; Bray et al., 2016, 2018, 2019; Brehm & Silova, 2014; Dawson, 2009; Maeda, 2019; Naren & Blomberg, 2014; Soeung, 2021). Cambodia attempted to abolish school registration fees and all types of students' informal payment since the mid-1990s by implementing a series of programs; nevertheless, PT remains unregulated in the Cambodian context (see Brehm et al., 2012; Brehm & Silova, 2014; Dawson, 2009). Hence, the question to be posed is whether those programs were serving their purpose effectively.

RGC amended some articles⁸ (i.e., 13, 17, 25, and 27) of the Ethics Codes for the Teaching Profession in 2008 to respond to schoolteachers' unprofessionalism and labeled PT unethical. This amendment addresses prohibiting schoolteachers' private gains during public school hours and coercing students to opt for PT (RGC, 2008). This amendment is linked to “*discouragement*” (Bray & Kwo, 2014). However, studies reported that schoolteachers engaged in PT and oppressed their own students into undertaking PT (see Bray, 2013; Bray & Bunly, 2005; Dawson, 2009).

Additionally, Cambodia has been committing its best to respond to teachers' low salaries and to strengthen its education system, yet the quality education at public schools still relies on PT (Brehm et al., 2012). Basic salaries of newly recruited schoolteachers at upper secondary schools teachers have been, so far, increased from 586,500 Cambodian riels (KHR)

⁸ **Article 13:** Teacher shall not raise the money or collect informal fees or run any business inside the class.

Teachers shall avoid doing other jobs in the education institution.

Article 17: [...] Teacher have duty to teach without putting pressure on students which aims to exploit them.

Article 25: Teachers of public institution have rights to teach for private purposes (it shall be out of their official time).

Article 27: Teachers in public and private education institution shall not use their roles to force students to study with them or other teachers.

(approximately 145 US dollars) in 2016 to 862,500 KHR (approximately 211 US dollars⁹) in 2020 (RGC, 2015b, 2019). Nevertheless, teachers claimed they could not meet the family's needs due to the simultaneous increase in living costs (Dawson, 2009; Khy, 2019). Along the same line, Cambodia's MoEYS launched the Priority Action Program (PAP) in 2001 to implement a free education policy by abolishing school registration fees and all types of informal payment, including purchasing test papers, learning handouts, teachers' gifts, and paying a daily fee as well as tutoring lesson (Bray & Bunly, 2005; Brehm & Silova, 2014; Dawson, 2010). Keng (2009) reported that this PAP boosted enrolment rates and further empowered the schools. However, it failed to improve the education quality. Therefore, teachers extort supplementary income from students through tutoring classes. To possibly support their daily family needs, schoolteachers 'blackmail' their students for PT (see Bray, 1999, 2013; Dawson, 2009). In addition, PT has become necessary for students to ensure their academic success and effectively learn the entire public school syllabus (Bray & Kwo, 2014; Brehm et al., 2012; Brehm & Silova, 2014b).

2.4 Chapter Summary

Cambodia has no specific policy for schoolteachers' PT engagement, albeit MoEYS has attempted to do so since the mid-1990s. Previous empirical studies indicated that a large proportion of Cambodian students in primary and secondary education undertook PT (Bray et al., 2018; Bray, et al., 2015; Bray & Bunly, 2005; Brehm & Silova, 2014b; Soeung, 2021). For example, Bray et al. (2018, p. 441) reported that approximately 75% and 83% of their samples of Grades 9 and 12, respectively, took PT and more than 70% of students in upper secondary school nationwide between 2015 and 2020 did same according to the survey results of the National Institute of Statistics (see Figure 2.1). Through the different phases of the education

⁹ Exchange rate in 2016 was 1USD = 4058.695KHM, and 4092.783KHM in 2020 (World Bank, 2022)

reform since the early 1990s, MoEYS has attempted to reinstall trustworthiness of stakeholders and society in the public education. MoEYS could attracted more attention to and trust in public education after implementing the 2014 education reform agenda, particularly promoting the equitable opportunity through anti-cheating examination policy. Noticeably, within the current examination system, Cambodian students sit for only one national standardized leaving (baccalaureate) examination to complete the entire general education system. Additionally, examination subjects were curtailed from 10 to only six at the Grade-12 baccalaureate examination. The subjects are also separated into three compulsory, three elective (according to students' learning track) and one lucky-draw subject. The current education reform has succeeded in clearing the corruption in Grade 12 baccalaureate examination, increasing schoolteacher salaries and some others (see Bredenberg, 2022). Specifically, it has improved the pass rate of Grade 12 students in the baccalaureate examination since 2015. The high rate of students who failed in 2014 indicated the low quality of teaching and learning at public schools and the ineffectiveness of PT classes (p. 70). However, the steady increase in passing rates is likely to signal better teaching and learning quality improvement. Similarly, MoEYS (2018b) reported the positive behavior change in schoolteachers' teaching and students' learning following the reform. However, no empirical evidence has proved these changes in either public school or tutoring classes. These evidences are needed to provide the policymakers with more evidences to address the issues effectively and on time. Additionally, PT remains in need for both schoolteachers and students according to the national survey and some empirical studies, although RGC and MoEYS aimed to stop it in the mid-1990s though implementing some actions and employed a "discouragement" scenario of PT.

Chapter 3: LITERATURE REVIEW

This chapter aims to provide an overview of private tutoring and discussion of patterns, factors and relevant stakeholders' perceptions of private tutoring that previous empirical studies are arguing in different contexts. The chapter starts with brief concepts of private tutoring and its nature including how and why private tutoring happened.

3.1 Nature of private tutoring

“Private [supplementary] tutoring” is not a new phenomenon in the field of education; it has been used worldwide (Bray, 2017). Although its origin cannot be traced back, Bray et al. (2015, p. 6) assumed that PT might have appeared since the start of the schooling system. Additionally, PT is metaphorically known as “*shadow education*” as it cannot stand alone but depends on the mainstream system (Bray & Lykins, 2012; Bray, 1999b; Lee et al., 2009). The term has evolved globally and been defined based on the contexts or purposes in which it was used. PT meant tutoring in academic subjects, which schoolteachers offered for supplementary income (Bray & Kwok, 2003; Bray & Lykins, 2012). Furthermore, the U.S. Department of Education (1987 as cited in Mori and Baker (2010, p. 37)) referred to it as a “secret ingredient” to assist students in performing better in the tests or examinations in some Asian nations, especially in countries that are strongly influenced from the Confucianism (Li & Choi, 2014). However, Dawson (2010, p. 15) used the term “parasitic” system to define the PT, which is a kind of system that absorbs unmet demand for schooling. In the Cambodian context, Brehm et al. (2012, p. 15) described the situation of public education as a “public-private *hybrid* education system” because students were required to pay for both systems to complete the public school curriculum successfully.

PT has been hallmarked as a part of education globally (Bray, 1999b; Mori & Baker, 2010). It serves as learning activities outside school aiming to support students' learning during the official hours; it positively contributes to improving students' academic achievement (Mori & Baker, 2010; Stevenson & Baker, 1992). To some extent, schoolteachers tend to benefit from these positive viewpoints of PT to boost their PT market. With a supply and demand process, Bray (1999b) explained two ways of producing PT. First, schoolteachers made the PT market as compulsory as possible for students, regardless of whether they required it. This was because schoolteachers were given full authority to decide whom to move to the next grade and who should repeat a grade. This fact could describe not only in primary school but also beyond (Soeung, 2021b). This generates a "*supply creates demand*" cycle in some settings (e.g., Cyprus, Indonesia, Lebanon, Nigeria, Cambodia) where schoolteachers could offer PT to their own students. Studies (i.e., Bray, 1999b, 2013; Bray et al., 2016, 2018, 2019; Brehm et al., 2012; Brehm & Silova, 2014; Dawson, 2009), on the one hand, uncovered that schoolteachers withhold some contents or slow down their teaching during official hours as so to promote their PT classes. They abused their role to force their students and recommend parents directly or indirectly to invest in PT with them and favor tutees. Therefore, students who are (not) in need of PT decided to opt for PT with their schoolteachers. Parents perceived that paying for PT is a great way to avoid unwanted consequences (e.g., repeating a grade) in children, which may cost even more than PT (Bray, 1999b, 2013; Bray & Bunly, 2005). Additionally, students and parents humbly accepted that PT could help add more instructional times for precise explanation and help schoolteachers teach a subject properly (Brehm & Silova, 2014b). Similarly, schoolteachers perceived that offering PT could compensate for insufficient instructional time during official hours (e.g., Brehm & Silova, 2014; Hallsén & Karlsson, 2019) and help students learn better and practice more exercises (Bray et al., 2018). In addition, some

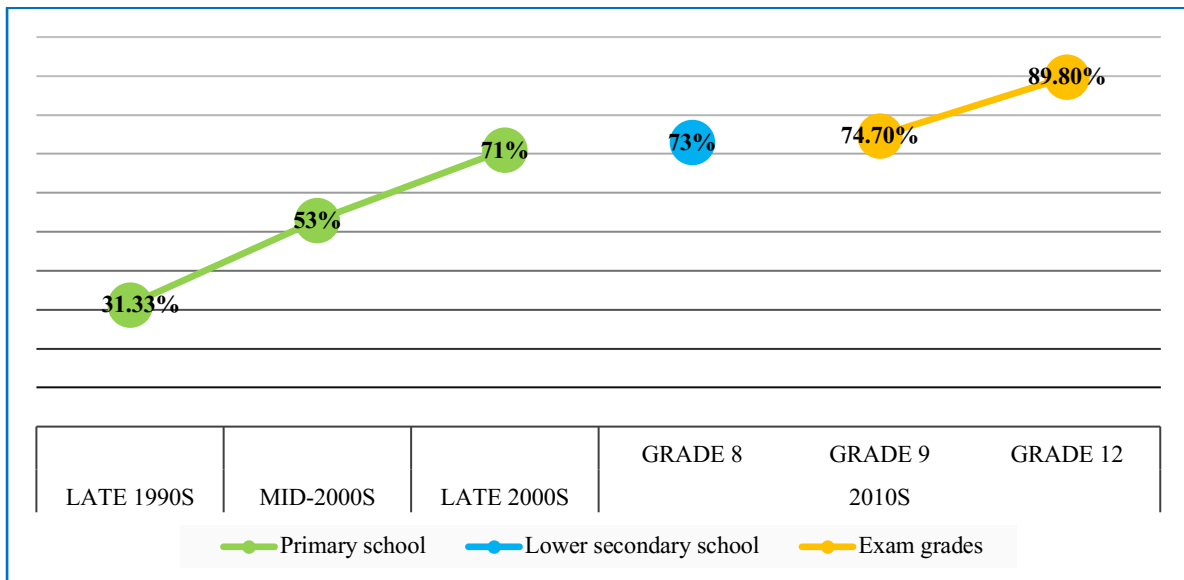
schoolteachers reported that they decided to engage in PT as requested by parents and students (Dawson, 2009).

Second, *schoolteachers create different types of PT (e.g., one-to-one or special PT) to target different markets*, especially for students who may be in need, can afford better learning quality, and aim to maintain their good achievement. This type of market is not only for students for whom they are responsible during official hours but also for any consumers who may demand (Bray, 1999b). The proportions of students who required PT of this type do not seem to be reported in the previous studies, particularly in the Cambodian context. The gap may likely be large between rural and urban including Phnom Penh, due to the availability of tutorial centers, better income, and greater population as well as more competition (see Bray, 1999a; Bray & Bunly, 2005; Bray & Lykins, 2012; Brehm et al., 2012).

PT participation steadily raised in upper grades, particularly in the diploma-granting grades. Also, schoolteachers seemed to be the main PT providers. Although official data on PT have not been recorded nor can be easily accessed, Cambodia's national survey (see Figure 2.2) and studies revealed a steady increase in PT. As seen in Figure 3.1, the average rate of primary school students who took PT was 31.33% (Bray, 1999a, p. 59). The rates increased to around 53% on average in 2004 (Bray & Bunly, 2005, p. 41) and 71% in 2008 (Dawson, 2009, p. 59). The rates were higher (about 73%) at lower secondary schools (Marshall & Fukao, 2019, p. 106); those rates increased when reaching diploma-granting grades, such as 74.7% and 89.8% for grades 9 and 12, respectively (Bray et al., 2018, p. 7; Bray et al., 2015, p. 233). Regarding the types of tutors, 47.5% of these diploma-granting grade samples reported opting for PT with their own schoolteachers, followed by that of schoolteachers in the same school (33.7%) and schoolteachers from a different school (1.0%). Almost no student was tutored by a university

student or other self-employed people (Bray et al., 2015, p. 233). However, the rates of students who were tutored by their own schoolteachers (57.7%) and schoolteachers in the same school (40.9%) relatively rose in the same context (Bray et al., 2018, p. 8).

Figure 3.1: Approximate rates of students taking private tutoring in Cambodia



Created by author

Sources: Bray (1999a), Bray and Bunly (2005), Bray et al. (2015, 2018), Marshall and Fukao (2019)

3.2 Factors related to education providers

The previous studies revealed various unprofessional practices that schoolteachers used to promote their PT services for financial gain. Those practices are closely linked to how schoolteachers behave in classes, including how they teach and treat students during public school and PT classes.

3.2.1 Pedagogical issues

Teaching pedagogies is one of the motives for PT. Schoolteachers distinguished teaching pedagogies between public school hours and tutoring to create PT demand among students whom they were responsible for at the public school. In Cambodia, Bray et al. (2018) unveiled

that schoolteachers applied so-called “*caring* pedagogy or pedagogy of *care*”¹⁰ during PT classes while employing an *uncaring* one during official hours. About 82% of tutored schoolteachers in their study reported they did not follow a prescribed teaching pedagogy (i.e., student-centered approach) but a teacher-centered one in their tutoring classes. Although a student-centered approach can promote students’ active participation and self-directed learning (MoEYS, 2001), Song (2015) unveiled that Cambodian schoolteachers faced challenges in implementing it due to mixed-ability classes, large class sizes, limited resources, and an inflated syllabus. Additionally, this approach was criticized as being time-consuming in Lithuania (Būdienė & Zabulionis, 2006) and ineffective in Thai public schools due to the large class size (Jones & Rhein, 2018). Cambodian schoolteachers also expressed that a five-step teaching pedagogy recommended by MoEYS took much time, and they could not complete lessons as required by the syllabus (Dawson, 2009). Therefore, this prescribed teaching pedagogy, including a five-step teaching methodology, forced schoolteachers to exercise hurried teaching to complete the intended syllabus during public school teaching while providing them the opportunity to showcase their knowledge and skills needed during PT classes. Bray et al. (2018) also explained that schoolteacher absenteeism and insufficient instructional time contributed to the overloaded curriculum syllabus and resulted in PT engagement of both schoolteachers and students including their parents.

¹⁰ The authors explained the term ‘*care*’ in their study context as schoolteachers’ marketing strategy used to promote their tutoring service (p. 14), although the term was used to combine the traditional and progressive views. The term was known as ‘*ethic of care*’, which is referred as a climate in which caring relationship between carer (teacher) and cared-for (student) flourish and as a pedagogy used to assist students to achieve prescribed skills and knowledge. This caring is argued as the accountability of education systems and should be part of formal curriculum (see: Noddings, 2005, pp.xiv-xv).

3.2.2 Schoolteachers' malpractices or tricks

PT has an association with schoolteachers' malpractices/tricks which were used to expand their PT engagement due to schoolteachers' low salaries and family SES (Bray et al., 2016; Dawson, 2009, 2010; Tandon & Fukao, 2015). Schoolteachers who relied on only government salaries to support the family with *two* children lived in poverty, particularly in urban areas (Benveniste et al., 2008, p. 52; Tandon & Fukao, 2015, p. 24). The inadequate salaries led to schoolteachers' malpractices and PT engagement. These practices impact schoolteachers' efforts in teaching in public school and develop a "culture of dependency" on PT for schoolteachers and students (Hammond, 2018). For instance, to meet family's daily financial needs, schoolteachers forced their own students to take PT and pay other informal fees, such as for purchasing handouts, test papers or answer sheets; they also charged a sum for removing the number of absences and adjusting passing grades, alongside a daily fee. These malpractices were found not only in Cambodia but also in Southeast Europe, Latin America, the former Soviet Union as well as in China, Malaysia, and Vietnam (Brehm & Silova, 2014b; Dawson, 2009, 2010; Hallak & Poisson, 2007, 2008; Heyneman, 2009; Rumyantseva, 2005). Moreover, schoolteachers boasted PT benefits and quality and forced students and parents directly or indirectly to invest in PT through withholding some contents and slowing down their teaching during official hours (Bray, 1999b, 2013; Dawson, 2009). Schoolteachers gave much favor to their own tutees not only in learning activities but also during the examinations by allowing them to cheat and giving them greater scores, and making fun of non-tutees during class, as well as schoolteachers emphasized some parts of the tests in advance during PT classes (Bray et al., 2016, 2018, 2019; Edwards et al., 2020; Maeda, 2019). Heyneman (2009, p. 3) pointed out these behaviors as professional misconduct and considered it corruption in education.

3.2.3 Schoolteachers-related factors

Schoolteachers who lived closer to their public schools and who did not have additional jobs engaged in PT more than their counterparts. Cambodian students at lower secondary schools preferred to take PT with teachers with university qualifications and better knowledge of subject matters (Marshall & Fukao, 2019). Additionally, schoolteachers' gender showed differences in terms of the possibility of offering PT. Bray (1999a) reported that although PT tended to steadily increase in the upper grades at urban Cambodian primary schools (i.e., Ratanakiri province), the rate was notably low in the grade which was in charge by a female schoolteacher. It was about 50% less than a lower grade which was taught by male schoolteachers (p. 60). Female schoolteachers were less likely to offer PT than their male counterparts; for they spent their time on family duties. Some of them thought they did not have enough time to prepare lessons for PT classes, unlike some male schoolteachers whose subjects were core examination subjects (e.g., mathematics), who were engaged in other businesses which could gain more income than PT (Bray et al., 2018). Other factors such as teacher absenteeism, multishift teaching, and large class size were also associated with PT engagement of both schoolteachers and students (Bray et al., 2016; Marshall & Fukao, 2019).

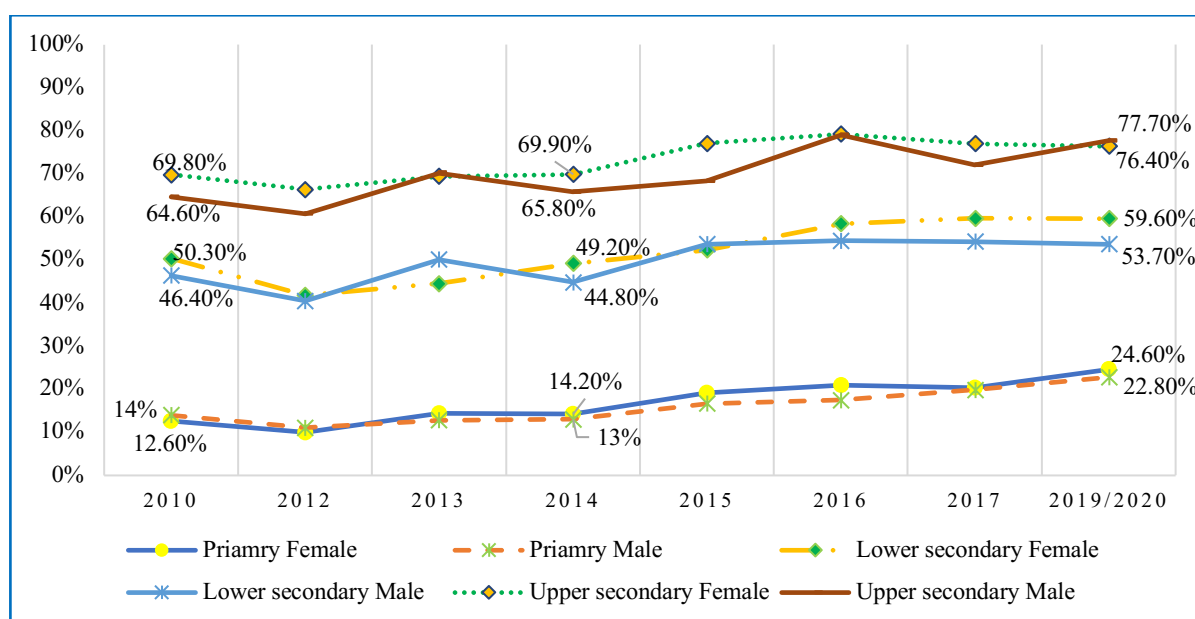
3.3 Students and parents

Students demand PT for different reasons, based on individual (e.g., gender and uphold academic performance), parental (e.g., peer influence and parental pressure), and school factors (e.g., examinations) (Bray, 1999b).

3.3.1 Gender disparity

The pattern of gender disparity in demanding PT showed controversy in different contexts and tutoring subjects as well as types. The survey reports of CSES Cambodia's NIS, as indicated in Figure 2.2, illustrated that the rate of female and male students undertook PT after school

Figure 3.2: Rate of students taking private tutoring by gender



Created by Author

Source: National Institute of Statistics (2012, 2013, 2014, 2015, 2016, 2017, 2018, 2020)

fluctuated between 2010 and 2020. However, the overall trend of females was higher in most of the years in which data were collected. Female students were likely to spend more on PT than their male peers in Cambodia (Bray et al., 2018), South Korea (Kim & Park, 2010; Kim & Lee, 2010), and Kuwait (Alazmi & Alazmi, 2020). In the same line, girls demanded English PT more than their male counterparts in Bangladesh (e.g., Hamid et al., 2018; Mahmud & Bray, 2017; Mahmud & Kenayathulla, 2018) and Cambodia (Soeung, 2020). Females, additionally, significantly obtained mathematics PT more than their male peers in Eastern China (Zhang, 2015). Similarly, females (65.4%) undertook one-to-one and small group tutoring in Kyrgyzstan (Bagdasarova & Ivanov, 2009). However, males were more likely to take PT than females at primary schools in Bangladesh (Nath, 2008), Taiwan (Liu, 2012), and Japan (Organisation for Economic Co-operation and Development [OECD], 2011, p. 128). However, Stevenson and Baker (1992) showed no significant difference between females and males in terms of PT investment in Japan. The pattern does not seem to be universal in terms of gender disparity. These variations may link to cultural perspectives as well as social ones. For

example, parents may think that male students are more likely to require better quality of education for paid employment. However, male students do not seem to be as focused as females on their education (Bray et al., 2018, p. 9; Bray & Lykins, 2012, p. 12).

3.3.2 Location and family SES

Studies have confirmed the disparity between urban and rural areas in terms of PT availability. In Cambodia, PT is more prevalent in urban due to higher competition, better average income, and more availability of tutoring as well as tutorial centers, especially in Phnom Penh, Cambodia's capital city (Bray, 1999a; Bray & Bunly, 2005; Bray & Lykins, 2012; Brehm et al., 2012). However, the latest study by Marshall and Fukao (2019) unveiled that PT was likely to expand in rural areas.

The relationship between SES and PT was emphasized in developed and developing countries and showed implications for social inequality. Previous studies (e.g., Bray & Kwok, 2003; Dang & Rogers, 2008; Pallegedara, 2012) indicate parents' educational attainment, family size, place of origin and family income as economic characteristics that influence children's PT demand. The lower-income families could not afford a greater quality of education than their peers whose income was higher. However, poor- and medium-income households were influenced by their higher-income peers to obtain a better education for their children (Bray, 2010). For example, Some families were qualitatively reported to use loans or work additional part-time jobs in Cambodia (Bray et al., 2018) and India (Ghosh & Bray, 2018).

3.3.3 Subjects for tutoring and instructional time

Although students are required to study all subjects in the school curriculum, and no policy reported that one subject is more important than others, some subjects for national

examinations seemed to be more attractive to students for PT. This attracted candidates for the teaching profession. For example, in Cambodia, mathematics, physics, chemistry, and Khmer literature were reported as the most popular for PT, while English seemed to be common among students in the urban area. This popularity influenced those who entered teaching in Cambodia because they were likely to earn more supplementary income by offering PT (Bray & Bunly, 2005). Marshall and Fukao (2019, p. 106) also reported that about 53% of urban-area samples, who reported opting for PT, took tutoring classes in mathematics, followed by physics and English at 38% and 35%, respectively, while more than 75% of schoolteachers teaching mathematics and physics offer PT. For Kuwaiti higher education entrance examination purposes, students used PT for science subjects such as mathematics, physics, chemistry, and biology. Among tutoring subjects, mathematics was in the most demand for PT in Kuwait (Alazmi & Alazmi, 2020). This trend seemed to be the same in other contexts such as Cambodia (e.g., Bray et al., 2018, 2015), Hong Kong (Bray & Kwok, 2003), and the Republic of Georgia (Kobakhidze, 2015). Bray et al. (2018) explained that mathematics not only is a core subject, but it also assists the rest of the subjects. In specific cases like Malaysia, Malay tended to take the lead, followed by English, mathematics, science, and history because students need the pass grades in Malay and history to be eligible for a high school certificate (Kenayathulla, 2015). However, the question that can be raised is why history tended to be the last on the list for tutoring, although it is one of the mandatory subjects to be eligible for the certificate.

Shortage of instructional time is one factor influencing PT supply and demand. As teachers have to take responsibility for multi-grades/classes as well as for both shifts, morning and afternoon, teachers complained about issues of being unable to complete the curriculum as planned (Bray, 2008, p. 48). Insufficient instructional time is also associated with large class

sizes and overloaded curricula in public schools (Bray et al., 2016). Along the same line, Cambodian schoolteachers complained about their challenges in covering the entire syllabus using MoEYS' recommended teaching pedagogies, such as five-step pedagogical teaching (Dawson, 2009).

3.4 Synthesis of literature

PT is a complex phenomenon that is connected to different actors (i.e., parents, students, and teachers) and social, cultural, economic, and educational factors. Parents and students invest their economic capital to race for their social capital to augment educational opportunity and social status, primarily to obtain social mobility through the standardized examinations and to complete public school syllabus with the hope of gaining better opportunities as well as income. At the same time, schoolteachers invested their social status by using PT as oppression to cater to their economic capital due to insufficient payment from their teaching position in the public school. Therefore, students and parents, as well as schoolteachers, require PT to overcome their challenges for social status (i.e., academic success) and economic capital for survival, respectively. As highlighted by Brehm and Silva (2014), PT in the Cambodian context is not about private education provision as existing research believes. This alerts researchers to pay more attention to the relationship between the schoolteachers and students and parents when studying PT in this context. The existing literature indicated most common reasons for this phenomenon such as low salaries, teachers' teaching pedagogies, teachers' malpractice/tricks, shortage of instructional time, family SES and school's geographical areas.

Chapter 4: METHODOLOGY

This chapter explains the entire research process of how this study was conducted to answer the stated research questions. The chapter starts with the research design and its description and conceptual framework. Next, it presents how the research setting and samples in the study were selected and how data were collected, including how they were treated and analyzed. Additionally, data descriptions and measurements were included.

4.1 Research design

It is worth reminding that the current study's intent and questions involve not only examining the causes and effects of PT but also exploring the social relationship that occurs in the school settings to produce PT as well as dealing with school syllabus or teaching style and students' cultural value. Thus, the study employed the philosophical viewpoints of pragmatists for its design to consider approaches rather than subscribing to only one way for data collection and analysis to gain insights into the research problem. Pragmatism originates from the work of Peirce, James, Mead, and Dewey; it conveys the importance of focusing on the research problem in social science and then employing a pluralism approach to gain knowledge about the research problem and questions instead of focusing on methods (Creswell & Creswell, 2018; Morgan, 2007). Additionally, the use of both quantitative and qualitative research methods in one study is essential to capture the complexity of reality. This also helps gain deeper insights by using the strengths of one method to fulfill another one's shortcomings rather than using one method (Creswell & Guetterman, 2019; Ponce & Pagán-Maldonado, 2015).

In this regard, this study combines both survey and interview approaches for its design since the purpose of this design is to study or explore the research problem in depth as well as the

information or reliable data on PT was neither documented nor obtained easily (Bray, 2013; Valerio, 2013). To realize this, the study used self-reported survey questionnaires for data collection from different stakeholders (i.e., students, parents, and teachers) to measure the attributes of the research problem. Then the interview was conducted to gain insight into their decision and extend some understanding from the survey.

4.1.1 Conceptual framework

Over a few decades, researchers have proposed several perspectives (e.g., low salaries, shortage of instructional time, teachers' malpractice, teaching pedagogies, school areas, and family SES) to explain the expansion of PT. A literature review reveals that the PT expansion, especially in a context where schoolteachers can tutor their own students, was associated with social, cultural, economic, and institutional factors. In addition, it linked with schoolteachers, students and parents who were PT actors. Parents and students invested their economic capital to race for their social capital to gain educational opportunity and social status; for example, succeeding in the examinations, learning the entire syllabus and obtaining better returns in the future. At the same time, schoolteachers invested their social status in gaining economic capital for survival due to low salaries from the government school. A common perspective of PT expansion is associated with survival and academic success among these tutoring actors. The literature has been discussing social inequality and teachers' unprofessionalism for decades in compulsory education. However, limited number of studies have paid their attention to the secondary education, especially in the Cambodian context.

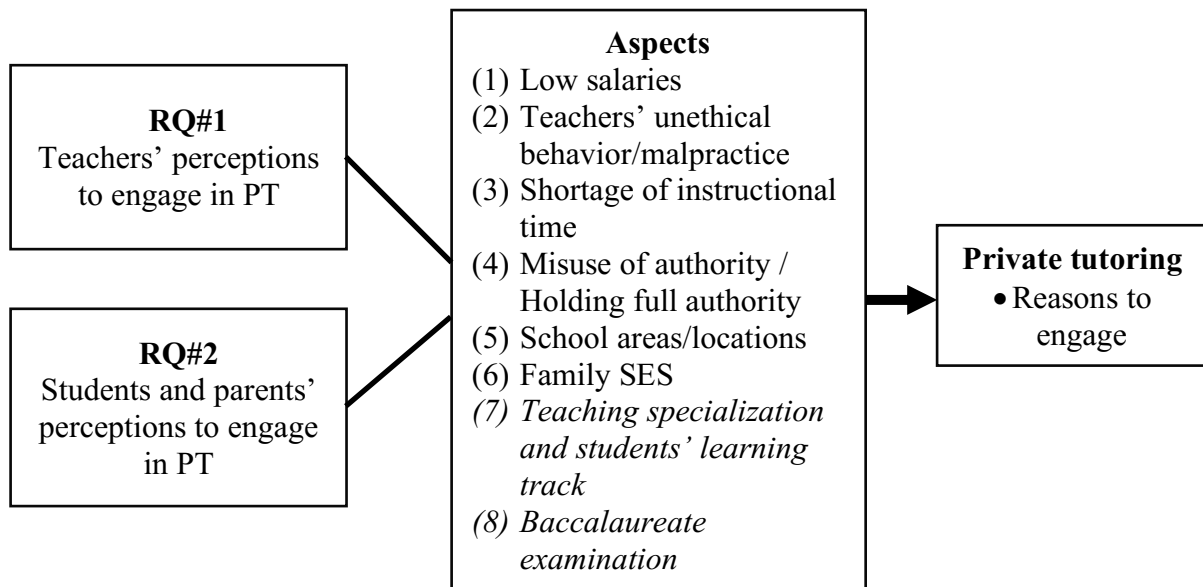
Brehm (2018) started to argue PT as a "social factor of tutoring" by situated PT as a "positional good" in the late 2010s within the privatization. Similarly, Bray (2003) explained that families, regardless of their income level, would invest in PT to gain "social mobility" through the standardized examination, taking a role in the screening process everyone must go through.

Therefore, regardless of their background, they commit to moving toward their goals within their space of possibility and attitude. With the same intent, Edwards et al. (2020) used “mobility theory” to explain the movement of Cambodian students at the basic education level as PT has notably increased during Cambodia's commitment toward a knowledge- and skill-based society for its 2030 and 2050's national goals. Additionally, Cambodia has been performing better in economic improvement. Within this movement of change and influence of international donors and development agents, the education system students and their parents and schoolteachers adapted in response to that development and needs.

The “mobility theory” is combined by two main dimensions: field of possibility and aptitude for movement. Edwards et al. (2020) categorized *private tutoring* as an “institution” and other elements such as space (e.g., socio-economic position, place, transportation), and the ability to move in the space while responding to the available opportunities in another dimension. These three were connected and presented as the movement aptitude of individuals. However, this current study attempted to extend from Edwards et al.'s (2020) study by combining both approaches (interview and survey) to gain a clear understanding of samples' movement aptitude as well as to triangulate to make results more clear by increasing the number of participants from the survey approach. Additionally, this study extended data collection through semi-structured interviews from different stakeholders rather than only with students and parents. This extension would provide clearer insight not only on their decision to move within the institution (i.e., PT) but also on its impact from one individual to another. Additionally, this study combined all common aspects/reasons which were arguing by the previous studies into to conceptual framework to examine whether these variables were the reasons schoolteachers, and students and parents engage in PT at the upper secondary schools. However, two additional variables (i.e., teaching specialization/learning track and

baccalaureate examination) were added and examined because this study intended to gain insight into Grade-12 students' PT engagement. The Grade-12 students are required to select their learning tracks—science and social science, and to sit for the baccalaureate examination.

Figure 4.1: Conceptual framework



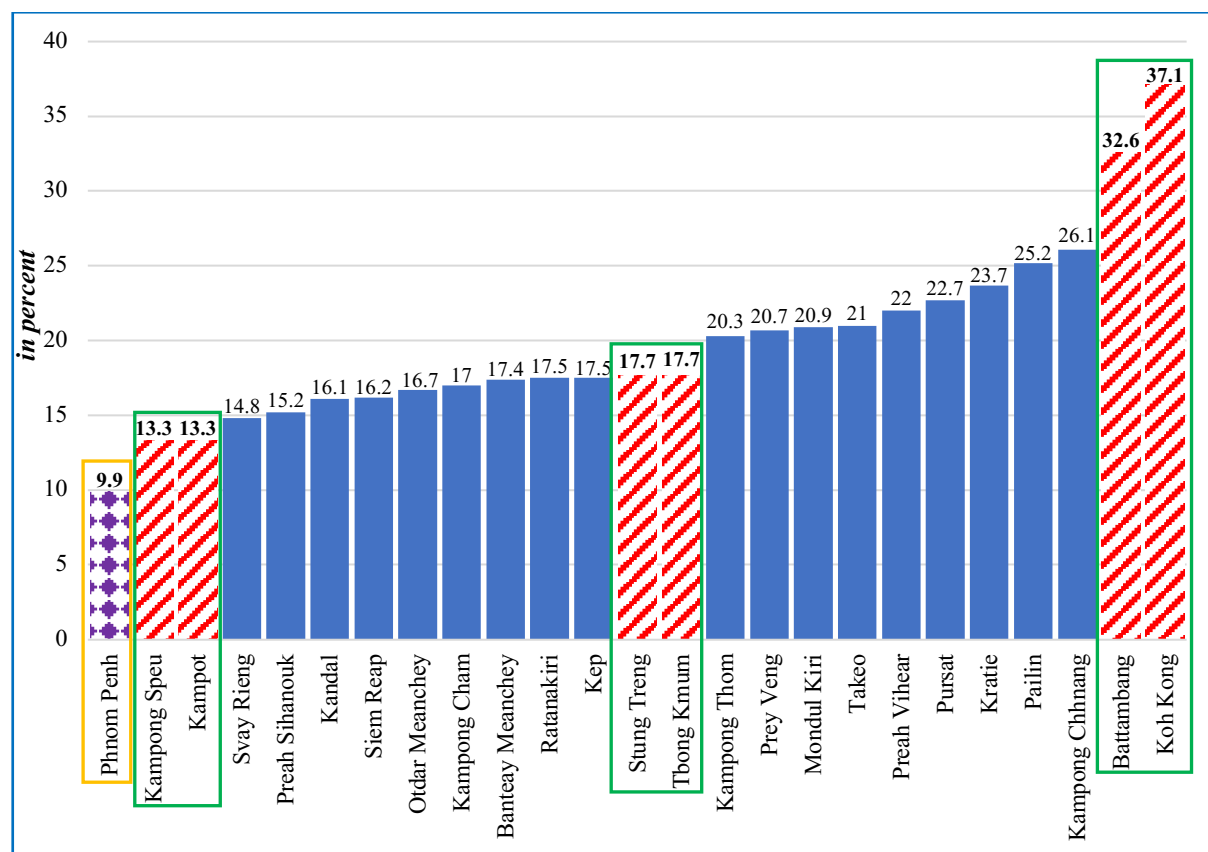
4.2 Research sites and participants

4.2.1 Research sites

This study employed a multistage random sampling method to select its research sites and participants, as the study population is large and geographically scattered (Creswell & Guetterman, 2019). The study was conducted in Phnom Penh, the capital city of Cambodia, and six provinces, namely Kampong Speu, Kampot, Steung Treng, Tboung Khum, Battambang, and Koh Kong, among 25 municipalities (Appendix 5). As the household's SES was one of the main factors for PT demand, the study used the 2018 data on the Identification of Poor Households Program from Cambodia's Ministry of Planning, as cited in Sok and Chhinh (2018), as criteria to select research sites. Figure 4.2 shows the landscape of the overall poverty rate in all municipalities. Phnom Penh was purposively selected as it is categorized as

the only autonomous municipality. Therefore, it is considered a *higher-SES area*. The other six provinces were selected according to their poverty rate. The first two provinces, whose poverty rate was low (13.3%) among all, were selected and labelled as a *high-SES area*. Other two provinces whose poverty rates were high (32.6% and 37.1%) were chosen and named as *low-SES areas*; the last two provinces with the medium poverty rate of 17.7% were also selected and presented as *medium-SES areas*. This classification was termed as “*type*” of school location in this study.

Figure 4.2: Overall poverty rate by province



Created by author

Source: Sok and Chhinh (2018)

According to the Education Management Information System (EMIS, hereafter), there are 493 schools with Grades 7-12 and 32 schools with only Grades 10, 11 and/or 12 in Cambodia

(MoEYS, 2019h). However, schools with only Grades 10-12 were removed from the list before the selection process since those schools just started its upper secondary school operation recently, and about half of them did not have Grade 12. Table 4.1 indicated the total population of school and students.

Table 4.1: Number of schools and population

School areas	Number of schools	Total students	Females
Phnom Penh	38	74,768	37,504
Urban areas	65	95,633	49,798
Rural areas	390	413,464	220,537
Total	493	583,865	307,830

Next, schools were randomly selected to compare between Phnom Penh and urban and rural areas. We purposively ensured the same number of schools in each type and area. Six schools were randomly chosen from 14 city districts in Phnom Penh. Three schools located downtown, and other three schools located in the suburb were selected as the research settings. Additionally, three schools were selected in each province based on its location. One school was chosen from all which are located in the center of the town. They were named as urban school. Another one from schools located in districts which is between 20 and 30 kilometer (semi-urban school) and between 31 and 50 kilometer-away (rural school) from the town center. Therefore, there were 24 schools in total, six schools representing each type (i.e., higher-SES, high-SES, medium-SES and low-SES) as shown in Table 4.2. Schools, which are in the same selection criteria, were recruited through simple random sampling.

4.2.2 Samples and sampling

With an attempt to gain insight into the PT phenomenon, the study selected its samples from different educational stakeholders such as schoolteachers, students and their parents who are

the main actors in PT, and school principals as well as independent informants from POE and policy level.

4.2.2.1 Schoolteachers

The study selected both groups of schoolteachers who engaged and did not engage in PT from each targeted school ($n = 975$, Female = 336) as illustrated in Table 4.2. Since a record or document on schoolteachers who are tutors nor non-tutors is not available or accessible, schoolteachers who were teaching in upper secondary school level at the selected schools during the academic year 2020—2021 were targeted. Specifically, only schoolteachers who taught Grades 11 and 12 were selected to be the participants because the study scoped to observe the affect from the learning track—social science and science. The learning track starts from Grade 11 to 12 only, as mentioned in Chapter *two*. Of 1,197 teachers (Female = 439) in total, who were teaching either Grades 11 or 12 as well as both grades, 975 schoolteachers (Female = 344) were purposively invited to be research informants.

4.2.2.2 Students and parents

The study scope was limited to the Grade 12—the only grade with a nationwide examination—because PT is significantly associated with high-stakes examination (e.g., Bray, 2009, 2021; Bray & Lykins, 2012; Bregvadze, 2012). All Grade-12 students in the selected schools were purposively selected to be respondents. As shown in Table 4.2, a total of 6,737 samples (Female = 3,453) were selected. There were 4,036 students (Female = 1,853) in social science track and 2,701 (Female = 1,600) students in science track. Their parents, additionally, were invited to be the informants in this study.

Table 4.2: Targeted samples for the study

Type	Location	Sch. I.D	Grade 12 students			Teachers	
			Social Science (Female)	Science (Female)	Total (Female)	Total* (Female)	Selected (Female)
Higher-SES	Phnom Penh	P01	231 (93)	209 (130)	440 (223)	92 (40)	87 (35)
		P02	341 (146)	231 (124)	545 (270)	75 (31)	66 (26)
		P03	236 (96)	188 (111)	424 (207)	131 (56)	96 (40)
		P04	211 (108)	107 (62)	318 (170)	60 (20)	54 (14)
		P05	130 (55)	112 (69)	242 (124)	52 (16)	45 (12)
		P06	34 (14)	41 (19)	75 (33)	61 (23)	41 (17)
	n =		1,156 (512)	888 (515)	2,044 (1,027)	471 (186)	389 (144)
High-SES	Kampong Speu	H07	468 (229)	150 (103)	618 (332)	63 (21)	55 (18)
		H08	218 (102)	68 (54)	286 (156)	45 (10)	37 (8)
		H09	175 (80)	37 (26)	212 (106)	43 (15)	32 (13)
	Kamput	H10	110 (44)	66 (36)	176 (80)	37 (15)	30 (10)
		H11	184 (88)	56 (37)	240 (125)	40 (19)	33 (12)
		H12	157 (71)	72 (38)	229 (109)	59 (22)	48 (15)
	n =		1,312 (614)	449 (294)	1,761 (908)	287 (102)	235 (76)
Medium-SES	Steung Tren	M13	245 (127)	71 (39)	316 (166)	45 (17)	40 (16)
		M14	75 (47)	14 (6)	89 (53)	14 (6)	14 (6)
		M15	30 (20)	8 (2)	38(22)	13 (2)	12 (2)
	Tbong Khum	M16	245 (125)	241 (148)	486 (273)	64 (10)	45 (9)
		M17	72 (37)	128 (86)	200 (123)	35 (11)	31 (11)
		M18	104 (75)	167 (104)	271 (179)	31 (17)	27 (10)
	n =		771 (431)	629 (385)	1,400 (816)	202 (63)	169 (54)
Low-SES	Battam- bang	L19	292 (127)	181 (97)	479 (224)	81 (37)	68 (25)
		L20	149 (73)	134 (49)	283 (52)	31 (9)	25 (9)
		L21	75 (47)	91 (54)	166 (101)	22 (8)	17 (8)
	Koh Kong	L22	170 (77)	181 (103)	351 (180)	52 (12)	39 (9)
		L23	-	25 (10)	25 (10)	23 (14)	8 (3)
		L24	105 (42)	123 (93)	228 (135)	28 (8)	25 (8)
	n =		797 (296)	735 (406)	1,532 (702)	237 (88)	182 (62)
Total n =		24	4,036 (1,853)	2,701 (1,600)	6,737 (3,453)	1,197 (439)	975 (336)

* number of teachers in the selected school (both levels and every subjects)

4.2.2.3 Informants for the interview stage

The researcher selected individuals who had agreed to participate in the interview in their self-reported survey. Opportunistic sampling was employed when recruiting the informants since this approach can help unfold specific events or phenomena to answer the research questions in depth or lead to novel ideas and interesting findings (Creswell & Guetterman, 2019). Since

the study aimed to investigate stakeholders' perception of PT, the study purposively aimed to select the same number of informants from teachers and students, their parents, and all focus areas. However, to avoid diverting attention away from the original aim as a caution of implementing opportunistic sampling, samples (i.e., tutor and non-tutor; tutee and non-tutee) were categorized into new lists based on their areas, and they were randomly selected. All informants gave written consent to be interviewed and their information to be used for academic purposes, including writing this dissertation.

- *Schoolteachers*: four teachers (tutor = 2; non-tutor = 2) from each school were selected. Therefore, 96 informants from the schoolteacher groups were selected for the interviewing stage. If any participant failed to provide the contact details or who could not be contacted neither before the interviewing date nor on the agreed interviewing date, the same process would be conducted to select substituted informants from the same category (i.e., tutor or non-tutor) in the same school to reach an adequate sample size. However, in case the substituted informant as tutor could not be contacted either, the researcher would select the non-tutor to replace. The study aimed at maintaining a high number of non-tutor participants because very few studies included this type of samples in their scope of study and to seek reasons for declining to engage in PT.
- *Students and parents*: The same procedure was done to select students and their parents as informants for the semi-structured interviews. The study aimed to select two tutees and two non-tutees and their parents from each school. Therefore, the study would obtain 96 students and 96 parents as informants during this stage.

- *Gatekeepers*¹¹: a school (vice)principal of each school was purposively invited to be the participants in this stage to explore teachers' behavior Page (2016) explains that although the teachers' malpractices were covert, they were never hidden from the school administrators' attention. In the same line, the (vice)-director of the POE, who is in charge of the Secondary Education Office, was also invited to seek their actions toward PT in schools and insight on teachers' malpractices and their responses.
- *Independent informants*: In an attempt to observe the overview of what and how has been done and what MoEYS is going to do in terms of PT regulations/policies at the school level from the perspectives of the policy level, the study purposively invited officials who were working in three departments of MoEYS, namely Policy Department, General Secondary Education Department, and Examination Affairs Department as participants. They were termed as *independent informants* in this study since they are not directly involved in the PT supply and demand process. Regarding the informants for this category, the researcher acquired the appointment of the director of the concerned departments after introducing the study's purpose and specific characteristics of the targeted person. The appointed person should be the one who has been involved in guiding schools toward implementing the policies related to the examination before and after the nationwide 12th grade's examination reform.

4.3 Instruments and Data collection

4.3.1 Instruments

A survey and interview were used for data collection. Data from both survey questionnaires and interviews were collected through online applications due to the school closure on the 16th

¹¹ *Gatekeeper* is referred to as an individual who usually has 'insider' status at the site as well as who provides entrance to the site and assists researcher to locate/identify people to study (Creswell & Guetterman, 2019, p. 211).

of March 2020 following the COVID-19 outbreak. Respondents were informed about the survey purpose and requested to confirm their voluntary participation. Also, interviewees gave written consent to record and use data for academic purposes (Appendix 6).

Three *online questionnaires* were developed to collect data from schoolteachers, students, and parents. Questionnaires for students and parents were combined before data analysis. Therefore, completed questionnaires from respondents whose either parent or child did not respond to the survey questionnaire would be categorized as a lost sample. The questionnaires were constructed using Google form because schoolteachers and students were familiar with it, and it can be accessed on computers, tablets, and smartphones. In addition, schoolteachers and students reported using Google Forms for their assessments during this new normal way of teaching and learning. Therefore, this was seen as the most convenient means to the target respondents in most areas in the Cambodian context. First, survey questionnaires were developed in English because most contents were mainly based on the previous literature written in English. Then, those survey questionnaires were translated into Khmer—the native language of Cambodia. The translation was a challenge because of the vocabulary and the concept. Thus, the word “*supplementary*” used in the original term “private supplementary tutoring” was removed as being explained in the definition of terms in Chapter *one*. Finally, the translated questionnaires and interviews for all groups of informants were consulted with and checked by the researcher’s colleagues who have expertise in English and Khmer languages to ensure the validity of the contents and errors in both spelling and Khmer sentence structure which may change the meaning of the statement or question.

Time allocation for online questionnaires was the main barrier when developing the questionnaire to ensure better response rates and quality since it affects participants’ time and

imposes a financial burden. Past literature on the effects of length of questionnaire on survey response revealed that when one personal questionnaire consisted of more than 100 questions or 10 pages, it would cause low response rates and quality. The best length of time to allocate for responding to the questionnaire was still controversial (Burchell & Marsh, 1992). However, the Versta Research team (2011) suggested that a good rule of thumb is that a survey should take 15 to 20 minutes. Similarly, Hugick and Best (2008, p. 659) suggested the same length of time for telephone and online surveys. Besides the length of time, an unstable internet connection is also one of the factors that should be considered when collecting data online. Recent studies during COVID-19 commonly revealed the Internet connection was the main issue affecting students and schoolteachers' perceptions (e.g., Jalli, 2020; Muthuprasad et al., 2021; Soeung & Chim, 2022).

Regarding the interviews, five sets of interview protocols were developed for schoolteachers, students, parents, school principal, and POE (vice-)director, including staff at the policy level (Appendix 8a – 8e). The interview protocols for PT actors (i.e., schoolteachers, students, and parents) were adapted from Bray and Kwo (2015, pp. 170–173, 177–178) while interviewing questions for school principals, POE (vice-)directors, and staff at policy level were developed accordingly to probe the central phenomenon identified during the interview with all PT actors.

4.3.2 Piloting stage

Before proceeding to the data collection stage, the study went through certain procedures to ensure sound and replicable data and the accuracy of the results. First, validity and reliability were checked to assure the quality of the measurement instrument (Kimberlin & Winterstein, 2008). All survey questionnaires were piloted in five upper secondary schools in March 2020. One in Phnom Penh, two urban schools in Kampong Chhnang whose poverty rate was 26.1%

(highest rate among the remaining provinces), and two other rural upper secondary schools in Banteay Meanchey whose poverty rate was 17.5% (medium rate). The links of the students' and parents' survey questionnaires were sent to 217 Grade-12 students and 168 schoolteachers. As a result, 165 students, 51 parents, and 65 schoolteachers responded to the questionnaire. Although the Cronbach's Alpha values were acceptable ($\alpha = .716$ for students; $\alpha = .762$ for parents, and $\alpha = .693$ for schoolteachers), the median length of time the respondents spent on answering the questionnaire was 42 minutes for 97 items, 37 minutes for 52 items, and 29 minutes for 52 items from students, parents, and schoolteachers respectively. The researcher assumed that the length of his questionnaire may have influenced the response rates even though the items were less than 100. After receiving the survey questionnaires, the researcher contacted participants randomly to gain insight into their challenges and comments toward increasing a friendly-user condition. A total of 13 out of 20 informants suggested reducing the items and breaking page by item since most informants answered the questionnaire through their handphone. Therefore, some items were removed from the original versions.

As a result, the items were reduced to 36 items for schoolteachers, 26 for students, and 29 for parents. Schoolteachers' self-reported survey (Appendix 7a) consisted of six sections: personal information, about family, your home, perceptions of teaching and learning, private tutoring, and inviting for interview. Regarding items related to schoolteachers' homes, it was especially used to measure their family SES. The items were adapted from the MoEYS' poor priority form for the scholarship. This form was used to identify students in underprivileged households and privileged ones by the Department of Higher Education (MoEYS, 2019b). Although these items were used with students in the original form of MoEYS, these were applicable for SES in the Cambodian context.

For the students' self-reported survey (Appendix 7b), there were four main sections: personal information, perceptions of teaching and learning, private tutoring engagement, and contact information for the interview. The items related to students' perceptions of teaching and learning at public schools and PT classes were constructed based on the previous local studies' findings. The researcher constructed those findings into the statement form to make it easy for the respondents in this context. As mentioned above, to ensure validity, those statements were consulted and checked by the experts after the translation into the native language. Similarly, the parents' survey questionnaire (Appendix 7c) consisted of four sections – personal information, information about your home, about private tutoring, and contacting for interview. To measure family SES, the items were adapted from MoEYS' 2019 poor priority form as it was in the schoolteachers' survey. Moreover, the reasons for parents investing in PT were adapted from Kobakhidze's (2015, p. 48) survey.

4.3.3 Data collection

4.3.3.1 Ethical procedure and its effects

The study took the same ethical procedure for each research setting before the data collection stage. First, Cambodia's MoEYS-approved research permit was sent to each POE of the target research setting through the Telegram application. Then the researcher arranged a time to conduct a brief (about 30-minute) discussion with the (vice-)director of POE through Zoom according to their convenient time. Research's purpose included why their province was selected, how much time the data collection may spend at the site, targeted schools and participants, and the data collection procedure were presented to them. Next, the research permit was sent to all targeted schools in each selected province. Following that, the researcher explained the research process, including data collection, to the school (vice) principal. After obtaining approval, the researcher would work with schoolteachers in charge of each Grade-

12 class and administrative staff who were in charge of teaching staff at the upper secondary level to obtain the contact numbers or contact addresses to proceed with the data collection.

This ethical procedure reduced the number of research sites and participants in this current study due to being conducted during the COVID-19 outbreak and being requested to sign a consent form. For example, two selected provinces (one in high-SES type and one in medium-SES type), consisting of six selected schools, refused to allow the researcher to continue his procedure by explaining that some schools were being used as quarantine center as well as teachers and students including school principals were being overwhelmed with online teaching and learning. Therefore, the research procedure was requested to be postponed during the school closure and to wait until face-to-face data collection could be done. Similarly, six schools (three in Phnom Penh and three in low-SES type) out of the 18 remained schools denied collaborating in this study. As a result, only 12 out of 24 selected schools with 3,066 students (Female = 1,579) in total participated in this study. Also, there were 526 teachers (Female = 201) as exhibited in Table 4.3. Facing a similar issue, Bray et al. (2015, p. 226) explained that Cambodian adults seemed to be cautious when signing on official paper or written documents due to high rates of illiteracy and the legacy of Cambodia's political history.

Table 4.3: Remained population for the study

Type	Location	Sch. I.D	Grade 12 students			Teachers
			Social Science (Female)	Science (Female)	Total (Female)	Total (Female)
Higher-SES	Phnom Penh	3	655 (309)	450 (255)	1,105 (564)	187 (67)
High-SES	Kampot	3	451 (203)	194 (111)	645 (314)	136 (56)
Medium-SES	Steung Treng	3	350 (194)	93 (47)	443 (241)	72 (25)
Low-SES	Battam-bang	2	373 (174)	272 (151)	669 (389)	645 (325)
	Koh Kong	1	105 (42)	123 (93)	228 (135)	28 (8)
Total n = 12			1,934 (922)	1,132 (657)	3,066 (1,579)	526 (201)

4.3.3.2 Self-reported survey

This phase of the data collection started from mid-March to late May 2021. The online survey was sent out to individual schoolteachers and students through social applications (i.e., Telegram). The online survey for parents was sent to them through individual students' Telegram accounts as schools have a limited number of parents' contacts; some contact numbers were no longer available in the system. Respondents were informed about the purpose of the study on the first page and requested to confirm their voluntary participation. The participants could freely accept or decline the request to participate in the survey by clicking one of the choices—*agree* or *disagree*—before proceeding to the survey questions. As a result, 198 teachers (Female = 76), accounted for 37.64% (Female = 37.81%) as well as 862 paired students and parents (Female = 591), accounted for 26.94% (Female = 37.43%) of the total samples responded the survey questionnaire. Notably, 862 respondents were paired out of 1,224 students and 1,198 parents who responded to the online survey. Table 4.4 indicates the total number and rates of respondents who answered to the survey questionnaire by type.

Table 4.4: Total and rates of respondents among the selected participants by type

Type	Paired students and parents		Teachers	
	Total (%)	Female (%)	Total (%)	Female (%)
Higher-SES	324 (29.32)	217 (38.48)	60 (32.08)	23 (34.33)
High-SES	290 (44.96)	207 (65.92)	57 (41.91)	21 (37.50)
Medium-SES	0	0	32 (44.44)	14 (56)
Low-SES	248 (28.41)	167 (36.30)	49 (37.40)	18 (33.96)
Total respondents (%)	862 (26.94)	591 (37.43)	198 (37.64)	76 (37.81)

4.3.3.3 Semi-structured interview

4.3.3.3.1 Planning stage

The main purpose of this stage was to arrange a convenient time for the interview and to inform participants about the research, including the research ethics. This process was done in late

June 2021. The researcher contacted each selected individual through Telegram to discuss the interview process, arrange a convenient time, and reconfirm the means for the interview (e.g., Skype, Telegram, Zoom, Google meet, or Facebook messenger). In addition to this, the researcher explained briefly to the selected individuals the reasons they were selected, the study's and interview's purpose, and the protection of their information and written consent. Then, the researcher sent a written consent letter to each participant and asked them to read it carefully before submitting it to the researcher on the interviewing date. They were also informed about their rights to cancel their interview appointment or withdraw their participation, including their interview record/transcript at any time (e.g., before, during, or after the interview), although they had already agreed to participate or submitted the written consent form. In this stage, 25 students and parents decided not to participate in the interview process after the discussion on the written consent form. Similarly, 9 schoolteachers and 3 school principals were left out, although they agreed to participate in the interview with a condition of not completing the written consent. In total, 39 informants (28.47%) across the group selected for interviews were reduced regarding their concern about the written consent form. Table 4.5 shows the retention samples were only 98 (Female = 42) out of 137 selected informants for the interview stage.

There were 10 non-tutees (Female = 4) among 23 students, while 11 (Female = 5) out of 24 parents whose child did not take PT could be reached for interviews. As mentioned in the previous section, the study aimed to recruit more non-tutors to substitute tutors who could not be contacted for interviews, so the study reached 17 non-tutors (Female = 4) out of 39 teachers for the interviews. The researcher could also reach only one out of three independent informants for the interview. Therefore, there were 99 informants.

Table 4.5: Retention number of informants for the interviews (by school type)

Type	Informant category	PT actors (n = 120, Female = 54)			Gatekeepers (n =17, Female =2)		Lost Samples
		Students	Parents	Teachers	principals	POEs	
		Selected n.	(4x9) =36	(4x9) =36	(4x12) =48	12	5
Higher-SES	Total	8	10	8	2	-	12
	Female	5	6	1	1	-	4
High-SES	Total	8	9	11	3	1	8
	Female	6	5	3	0	0	4
Medium-SES	Total	-	-	10	1	-	5
	Female	-	-	4	0	-	0
Low-SES	Total	7	5	10	3	2	14
	Female	4	4	2	1	0	6
Retention (n =98)	Total (%)	23 (63.89)	24 (66.67)	39 (81.25)	9 (75)	3 (60)	39 (28.47)
	Female (%)	15 (71.43)	15 (78.95)	10 (71.43)	2 (100)	0	14 (25)

4.3.3.3.2 Interviewing stage

The study employed Leech's (2002) *gaining rapport* techniques for a semi-structured interview (e.g., putting respondents at ease, briefly *restate* not *reinterpret* what respondent has just said before moving to the next question, ask for *use* not *meaning* when you do not understand, ask easy question first, use '*enough is enough*' rule) to create a friendly environment for informants to express their viewpoints freely and confidently without any interrupted or intimidated as well as to grasp any important, unexpected points. Therefore, the researcher conducted interviews as informally as possible to make informants feel comfortable because it can allow him to get close to them for the most reliable responses without any barrier. The interview stage was between July and November 2021, including the transcript verification stage.

Due to the COVID-19 outbreak, which restrained the researcher from traveling to the research site for face-to-face interviews, the constraints of interviewing online were considered in advance. To minimize informants' time and expenses on the internet, each interview was planned to be completed within 30 minutes through a video call. However, a voice-call interview would be used if experiencing slow internet connectivity during the process or as per request. Some challenges were encountered during the interview due to an unstable internet connection. This inconvenience may have affected informants' answers, whereas online interviews provided respondents with more confidence and freedom to share their perceptions than a face-to-face, on-site interview conducted on the school campus. Interviews were done in Khmer, the native language of both informants and the researcher. The researcher conducted all interviews by himself through online applications of the informant's preference.

Before stating the interview, the researcher started by thanking them for joining and again informing them about the study's purpose, protection of their identity, right to ask to pause/stop (recording) the interview, and confidentiality of their answers about why they were selected to join. Also, the researcher asked whether they had any concerns or questions before proceeding with the interview process. Then the interview began with a self-introduction by the researcher and the informant (Appendix 8a–8e). By the end of the interview, the researcher informed informants about transcript verification and requested permission for further contact in case of having to verify some points or seek further information which may be needed during the data analysis process. Note-taking and voice/video recording were used during the interview.

4.3.3.3.3 Post interview

Each recorded interview was transcribed soon after the interview had been completed, and notes were reviewed and combined. The transcript was sent to each informant through

Telegram or Facebook messenger as per request to verify before proceeding to the analysis stage. This phase is a crucial process in a qualitative study to guarantee accurate and complete information before data analysis (Hagens et al., 2009). Informants were requested to read through their written transcript and add more information to clarify doubts or remove any pieces of information they felt were inappropriate or misleading. Informants could do this on their own, or they could inform the researcher by using voice message to change or remove, as well as request to work on it with the researcher in case they do not have any computer to access. Moreover, this phase helps the informants ensure that none of their and/or third party's identities were included. Although 99 transcripts were sent for verification and confirmation, 10 were not returned despite the researcher's attempts to contact the concerned informants to return their verification transcripts a few times. Therefore, the bring-forward transcripts for the data analysis stage were only 89, as seen in Table 4.6 below.

Table 4.6: Number of bring-forward transcripts for analysis

Attribute		Sent (female)	Lost (female)	Returned (female)
PT actors	Teachers	39 (10)	2 (2)	37 (8)
	Parents	24 (15)	5 (2)	19 (13)
	Students	23 (15)	2 (0)	21 (15)
	<i>Sub-total</i>	77 (40)	9 (4)	68 (36)
Gatekeepers and independent	Principals	9 (2)	1 (0)	8 (2)
	POEs	3 (0)	-	3 (0)
	Central level	1 (0)	-	1 (0)
	<i>Sub-total</i>	13 (2)	1 (0)	12 (2)
Grand total n.		99 (42)	10 (4)	89 (38)

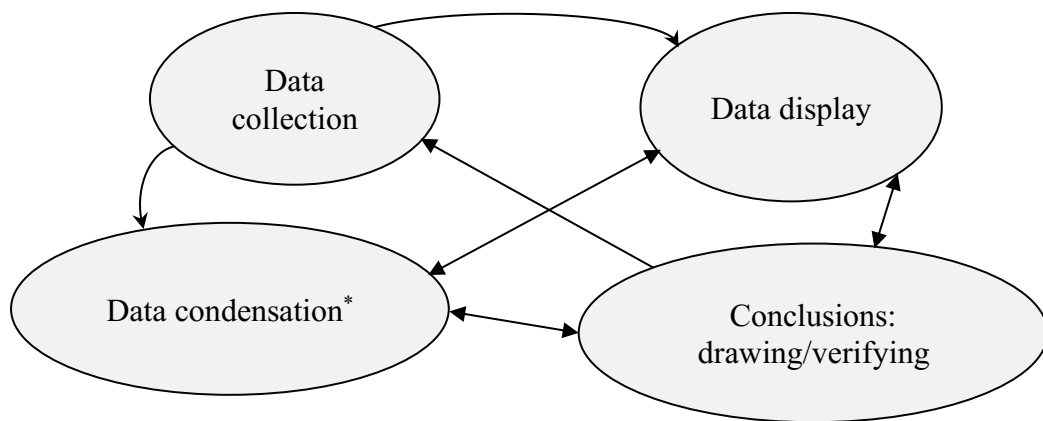
4.3.4 Data analysis

4.3.4.1 Interview data

The interactive model for qualitative analysis was employed to analyze qualitative data of this study as Miles, Huberman, and Saldana (2014) expressed that this model allows researchers to move among those components during data collection and then shuffle among condensation,

display, and conclusion for the remainder of the study as shown in Figure 4.3. Due to this active interaction in terms of the possibility to merge data analysis and interpretation as well as the process of data collection and analysis, this model has become popular in qualitative research (Cohen et al., 2017).

Figure 4.3: Components of data analysis: Interactive model



*The term “*condensation*” is used in their 3rd edition (2014) to replace the original term “*reduction*” in 1994. The original term could imply that the researchers were weakening the analysis or losing something when applying this model.

Source: Miles and Huberman (1994, p. 12); Miles, Huberman and Saldana (2014, p. 10).

To ensure validity and reliability of the data, code and re-code strategy or coding agreement for content analysis were employed. Data were encoded twice within one or two weeks. Then both encodings were compared to see similarities and differences (Anney, 2014). The consistency was calculated using the formula described by Miles and Huberman (1994) as seen below. As explained by those authors, when the coefficient of agreement is above 70% between the first and second coding, it is considered sufficient agreement or reliable.

$$reliability = \frac{\text{number of agreements}}{(\text{number of agreements} + \text{number of disagreements})} \text{ or}$$

$$reliability = \frac{\text{number of agreements}}{(\text{total codes of each coder})}$$

Moreover, an official monolingual Khmer dictionary was used to ensure the correct meaning of some words/phrases during the conceptual analysis to mitigate subjectivity, reliability, and validity issues. The researcher contacted informants for clarification in the case of issues pertaining to the interpretation of dialects to avoid misleading concepts. To serve the study's intent, the three crucial terms were clearly defined before starting the coding process to ensure consistency in each coding stage (Table 4.7).

Table 4.7: Excerpt of codebook used for analysis

Code name	Code definition	Code includes
Caring pedagogies	It is referred to as a climate in which a caring relationship between the carer (schoolteacher) and cared-for (student) flourishes, and as a pedagogy, it assists students in achieving prescribed skills and knowledge (see Noddings, 2005, pp. 14–15).	Precisely explaining, accepting questions, paying attention to every individual regardless of own tutees, non-tutees, and tutees with others, having interaction between individuals.
Uncaring pedagogies	It is mainly related to teachers' instruction in the class. It covers all kinds of teaching behaviors of teachers which interfere with students achieving the prescribed skills and knowledge.	Hurried teaching, slowing down teaching, withholding some contents, unavailable for questions, focusing more on theory, giving few practices,
Unethical behaviors	Any kinds of activities as well as either direct or indirect verbalization which make students feel ashamed or scared and feel that taking PT is a “must”. This also includes any activities involving paying money to gain benefits over others and to build rapport between the supply and demand side, but not include paying for PT.	Mocking, blaming, Forcing/advising students to take PT, boasting PT advantages, allowing own tutees to cheat, giving better grades, emphasizing some test items during the tutoring classes, selling test paper/answers, paying to remove the number of absence, demanding/giving gifts, collecting money during public school hour.

It is important to calculate the coefficient of agreement for both codings as its result is based on the total number of coding in each coding phase. To simplify the calculation, the value of rater reliability was determined by the number of total agreements in 1st coding divided by the total number of codes in 1st coding. Then a similar method was followed for the reliability of 2nd coding. Table 4.8 illustrates the comparison.

Table 4.8: Examples of comparison table (after condensation)

ID	Page	Extracted text	1 st coding	2 nd coding	Count
T03	p.2 lines 15-17	Moderator: Can you tell me what was behind your decision to take PT that year?			
		Teacher: Nothing else but to practice more exercises. At school, we could practice some, but it is just about formula and some exercises in the [school] textbook. [we]	[Extra practice]	[Learn more exercises]	+1
		[n]ever got good score if [we] did not take PT. (started with a deep breath). Teachers at that time [1992-95] were so unfair.	[unethical behavior] --No code--	[PT benefit] [unethical behavior]	-1 -1
	p.3 lines 2-4	Teacher: ...[S]ome exercises [test items] are the same to what he [teacher of math] taught in tutoring class. He did not tell us [tutees] what [test items] would appear in the [monthly/semester] exams; he just indirectly talked [gave some hints] about it during the explanation.	[unethical behavior] [marketizing strategy]	[unethical behavior] --No code--	+1 -1
Total number of codes =			18	20	
Total number of disagreements =			2	4	
Total number of agreements =					16
Coefficient of agreement =			0.888 (89%)	0.80 (80%)	Good

4.3.4.2 Survey data

The quantitative data were used to examine factors influencing teachers' and students' decisions on whether to engage in PT at Cambodian upper secondary schools. The decision to engage in PT, the dependent variable, was obtained from both teachers and students and coded dichotomously (No = 0, Yes = 1). Therefore, a Binary Logistic Regression was used to examine the relationship between teachers' as well as students' predictors and this categorical variable. After the period for data collection was over, data were extracted from Google form and coded before proceeding to the data cleaning and analysis.

The teachers' survey questionnaire consisted of 36 items. The overall internal consistency of the instrument when administered was $\alpha = .685$. The decision to engage in PT was predicted by 13 predictors, which were combined in three constructs, namely *school-related* (i.e., school type, area), *individual-related* (i.e., gender, teacher specialization, qualification, teaching group, place of residence, including socio-economic status), and *teacher's attitude* such as perceptions of public school (5 items), teaching attitudes (12 items), family-related variables (i.e., spouse' occupation, spouse's education, using loan) including one item as a dependent variable.

The *socio-economic status* was measured by 10 items which were about their living condition. The Cronbach's alpha value of these 10 items was $\alpha = .618$, which a little lower than the threshold ($\alpha = .70$); however, it was within the scope of acceptable value ($\alpha = .50$). Exploratory Factor Analysis using principal axis factoring with Varimax and Kaiser normalization in the rotation was performed to obtain the regressed scores for teachers' SES. For item-factor saturations, values greater than .40 were used as criteria. The analysis produced two factors (KMO = .742; Bartlett's test = 317.754; $p < .001$), and the variance explained of the variable

was 62.45%. They were named as *housing condition*, measured by four items having Eigenvalues of 2.271 and $\alpha = .628$, and *extra-income source*, measured by two items having Eigenvalues of 1.476 and $\alpha = .60$.

The *teachers' perception of teaching at the public school* was measured by five items ($\alpha = .773$) which were about their work during the official hours. The performance of Exploratory Factor Analysis using principal axis factoring with Varimax and Kaiser normalization in rotation produced one factor and named as *attitude toward public school* with an Eigenvalues of 53.475 (KMO = .754; Bartlett's test = 275.004; $p < .001$), and the variance explained of the variable was 53.48%.

The *teaching attitude* was measured by 12 items about their teaching activities with the Cronbach's alpha value of $\alpha = .90$. The results of factor loading by using principal axis factoring with Varimax and Kaiser normalization in rotation produced two distinct factors of this construct (KMO = .905; Bartlett's test = 1383.580; $p < .001$), the variance explained of the variable was 61.05%. The first factor was named *caring pedagogies*, which was measured by 10 items, having an Eigenvalues of 6.018 and $\alpha = .918$, and another one was *uncaring pedagogies*, measured by two items having an Eigenvalues of 1.307 and $\alpha = .571$. Table 4.9 exhibits the factor loading of schoolteacher-related factors.

Table 4.9: Factor loading of teachers' predictors

Constructs	Item descriptions	Factor loading				
		Housing condition $\alpha = .628$	Extra-income source $\alpha = .60$	Attitude toward public school $\alpha = .773$	Caring pedagogies $\alpha = .918$	Uncaring pedagogies $\alpha = .571$
Socio-economic status (KMO = .742, $p < .001$)	1. Materials of your walls	.778				
	2. Materials of your floor	.654				
	3. Type of toilet you own	.676				
	4. Sources you use to cook your meal	.439				
	5. Do you have rooms for rent?		.563			
	6. Do you have a store/land for rent?		.681			
Perception of public school (KMO = .754, $p < .001$)	1. Government salary is low.			.530		
	2. Instructional time is insufficient to ensure knowledge and skills as required by the national syllabus.			.729		
	3. We are required to use a learner-based approach, so we need more time to explain to students in detail about knowledge and skills.			.722		
	4. Students can learn only theories with few practices.			.729		
	5. Class size is too big.			.515		
Teaching attitude (KMO = .905, $p < .001$)	1. Use group works				.417	
	2. Use individual works				.588	
	3. Explain the lesson in detail				.745	
	4. Assign more homework				.708	
	5. Respond to most questions of students				.857	
	6. Practice more knowledge and skills				.828	
	7. Practice previous years' exam tests				.759	
	8. Have active interaction				.879	
	9. Main purpose is to complete the syllabus.				.423	
	10. Main purpose is to strengthen students' knowledge and skills.				.802	
	11. Focus on theories with few practices					.630
	12. Summarize and dictate lessons					.603

Note: Loadings $< .40$ are suppressed

Regarding the students' survey, there were 26 items in the combined students' and parents' self-reported survey questionnaire with the Cronbach's Alpha value of .948 when administered. These items were comprised of two constructs: *school-related* (school types and areas), *individual-related* such as gender, learning track, perception of learning and teaching at public schools (12 items), perceptions of learning and teaching at PT classes (7 items), influence by others (5 items), teachers' attitude (10 items), and one item of PT demand as a dependent variable. The perception of learning and teaching at public schools was measured by 12 items ($\alpha = .927$) using a Likert scale (ranging from 1 = no idea, 5 = Absolutely agree). Exploratory Factor Analysis using principal axis factoring with Varimax and Kaiser normalization in rotation was performed to obtain the regressed scores for students' perception of public school. For item-factor saturations, values greater than .40 were used as criteria. As a result, it produced one factor named *perceptions of teaching during official hours* (KMO = .960; Bartlett's test of Sphericity = 7897.295; $p < .001$), with the variance explained of the variable was 65.01%, as indicated in Table 4.10.

Table 4.10: Factor loading of students' perception of learning at public school

Item descriptions	Factor
1. Teachers teach lessons very fast.	.749
2. Teachers focus much on theories.	.781
3. Teachers cannot cover the entire syllabus.	.764
4. Teachers do not explain the lesson in detail.	.850
5. Teachers give only a few practices.	.811
6. Teachers give challenging homework.	.778
7. Teachers emphasize tests before the test dates.	.802
8. Teachers allow tutees to check cheat sheets during the tests.	.770
9. Instructional time for core examination is not enough.	.843
10. Class is too large.	.784
11. If I do not take private tutoring with her/him, I will never get a good grade.	.749
12. If I do not take private tutoring with her/him, I do not feel comfortable during school.	.747

Note: Loadings <.40 are suppressed

The perception of learning and teaching at private tutoring classes was measured by seven items ($\alpha = .848$) using a Likert scale (ranging from 1 = no idea to 5 = Absolutely agree). As indicated in Table 4.11, all items were loaded in one factor which was labeled as *perceptions of tutoring classes* (KMO = .804; Bartlett's test of Sphericity = 2480.487; $p < .001$), and the variance explained by the variable was 51.94%.

Table 4.11: Factor loading of students' perception of private tutoring classes

Item descriptions	Factor
1. Teaching is easy to understand.	.781
2. Gain more techniques and skills for examinations.	.722
3. Can practice previous years' examination tests.	.453
4. Have more chances to ask questions.	.730
5. Can have good relationship with schoolteachers.	.598
6. Receive more care from schoolteachers during school hours.	.721
7. Improve my academic achievement.	.685

Note: Loadings $< .40$ are suppressed

The influence from others, having five items measured by a Likert scale (ranging from 1 = no idea to 5 = absolutely agree) with the Cronbach's Alpha value of .853, was also examined in Exploratory Factor Analysis using principal axis factoring with Varimax and Kaiser normalization in rotation. It produced one factor, as shown in Table 4.12, named as *influence of others* with the KMO values of .794, and Bartlett's test of Sphericity of 1443.699 ($p < .001$), having the variance explained of the variable of 70.52%.

Table 4.12: Factor loading of influence by others

Item descriptions	Factor
1. If many of my friends take private tutoring classes, I do too.	.586
2. My parents/relatives chose private tutoring classes for me	.772
3. My teachers recommended private tutoring classes for me.	.878
4. My school principal recommended use to take private tutoring.	.875
5. I do not want to be different from others.	.851

Note: Loadings $< .40$ are suppressed

The teachers' attitude was measured by 10 items using a five-point Likert scale with a Cronbach's Alpha value of .903. Table 4.13 indicates that Exploratory Factor Analysis using principal axis factoring with Varimax and Kaiser normalization in rotation produced two distinct factors (KMO = .897; Bartlett's test of Sphericity = 5744.676; $p < .001$) and the variance explained of the variable was 71.61%. The first factor, *uncaring behavior*, was measured by seven items, having an Eigenvalue of 54.171 with a Cronbach's Alpha value of .909. The second factor was named as *caring behavior*, measured by three items ($\alpha = .916$) with an Eigenvalue of 17.435.

Table 4.13: Factor loading of teachers' teaching attitude

Item descriptions	Factors	
	Uncaring behavior $\alpha = .909$	Caring behavior $\alpha = .916$
1. Teachers skip some contents of the syllabus.	.653	
2. Teachers do not have time to answer questions.	.745	
3. Teachers give more care to their own tutees.	.790	
4. Teachers often call non-tutees or tutees with other teachers to solve challenging homework or exercises.	.812	
5. Teachers give higher scores to their own tutees.	.831	
6. Teachers explain lessons very briefly.	.696	
7. Teachers teach only theories with few practices.	.677	
8. Teachers teach lessons with care.		.819
9. Teachers are friendly and approachable.		.896
10. Teachers are fair to everyone.		.856

Note: Loadings <.40 are suppressed

Data obtained from parents' survey questionnaires were combined with students' data to predict influence on students' PT engagement. The parents' survey questionnaire consisted of 29 items with the Cronbach's Alpha value of .862 when administered. These items were

divided into only one construct, namely *parent-related*, which consisted of parental educational attainment, parental occupation, parent's PT experience, family socio-economic status, reasons to invest in PT, and reasons not to invest in PT.

The *family SES* was measured by 12 items with a Cronbach's Alpha value of .644. The researcher conducted Exploratory Factor Analysis using principal axis factoring with Varimax and Kaiser normalization in rotation to obtain regressed scores of this construct. As can be seen in Table 4.14, it produced three factors with only nine items (KMO = .786; Bartlett's test of Sphericity = 1308.012; $p < .001$), and the variance explained by the variable was 47.49%. The first factor was named housing condition, measured by six items with Eigenvalue of 2.893 ($\alpha = .688$). The second one was labeled as *extra-income sources*, having an Eigenvalue of 1.221 with a Cronbach's Alpha value of .408. The last factor was measured by only one item, having an Eigenvalue of 1.110, and was named *bank loan*.

Table 4.14: Factor loading of individual socio-economic status

Item descriptions	Factors		
	Housing condition	Extra-income sources	Bank loan
1. Sources of water for your daily use	.457		
2. Number of bedrooms in your house	.496		
3. Material of your wall	.607		
4. Material of your floor	.657		
5. Type of toilet you own	.543		
6. Sources you use to cook your daily meal	.592		
7. Rooms for rent		.434	
8. Lands/stores for rent		.614	
9. Used loan recently			.559

Note: Loadings <.40 are suppressed

4.4 Chapter summary

The study employed interviews and surveys for data collection and analysis to answer the two research questions. Quantitative data were collected from PT actors such as schoolteachers, students, and their parents through a self-reported survey questionnaire covered multiple dimensions such as school-related factors (types and areas), teachers' attitudes (perceptions of public school and teaching pedagogical style), and individual-related factors to gain an insightful understanding about the reasons they continued offering PT to their own students. Other important dimensions were also observed in students and parents, such as school type and area, individual and parent-related factors. The survey data were collected through an online application from 198 schoolteachers and 862 paired students and parents from 12 schools located in four provinces and Phnom Penh. In addition, the study conducted 89 interviews with different educational stakeholders such as schoolteachers, students and parents, their school principals, POE (vice-)directors, and staff at the policy level. Both data were analyzed and reported separately for each research question. Then both findings and results were combined for discussion.

Chapter 5: TEACHERS' ENGAGEMENT IN PRIVATE TUTORING

This chapter presents schoolteachers' reasons to continue engaging in private tutoring. The research methodology included sampling, and data analysis is briefly described before reporting the study's findings. The data analysis findings and results from interviews and survey were reported separately. Then, all key findings were summarized by the end of the chapter. This chapter addresses the following research questions:

RQ#1: Why did schoolteachers continue to offer private tutoring at Cambodian upper secondary schools?

5.1 Brief methodology

The specific purpose of this research question was to investigate why upper secondary school teachers continue to engage in private tutoring in Cambodia by employing a self-reported survey questionnaire and semi-structured interview to probe the central mechanism of PT engagement and identify the influential factors of their decision. This chapter aims to observe schoolteachers' behavior and mechanism for maintaining their PT.

5.1.1 Samples and data collection

The data to respond to RQ#1 were collected from 198 schoolteachers through a survey questionnaire and 40 interviews, including different stakeholders from the school level to the policy one. The data collection process was done in two different stages. First, the survey data were obtained from 12 out of 24 selected schools in Phnom Penh and the other four out of six provinces of Cambodia through online application due to the school closure following the COVID-19 outbreak. Second, semi-structured interviews were conducted through online applications (e.g., Facebook Messenger, Telegram, Skype, Google Meet, or Zoom), which was convenient for the selected informants. We conducted 52 semi-structured interviews in total.

Of these, 39 were from schoolteachers to seek the influential factors contributing toward their PT engagement. Following a previous study by Page (2016, p. 8), nine school principals, three POE directors, and one independent informant at the policy level were invited for the interview to gain insight into schoolteacher professional behavior as well as to triangulate the teachers' responses.

Table 5.1: Demographic information of the informants for interviews

Category		Attribute	Frequency	Percentage
Teachers n = 37 (75.51%)	Gender	Male	27	72.97%
		Female	10	27.03%
	Area	Phnom Penh	8	21.62%
		Urban	19	51.35%
		Rural	10	27.03%
	Specialization	Mathematics	10	27.03%
		Sciences	11	29.73%
		Khmer composition	7	18.92%
		Social sciences	6	16.21%
		English		8.11%
	Type	Tutors	22	59.46%
Non-tutor		15	40.54%	
Principals n = 8 (16.33%)	Gender	Male	6	75%
		Female	2	25%
	Area	Phnom Penh	2	25%
		Urban	4	50%
		Rural	2	25%
	Num. of years in charge	< 5 years	3	37.50%
		between 5 and 10	5	62.50%
PoE ^(a) n = 3 (6.12%)	Gender	Male	3	100%
		Female	-	-
	Num. of years in charge	< 5 years	2	66.67%
		7 years	1	33.33%
Central staff ^(b) n = 1 (2.04%)	Gender	Male	1	100%
		Female	-	-
	Num. of years in charge	8 years	1	100%
Total N = 49 (100%)	Gender	Male	37	75.51%
		Female	12	24.49%
	Area	Phnom Penh	11	22.45%
		Urban	26	53.06%
		Rural	12	24.49%

Note: ^(a)only in urban area; ^(b)only in Phnom Penh

However, only 49 transcripts could be analyzed because three informants (two non-tutors and one principal) did not return their verified transcript versions to the researcher. Therefore, we

considered that they declined their information to be used although they had submitted the consent forms (see Table 4.3).

5.1.2 Data analysis

These two data sets (quantitative and qualitative) were analyzed separately as guided by Creswell and Guetterman (2019). First, the qualitative data were analyzed to thematize the main reasons for schoolteachers' engagement in PT. Then the survey data analysis was conducted. Finally, both results were reported separately regarding the PT phenomenon.

Regarding the interview data, the study employed an inductive approach for content analysis to code concepts according to the frequency of words or phrases appearing in the transcripts. The content analysis allows the researcher to gather the data in certain themes and transform them into a simpler format for readers to understand the findings easily (Fraenkel et al., 2012). For the data analysis, the interactive model was employed to ensure the enrichment of the information or data since this model allows the researcher to move backward and forward within the four components (see Figure 4.3) (Miles et al., 2014, p. 10; Miles & Huberman, 1994, p. 12). The data were coded for each participant, and the codes were used when a direct quote was needed. Data coding and categorizing were conducted during the data display and condensation. Related information in the data was encoded by themes and sub-themes accordingly. If necessary, the researcher contacted the informants for more information or clarification, albeit they had already verified the information during the verification stage of transcripts. As a result, *five* themes emerged for the reasons to engage in PT, categorized into three categories. The first category was labeled as *system-related category* embedded by “shortage of instructional time” and “feeling of fear due to anti-cheating examination.” The second one was named *personal-related* with two main themes: “teaching specialization” and

“low salaries.” Third category was *feeling of obligation* with one theme – “student/parent’s suggestion.” Regarding the reasons for not engaging in PT, the study unveiled **three** themes such as “teaching specialization/group”, “(own)family business” and “work for private school.” Dealing with reliability of the data, coding agreement or core-recode approach was employed (see Chapter 3). The agreement between the codings was found to be 86.82% for schoolteacher-tutors’ interviews and 91.05% for schoolteacher-non-tutors’ interviews, 85% for the POE directors’ interviews, 77.08% for school principals’ interviews, and 90% for the interview of the staff at the central level (Appendix 9). When the coefficient of the coding agreement is larger or equal to 70%, the findings are considered reliable (Miles et al., 2014; Miles & Huberman, 1994). Therefore, this study’s findings were good enough to answer the study’s intent.

Regarding the survey data, as the outcome variable was coded dichotomously, a *Binary Logistics Regression* (Field, 2013; Leech et al., 2005) with *Enter Method* was employed for the data analysis to estimate the effects of predictors on the schoolteachers’ decision to supply PT at Cambodian upper secondary school. To address this, a *Block Recursive Model* was employed. The variables included in the regression models were entered in two separated blocks, as shown in Table 5.2. First, three factors related to “teachers’ attitudes” construct were entered to determine the total effects of model 1. Then, the other 12 variables were put in model 2 to estimate the effects.

Table 5.2: Model estimation for teachers’ choices of PT

Model	Blocks of independent variables included in the regression model for analysis
1	(Teachers’ attitudes [<i>3 factors</i>])
2	(Teachers’ attitudes) + (School factors + Individual factors [<i>12 factors</i>])

Before entering variables into the analysis model, data reduction was performed since the study's data consist of a large scale of items in which multi-collinearity may be an issue. First, as shown in Table 4.6, Exploratory Factor Analysis using principal axis factoring with Varimax Kaiser normalization in rotation was conducted for factors such as teacher's attitudes toward public school, teaching attitude, and teachers' SES. Second, we performed collinearity statistics analysis in multiple regression to avoid multi-collinearity by ensuring that none of the variables had a *value of tolerance* lower than 0.1 or that of *Variance Inflation Factor* (VIF) higher than 10 (Field, 2013). Table 5.3 exhibits variable descriptions. Its descriptive results will be explained in the section below.

Table 5.3: Description of variables for private tutoring supply side (n = 198)

Variables	Measurement	Description	n.	Question
Supply private tutoring ^(a)	Nominal	0 = Not supply PT 1 = Supply PT	(90) (108)	Q31
Teachers' attitudes				
Attitude toward public school (1 factor)	Factor scores ^(b)	1 = No idea, 2 = Strongly disagree, 3 = Disagree, 4 = Agree, 5 = Strongly disagree		Q23
Teaching attitude (2 factors): • Caring pedagogies • Uncaring pedagogies	Factor scores ^(b)	1 = No idea, 2 = Strongly disagree, 3 = Disagree, 4 = Agree, 5 = Strongly disagree		Q24
School condition construct				
School type	Nominal	1 = Higher-SES 2 = High-SES 3 = Medium-SES 4 = Low-SES	(60) (57) (32) (49)	
School area	Nominal	1 = Rural area 2 = Urban area 3 = Phnom Penh	(92) (46) (60)	
Demographic construct				
Gender	Nominal	1 = Female 2 = Male	(76) (122)	Q1
Teaching discipline	Nominal	1 = Mathematics 2 = Science subjects 3 = Khmer composition	(39) (77) (35)	Q4

		4 = Social subject	(28)	
		5 = English	(19)	
Teaching group	Nominal	1 = Social science	(69)	Q5
		2 = Science	(85)	
		3 = Both	(44)	
Qualification	Nominal	1 = Pursuing Bachelor's degree	-	Q6
		2 = Pursuing Master's degree	-	
		3 = Pursuing doctoral degree	-	
		4 = High school	-	
		5 = Bachelor's degree	(151)	
		6 = Master's degree	(47)	
		7 = Doctoral degree	-	
Place of residence	Nominal	1 = Commuter	(51)	Q7
		2 = Local residence	(147)	
Socio-economic status construct				
Teacher's SES	Factor scores ^(b)			Q12-Q22
(2 factors):				
• Home condition				
• Extra-income sources				
Teacher's family construct				
Bank loan	Nominal	1 = No	(99)	Q22
		2 = Yes	(99)	
Spouse's occupation	Nominal	1 = Housewife/farmer	(28)	Q9
		2 = Teacher	(78)	
		3 = Government staff (not teacher)	(20)	
		4 = Non-government staff	(20)	
		5 = Business owner	(4)	
Spouse's education	Nominal	1 = Primary school	(7)	Q10
		2 = Lower secondary	(17)	
		3 = Upper secondary	(40)	
		4 = Bachelor's degree	(66)	
		5 = Master's degree	(20)	
		6 = Doctoral degree	-	

Note: ^(a) Dependent variable

^(b) Factor scores obtained from Exploratory Factor Analysis using principal axis factoring with Varimax and Kaiser normalization in rotation, and with an absolute value below .40

5.2 Narrative findings

Descriptively, Table 5.1 illustrated that about 76% of the informants were male, and 24% were female. Furthermore, the majority (53.06%) were located in urban areas, followed by rural areas (24.49%) and Phnom Penh (22.45%), respectively. Specifically, schoolteachers who

were the main informants responding to this RQ were from different teaching specifications. Of these, 27.03% were in mathematics, and 29.73% were in science subjects, followed by Khmer composition (18.92%), social science (16.21%), and English (8.11%). Moreover, 59.46% of these respondents were tutors, and 40.54% were non-tutors.

The findings for this research question were reported in two sections – reasons Cambodian schoolteachers engaged and did not engage in PT at upper secondary school. It should be noted that the reasons not to engage in PT were reported after the survey result section later in this chapter. The narrative findings were explained by category and themes in detail. It is worth noting that “*category*” is referred to as the general code used to group the different main themes of similar codes. Similarly, ‘*theme*’ contains some corresponding data which explain the same or similar points. These interrelated data were labeled as “*codes*.”

5.2.1 Reasons to continue engaging in PT

The results of the narrative data analysis unveiled five main themes explaining the reasons that influenced Cambodian schoolteachers to continue practicing PT. Based on the relevant themes, these main themes were classified into three main categories, as exhibited in Table 5.4 below. Each of them was presented with the direct quotes accordingly, and the findings obtained from other stakeholders such as school principals, POE directors, and central-level staff were used to triangulate.

Table 5.4: Teachers’ reasons for engaging in PT

Categories	Themes	Frequency (n = 22)	Codes
System-related	Shortage of instructional time	22 (100%)	• We [teachers] have limited time to complete the syllabus. • We need to teach many things during school hours, but time is limited there.

Personal reasons			• Learning [Instructional] time at the public school is not enough, so we need private classes to continue. • Not only I but also other teachers, I think, can only explain lessons and we explain them in detail. Then we focus on only practicing at private school. This is the best way to complete all contents on time. • I explain lessons in detail, but we [students] cannot practice more since time is limited at public school.
	Teachers' feeling of fear (Anti-cheating examination)	22 (100%)	• When reforming the examination, the Ministry should also increase teaching hours at public schools. Students cannot learn all lessons at school if we do not practice private tutoring. • Reforming the national examination is good, I agree. However, students will not be qualified enough if we do not offer private tutoring. They need more time to practice. • The current national examination is so challenging. If we do not take time to help them [students] in private tutoring, they cannot pass because they cannot learn enough at public school.
	Teaching specialization	15 (68.18%)	• If my subject needs only memorization skills like history, geography, and moral science..., I may not be able to open [offer] private tutoring. • Without practice, you [students] cannot learn [master] mathematics skills. Unfortunately, they cannot get enough practice at public school due to a lack of [instructional] time. • I believe that students also know that memorization does not really work in my subject [physics], but more practice. Moreover, they cannot have enough practice at school.
			• Private tutoring can give me some additional income, but not much. I would say it can cover my breakfast and petroleum for my motorcycle. • Our salaries cannot support our families' daily needs, so we can earn some from teaching private tutoring. Although it cannot fulfill our needs, it can release some of this burden.
	Low salaries	17 (77.27%)	• We [my family] cannot survive with only salaries from the government school. Therefore, small earnings from private tutoring at least can help me with earning my daily food. • My wife cannot make any income besides growing some vegetables around our home. If they do not allow teachers to teach private tutoring, I do not think we can live with the current

Feeling of obligation	Student's / Parent's request	13 (59.09%)	• Students and parents know that the current examination is so strict. They fear that they will fail if they are not good enough, so they requested us to teach private tutoring classes. • Students know that passing the current examination is not easy as before. So, they need time for more practice. I requested us to teach them [privately]. • Students and parents now feared to fail in their examinations because they know that learning at public school is not enough especially exercises [practices].
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5.2.1.1 System-related factors

Two main themes were classified in this category. First, the study unveiled that the *shortage of instructional time* affected schoolteachers' decision to offer PT to their students at upper secondary school. All informants from across teaching disciplines repeatedly pointed out that the given instructional times at the public school were insufficient for students to gain the intended knowledge and skills for their baccalaureate examination. In addition, the contents to be taught were cumbersome to complete within the given instructional time. One informant, for example, stated as follows:

... However, if we do not teach [offer tutoring], many students may not be qualified enough for the national examination because, at public school, we have limited [instructional] hours but too much content. I think we [all teachers] have tried our best to help them [teach students as much as we can] at public school, but I feel we cannot do as we want. – **Urban TT26: Schoolteacher-tutor of physics**

In this regard, schoolteachers repeatedly mentioned differentiating points to focus during public school and tutoring classes and employed *ineffective teaching pedagogies or uncaring pedagogies* when asked about their daily practice to assist students in acquiring the intended knowledge and skills. A total of 77.27% of the informants explained that they chiefly spent public-school hours explaining the theories/concepts but offered *more practical exercises* only

during the tutoring ones. It was stated, for example, that “I think not only me [who practice this way of teaching]. During public school, I paid attention to the theory or formula. I explained them carefully until they understood and practiced some practical examples in the textbooks, [so, I focused on] only practices during tutoring. Sometimes, I just revised theory a little bit before practicing.” (Phnom Penh TT21: Schoolteacher-tutor of mathematics). However, five of them (22.73%) employed *hurried teaching* to cover all knowledge and skills to avoid being blamed, albeit knowing that their students could not master those intents of the syllabus. Three informants from different disciplines, for instance, made this explicit:

... [In public school,] I taught a little fast. I knew that they [students] could not understand [a lesson] well, but we do not have enough [instructional] time. Although they could not learn much, they at least could have some knowledge for their self-learning if they could not afford private tutoring. I knew it was not good to do so [cover all contents, but students could not learn well], but if not [doing so], we will be blamed [by school principal and staff at POE also some students and parents]. – **Rural**

TT14: schoolteacher-tutor of Khmer composition

... [At public school], students do not have enough time to practice. In some months, we [schoolteachers] cannot even complete the lessons as our plan. ... To offer more practices, we had to speed up on the contents [and vice versus]. It was challenging, but we had to ensure the balance of content and practices. Thus, students who do not want to take PT or cannot afford PT can still learn on their own. I agree that students cannot get enough practice at public schools. To be saturated [have enough practice as well as master knowledge and skill], they need PT. – **Phnom Penh TT31:**

Schoolteacher-tutor of chemistry

Simply say, we can teach only content at public schools. During the tutoring class, we review contents briefly or summarize key points, then start practicing those

[knowledge and skills of the content]. If not do so, we cannot complete the syllabus

on time. – **Urban TT18: Schoolteacher-tutor of mathematics**

Second, implementing examination reform through promoting an anti-cheating policy during the baccalaureate examination was found to impact schoolteachers' continuation to offer PT due to *their feeling of fear*, although they remarkably supported this policy. They described this aspect as having a strong connection with the first sub-themes. All participants across school areas expressed that offering PT was the only way to assist their students in gaining better knowledge and skills for their baccalaureate examination. One schoolteacher (Urban TT10: Schoolteacher-tutor of chemistry) expressed his view on this aspect as follows: "Starting to strengthen the examination of Grade 12 is a good idea, but they [ministry] should consider increasing the number of teaching hours for us too. ... [At the public school,] they [students] could not learn all important points in detail as being prescribed in the Ministry's syllabus if we do not offer PT."

The data obtained from POE and some school principals contradicted schoolteachers' viewpoints regarding the aspect of the public-school syllabus. Instead, they viewed the insufficient instructional time as caused by schoolteachers' lateness. Two school principals (accounted for 25%) included all POE (vice-)directors, and the staff at the central level viewed the insufficient instructional time and overloaded syllabus as a result of schoolteachers' lateness or absenteeism. For example, one POE vice-director, coded POE03, described his view: "Not because I am in this position or I am not a classroom teacher, but it is the fact that teachers' punctuality is zero [poor]. They start their class [teaching session] late but finish it early. I think at least 10 to 15 minutes per class have been lost. Then they complained about the imbalance between contents and [instructional] time." However, 75% of school principals agreed with

schoolteachers' viewpoints, yet they accepted that schoolteachers sometimes came late for class. For instance, a rural school principal commented that:

It [insufficient instructional time] is true, and teachers always complained [about it].

However, I have no choice but to encourage them to implement what is prescribed in the syllabus in this position [principal]. ... [When I was a classroom teacher of physics,] I experienced this [insufficient instructional time] either. – **SP03: Rural school principal**

The interview data from these groups revealed that the *anti-cheating policy* during the examination increased the demand for PT. One school principal (SP07: Rural school principal) explained, “I observed that more students take private tutoring now and since the 2014 reform. They knew that no one but they themselves could make themselves through this current examination. Money, cheating, and their relatives could not help them.” Albeit the majority of them reluctantly corroborated schoolteachers' comments on the cause of PT growth, 37.5% of POE (vice-) directors expressed that the lack of self-learning skills of students was the leading cause when asked the reason for the increase in PT. One informant at POE, coded POE02, expressed his idea that “We do not support private tutoring, but this is the fact that in this present moment we are happy to see that students continue studying in private tutoring classes after their [official] school hours, rather than cheating or paying a bribe. We need more time to train them to get accustomed to self-learning. When they know how to learn [do self-learning], they will feel that it [self-learning] is better than [learning at the] tutoring classes.”

5.2.1.2 Teachers' personal reasons

The study found that schoolteachers' *teaching specialization* and *low salaries*, categorized as personal reasons, had an impact on the continuation of PT engagement in this study context. Schoolteachers who specialized in the subject for examination, particularly in mathematics,

Khmer composition, and science-related subjects, were more likely to engage in PT than their peers in social sciences. 68.18% of the informants explained that they could offer PT since their subjects required students to practice skills rather than memorization. Consistently, schoolteachers as tutors expressed PT classes as providing students more opportunities to master the prescribed knowledge and skills of the public school's syllabus. For example, one informant made this explicit:

As you [moderator] know, mathematics needs more practice than memorization. Without practice, you cannot master those skills, but at [public] school, they [students] could have few practices due to limited time. Thus, if our [my] subject requires only memorization, I may not be able to open [offer] tutoring classes. – **Urban TT18:**

Schoolteacher-tutor of mathematics

Additionally, the study found that *low salaries* or *insufficient payment* impacted the upper secondary school teachers' engagement in PT. Around 77% of this study's participants continued offering PT before and/or after their public-school hours for supplementary income. Of these, 64.71% of them explained that the income from PT had a small contribution to their daily expenses, such as petroleum for motorcycles and petty cash for their kids, when asked how much they could earn on average per week. Some informants described as follows:

I agreed that offering PT could give me some additional income, but not much. I would say it can cover my breakfast and petroleum for my motorcycle. – **Urban TT26:**

Schoolteacher-tutor of physics

We could not earn much, but at least I could cover my [two] kids' daily expenses [petty cash]. I charged 1,000 riels per hour; however, some students could pay only 500 riels. I have about 10 students in one class, and I taught only two classes three days per week. – **Rural TT16: Schoolteacher-tutor of chemistry**

Within the same aspect, 45.45% of informants reported that although they could not earn much, they considered continuing practicing PT because their spouse could not make any extra income for living. It is, for example, stated that "... [In my family,] I am the only one who makes a living. Being a teacher, what we can do for supplementary income is only teaching tutoring class, or only being a motor-dub [motorbike taxi] rider." – **Urban TT03: Schoolteacher-tutor of biology.**

5.2.1.3 Feeling of obligation

The interview data analysis showed that PT engagement of schoolteachers was so-called an on-demand service in this study context. About 59% of this study's informants explained that they offered PT upon the request of students and parents. The study also unveiled that 62.5% of school principals also requested schoolteachers to offer PT, particularly in rural areas.

Unlike before 2014, students and parents now contact or request us to teach [offer PT].

I think not only for my subject but every subject because I heard some colleagues say so too. We have to spare one or two hours per week for them because we feel they are keen to learn, although we do not have enough free time, or we know that we could not earn much from these [tutoring classes]. Students and parents now fear failure in the national examination because they cannot cheat. – **Phnom Penh TT11:**

Schoolteacher-tutor of Khmer composition

I agree that teaching hours at public schools are insufficient to assist students in acquiring prescribed knowledge and skills. Hence, I encouraged my schoolteachers to spare their time at least one hour a day to offer private tutoring classes. If they did not have time to offer daily, I encouraged them to teach at least one or two days a week or months before the examination. – **SP03: Rural school principal**

5.3 Survey results

5.3.1 Descriptive and analysis results

Of the 198 schoolteachers responding to the survey questionnaire, 45.45% did not engage in PT, and 54.55% engaged in PT (see Table 5.3). 38.38% were female, and 61.62% were male schoolteachers. They were from four school types: higher-SES (30.30%), high-SES (28.79%), medium-SES (16.16%), and low-SES (24.75%), which were classified based on the 2018 data of the Identity of Poor Household, and three different areas – Phnom Penh (46.47%), urban (23.23%) and rural (30.30%) areas. From the discipline perspective, 38.89% were in science followed by mathematics (19.70%) and Khmer composition (17.68%), while the rest respondents were in social science (14.14%) and English (9.60%). Among these, most of them accounted for 42.93%, taught only the group of students who followed science track, 34.85% taught social science, whereas 22.22% taught both groups of students.

Similarly, Table 5.5 indicates descriptive statistics ($M = \text{mean}$; $SD = \text{standard deviation}$) of variables included in the analysis model. Four variables: gender, qualification, place of residence, and using bank loans were measured by using dichotomous choice, so calculation for their mean score could not be performed. It should be informed that codes for “qualification” variable were recorded because the respondents were only in two of six original categories. Many of them had spouse as schoolteachers ($M = 2.29$; $SD = 1.01$). This indicated that most schoolteachers had a spouse who was also an income generator. Furthermore, most of their spouses had completed education till at least upper secondary school and possessed a bachelor’s degree.

Table 5.5: Descriptive results of variables included in the analysis

Variables	n	Minimum	Maximum	Mean	SD
Dependent					
Supply PT	198	0	1	-	-
Independent					
• Teacher's attitude factors					
Factor scores: attitude toward public school	198	-	-	-	-
Factor scores: caring pedagogies	198	-	-	-	-
Factor scores: uncaring pedagogies	198	-	-	-	-
• School-related factors					
School type	198	1	4	2.35	1.156
School area	198	1	3	1.84	.863
• Individual factors					
Gender	198	1	2	-	-
Teacher specialization	198	1	5	2.55	1.228
Teaching group	198	1	3	1.87	.747
Qualification	198	1	2	-	-
Place of residence	198	1	2	-	-
Factor scores SES: housing condition	198	-	-	-	-
Factor scores SES: other income sources	198	-	-	-	-
Using bank loan	198	1	2	-	-
Spouse's occupation	150	1	5	2.29	1.01
Spouse's education	150	1	5	3.50	1.015

Before interpreting the results based on the survey data, we started this section with the overall snapshot of the model fit and a summary of the influences of teachers' attitudes and individual factors. The logistic regression illustrated that the total factors about the schoolteachers' decision to engage in PT at Cambodian upper secondary school, entered in the analysis, could explain 54.20% of the variance (Cox & Snell R square = .542) as presented in Table 5.6. Precisely, without having any effect from other factors of individuals, including school-related factors, Model 1 showed two significant variables, such as teachers' attitude toward public schools and caring pedagogies, with 21.5% of total variance explained (Cox & Snell R square = .215). The inclusion of factors from school-related factors as well as individual ones in model 2, the total variance explained expanded to 54.20%. This showed that variables entered in model 2 could predict the effects of about 32.7%. However, this inclusion had neutralized

effects on teacher attitude toward public schools in model 1 since its coefficient value was at .50 ($p<.05$).

Table 5.6: Regression coefficient of factors affecting teachers' PT engagement

Variables	Model 1		Model 2	
	β (SE)	Exp(β)	β (SE)	Exp(β)
Attitude toward public school	.50(.22)*	1.65	.58(.35)	1.79
Caring pedagogies	1.05(.21)***	2.85	1.07(.41)**	2.91
Uncaring pedagogies	-.19(.25)	.83	-.20(.40)	.823
<i>School type (ref.: Low-SES)</i>				
Higher-SES			-3.59(1.36)**	.03
High-SES			-2.92(1.06)**	.05
Medium-SES			-2.72(1.22)*	.07
<i>School areas (ref.: Phnom Penh)</i>				
Rural areas			-.78(.89)	.46
Gender			-.83(.81)	.31
<i>Teacher specialization (ref.: English)</i>				
Mathematics			5.29(1.56)**	197.46
Science subjects			3.29(1.17)**	26.89
Khmer composition			2.01(1.15)	7.47
Social subjects			-19.21(74.48)	.00
<i>Teaching group (ref.: Both groups)</i>				
Social science groups			-1.36(.97)	.26
Science groups			.10(.96)	1.10
Qualification			-.74(.67)	.48
Place of residence			.22(.81)	1.25
SES: Home condition			.48(.37)	1.62
SES: Extra-income sources			.86(.45)	2.36
Bank loan			1.64(.75)*	5.15
<i>Spouse's occupation (ref.: Business owner)</i>				
Housewife/farmer			.66(2.89)	1.93
Teacher			.80(2.88)	2.22
Government staff (exclude Teacher)			1.16(3.04)	3.20
Non-government staff			-.67(2.92)	.51
<i>Spouse's education (ref.: Master's degree)</i>				
Primary school			3.05(1.56)*	21.19
Lower secondary school			3.39(1.76)	29.73
Upper secondary school			.128(1.06)	1.14
Bachelor's degree			1.30(.96)	3.68
Cox & Snell R Square	.215		.542	
Nagelkerke R Square	.286		.724	

Note: ref. = reference; * when $p<.05$; ** when $p<.01$; *** when $p<.001$

Another factor, namely caring pedagogies, remained statistically significant at 1.05 ($p < .001$) and 1.07 ($p < .01$) in each model, respectively. Of the main factors entered in model 2, four factors (i.e., school type, teacher specialization, using a bank loan, and spouse's education) significantly predicted the effects on Cambodian teachers' choices to supply PT.

5.3.2 Teachers' attitudes and teaching

The logistic regression analysis results showed that teachers' perceptions of public schools and their teaching pedagogies impact the choice of PT engagement at Cambodian upper secondary schools. As shown in Table 5.7, the model overall explained 21.5% (Cox & Snell R Square = .215) of the variance explaining their decision. Two out of three variables included in model one, namely *attitude toward public schools* and *caring pedagogies*, significantly predicted schoolteachers' decision for PT supply. Specifically, the analysis result showed that teachers who had low perceptions of public school were more likely to supply PT at the rate of 1.65 times ($\text{Exp}(\beta) = 1.65$; $p < .05$) higher than their peers. To put it simply, schoolteachers who had positive perceptions of public school's conditions (i.e., salaries, instructional times, prescribed learner-based approach, students' learning, class size) were less likely to offer PT with a variation from 1.07 to 2.54.

Caring pedagogies significantly impacted the schoolteacher's decision regarding supplying PT. Schoolteachers who reported using effective teaching pedagogies during their public-school hours were more likely to engage in PT ($\text{Exp}(\beta) = 2.85$; $p < .001$) than their counterparts. When one-unit increases in their preference to use the pedagogy of care in their teaching, the odds of the decision to engage in PT increase by 2.85 times than the schoolteachers who showed less interest in using the same.

Table 5.7: Significant factors of teachers' attitude predicted PT engagement

Model 1: Teacher's attitude	β (SE)	95% C.I. for Exp(β)		
		Lower	Exp(β)	Upper
Constant	.201(.189)	-	.00	-
Attitude toward public school	.50(.22)*	1.070	1.65	2.537
Caring pedagogies	1.05(.21)***	1.892	2.85	4.287
Cox & Snell R Square	.215			
Nagelkerke R Square	.286			

Note: *ref.* = reference; * when $p < .05$; ** when $p < .01$; *** when $p < .001$

5.3.3 Individual-related factors

By controlling the effects of teachers' attitudes, model 2 could explain 32.7% of the total variance explaining teachers' choice to engage in PT (Cox & Snell R square = .327), as seen in Table 5.8. Among the variables in model 2, *school type*, *teacher specialization*, *bank load*, and *spouse's education* significantly predicted whether schoolteachers at Cambodian upper secondary schools engage in PT. By including the school-related and individual-related factors in model 2, the effect size of teachers' attitudes decreased. Although engaging in PT could be due to teachers' attitude and their teaching at the public school, school types and individual factors (particularly teachers' specialization, bank loan, and spouse's education) play important roles in their decision.

First, the study unveiled that school type was a significant predictor of schoolteachers' PT engagement in this study context. The results of the analysis indicated that the greater SES of the province/city where the schoolteachers work, the more likely they continue to engage in PT ($\text{Exp}(\beta) = .07$, $p < .05$; $\text{Exp}(\beta) = .05$, $p < .01$; $\text{Exp}(\beta) = .03$, $p < .01$) respectively when the low-SES school type was used as a reference group. Specifically, a one-unit decrease in school type in which schoolteachers worked generated the decrease in the odds of schoolteachers' decision to supply PT by a factor of about one time lower than their counterparts.

Second, teacher specialization in mathematics and science subjects was a significant predictor of Cambodian upper secondary schoolteachers' engagement in PT. Under this construct, the analysis highlighted that only schoolteachers of mathematics ($\text{Exp}(\beta) = 197.46, p < .01$) and science-related subjects ($\text{Exp}(\beta) = 26.89, p < .01$) had significant impacts on PT engagement when using English as a reference group. This indicated that schoolteachers whose major was mathematics or science disciplines were more likely to offer PT than English teachers.

Third, a bank loan was also found to be a significant predictor of their PT engagement choice. The results exhibited that schoolteachers who were on loan were more likely to continue to engage in PT ($\text{Exp}(\beta) = 5.15, p < .05$). A change of a unit of using a bank loan enlarged the odds of engaging in PT by a factor of 5.15% with variation ranging from 1.19 to 22.37 in the upper bound of the 95% of Confidence Interval.

Table 5.8: Significant factors of individuals predicted teachers' PT engagement

Model 2: Individual factors	$\beta(\text{SE})$	95% C.I. for $\text{Exp}(\beta)$		
		Lower	$\text{Exp}(\beta)$	Upper
Constant	1.089(3.77)	-	.00	-
<i>School type (ref.: Low-SES)</i>				
Higher-SES	-3.59(1.36)**	.002	.03	.396
High-SES	-2.92(1.06)**	.007	.05	.433
Medium-SES	-2.72(1.22)*	.006	.07	.727
<i>Teacher specialization (ref.: English)</i>				
Mathematics	5.29(1.56)**	9.260	197.46	4210.96
Science subjects	3.29(1.17)**	2.737	26.89	264.133
Bank loan	1.64(.75)*	1.186	5.15	22.367
<i>Spouse's education (ref.: Master's degree)</i>				
Primary school	3.05(1.56)*	.997	21.19	450.005
Cox & Snell R Square	.327			
Nagelkerke R Square	.438			

Note: ref. = reference; * when $p < .05$; ** when $p < .01$; *** when $p < .001$

Finally, the study unveiled that schoolteachers whose spouse had studied or completed education at primary school were more likely to engage in PT than their peers whose spouse had higher education level, compared to a reference group of spouses with master's degree ($\text{Exp}(\beta) = 21.19, p < .05$). Simply say, when a one-unit increase of schoolteachers' spouse education level generates a decrease of the odds of schoolteachers' decision to offer PT by 21.19 times.

5.4 Reasons not to engage in private tutoring

Few studies (e.g., Bray et al., 2018) have paid little attention to schoolteachers who did not engage in PT. However, gaining insight from their perception or reasons could help the study better understand the PT phenomenon. For ease of understanding, the results from the narrative and survey were reported side by side in this section.

The results of the narrative data unveiled *three* reasons, closely associated with their personal issue, that some Cambodian upper secondary schoolteachers did not engage in PT in, particularly for Grade 12 students. Among 37 informants as schoolteachers, 15 of them did not engage in PT. First, Table 5.9 exhibited that most (approximately 67%) did not engage in PT because their teaching subjects (i.e., social science-related subjects such as history, geography, moral-civics, and earth environment) required only *memorization skills*. For example, one schoolteacher (Urban NT05: non-tutor of moral civics) stated that “students did not need tutoring for my subject because it is simple, and they could learn it by themselves, unlike other science subjects or mathematics which they need to deal with exercises and with some challenging formula.” Moreover, some teachers, particularly English teachers, stated that students had various choices for English PT with other foreign language tutoring

schools/centers rather than undertaking with them. Second, 60% of them reported *working for private schools*. In the same line, as shown in Table 5.10, 44.4% of the non-tutored respondents in the survey data reported that students could learn their subject by themselves using memorization skills, followed by 20% working for private school. Notably, more than 15% of them reported that their subjects were not in demand because the group of students they taught was not required to examine their subjects. Plus, the score earned in their subject, particularly English, did not impact their result in the baccalaureate examination. For example, two schoolteachers explained as follows:

Many students in the classes I were teaching did not want to study my subject because it was not for their examination. So, they study only subjects for their examination rather than spending their time on this subject. – **Phnom Penh NT29: non-tutor of physics**

... Many students think that my subject [English] does not worth for them in their examination. Also, some have learned it for many years, so they do not need to learn [take private tutoring of English] during this [12th] grade. – **Urban NT29: non-tutor of English**

Finally, about 32% of interviewees stated they needed time for their *family business*. For example, one of these schoolteachers reported owning an English tutoring center. However, very few survey respondents reported having a part-time job or owning a business.

Regarding the reasons for not engaging in PT of schoolteachers who specialized in mathematics, Khmer composition, and science subjects, the common finding was they had another source of income (e.g., family business) for their daily living. Some also worked as a part-time teacher for a private school or their family owned a small business. One informant

(PP NT07: non-tutor of mathematics) stated that “students also asked me to teach them [offer them private tutoring], but I could not make it as I worked for one private school in the afternoon and I use my spare time to help my wife’s business at home.”

Table 5.9: Schoolteachers’ reasons for not engaging in PT (interview)

Category	Themes	Frequency (n = 15)	Codes
Personal reason	Teaching specialization	10 (66.67%)	• My subject [history] is simple for students who do not need to spend money on private tutoring. They can learn it by themselves. • Students need only memorization skills for my subject [moral civics], unlike other subjects in a science track. • If I open a private tutoring class, only a few students may join because this subject [geography] requires students to use memorization.
	Work for private school	9 (60%)	• I do not have time for them because I work for one private school in the town. • I need a stable income, so I decided to work for a private school rather than offer private tutoring for my students. • I teach at a private school, so I do not have time for them. I asked them to study with another teacher in my school.
	Own/Help family business	7 (31.82%)	• Students also asked me to offer them private tutoring, but I did not accept it because I need time for my family’s business [grocery store]. • I cannot teach them [offer them private tutoring] because no one can help my wife’s business at the market. • Some students wanted me to teach them after school, but I asked them to study with other schoolteachers because I have my own school [private language Centre].

Table 5.10: Reasons for not engaging in PT (survey)

Statements (n = 90)	Frequency	%
1. My subject is not for examination in their track.	4	4.4%
2. Score of my subject is not important in their examination.	10	11.1%
3. Students can learn my subject on their own (memorization).	40	44.4%
4. I need time to help my family business.	7	7.8%
5. I need time for my housework.	8	8.9%
6. I work for a private school.	18	20%
7. I have a part-time job (e.g., NGOs, a private company, etc.)	1	1.1%
8. I have my own business.	2	2.2%
Total	90	100%

5.5 Chapter summary

Overall, the study unveiled five key factors impacting schoolteachers to offer PT: *shortage of instructional time, low salaries, teacher specialization, parents' and school principals' requests, and feeling of fear due to anti-cheating examination*. First, schoolteachers viewed that the MoEYS' given instructional time was insufficient for them to complete or cover all syllabus contents. Some schoolteachers taught only theories during public school and used PT classes for the practical. However, from the leadership point of view, the study revealed that schoolteachers' lateness and absenteeism were the causes of overloaded syllabi. Second, low salaries impacted on schoolteachers' PT engagement. Although RGC has increased their salaries substantially, it still could not meet their family's daily needs due to the simultaneous increase in living costs. Some schoolteachers who did not engage in PT have other sources of income, such as working for private schools and/or from their own/family's business. Third, teaching specialization, particularly mathematics and science subjects, was found to impact schoolteachers' decision to continue PT for their students because most of their subjects required more practice to master knowledge and skills, unlike social sciences, which students could learn on their own through memorization skills. Fourth, schoolteachers felt obligated to

offer PT due to the increase of higher demand and being requested by their school principal. Similarly, POE (vice-)director agreed that PT was in place to assist students outside school hours due to their poor self-learning skills of students. Last, the study unexpectedly found that anti-cheating examinations ironically impacted schoolteachers to continue PT because students and parents feared failure in their examinations.

Chapter 6: STUDENTS' ENGAGEMENT IN PRIVATE TUTORING

This chapter presents reasons students and schoolteachers continue investing in private tutoring at upper secondary schools. The research methodology included sampling, and data analysis is briefly described before reporting the study's findings. The findings from the interview and survey were reported separately, and all key findings were summarized by the end of this chapter. This chapter aims to address the second research question of this study:

RQ#2: Why did students and parents continue to invest in private tutoring at Cambodian upper secondary schools?

6.1 Brief methodology

The specific purpose of this research question was to investigate why upper secondary school teachers continue to engage in private tutoring in Cambodia by employing semi-structured interviews to probe the central mechanism of PT engagement and a self-reported survey questionnaire to identify the influential factors of their decision. This chapter aimed to observe any effects of schoolteacher professionalism on students' and parents' PT.

6.1.1 Samples and data collection

This study employed both interview and self-reported survey for its design. First, survey data were collected from 862 pairs of students and parents from 12 upper secondary schools from different areas (i.e., Phnom Penh, urban and rural) in Phnom Penh capital and four different provinces. We conducted 60 interviews with PT actors (23 students and 24 parents), gatekeepers (9 school principals and 3 POE (vice-)directors) and one independent informant. However, only 52 transcripts could be analyzed because eight had been lost during the transcript verification process (see Table 4.4). Data were collected online during the pandemic. School principals, POE (vice-)directors, and staff at policy level were invited for the interview to gain insight into teacher professionalism and to triangulate students' and parents' responses.

Table 6.1: Demographic information of the informants for interviews

Category	Attribute		Frequency	Percentage
Students n = 21 (40.38%)	Gender	Male	6	28.57%
		Female	15	71.43%
	Area	Phnom Penh	8	38.10%
		Urban	8	38.10%
		Rural	5	23.81%
	Learning track	Science	13	61.90%
		Social science	8	38.10%
	Type	Tutee	12	57.14%
		Non-tutee	9	42.86%
Parents n = 19 (36.54%)	Gender	Male	6	31.58%
		Female	13	68.42%
	Area	Phnom Penh	7	36.84%
		Urban	8	42.11%
		Rural	4	21.05%
	Qualification	Primary school	4	21.05%
		Lower sec. school	5	26.32%
		Upper sec. school	8	42.11%
		Master's degree	2	10.53%
	Occupation	Housewife/farmer	6	31.58%
		Teacher	5	26.32%
		Non-government staff	5	26.32%
		Business owner	3	15.79%
	Experienced in PT	Yes	15	78.95%
		No	4	21.05%
Principals n = 8 (15.39%)	Gender	Male	6	75%
		Female	2	25%
	Area	Phnom Penh	2	25%
		Urban	4	50%
		Rural	2	25%
	Num. of years in charge	< 5 years	3	37.50%
		between 5 and 10	5	62.50%
PoE^(a) n = 3 (5.77%)	Gender	Male	3	100%
		Female	-	-
	Num. of years in charge	< 5 years	2	66.67%
		7 years	1	33.33%
Central staff^(b) n = 1 (1.92%)	Gender	Male	1	100%
		Female	-	-
	Num. of years in charge	8 years	1	100%
Total N = 52 (100%)	Gender	Male	22	42.31%
		Female	30	57.69%
	Area	Phnom Penh	18	34.62%
		Urban	23	44.23%
		Rural	11	21.15%

Note: ^(a)only in urban areas; ^(b)only in Phnom Penh

The interviews were collected from only eight pairs of students and parents; however, the rest of the interviews were also used in the analysis. Although they were in pair as expected, they still could represent their household as information about their child or parents were asked during the interview process.

6.1.2 Data analysis

Guided by Creswell and Guetterman (2019), these two data sets were analyzed separately to realize the study's intent. First, the qualitative was analyzed to thematize students and parents' main reasons for not engaging in PT. Second, the survey data were analyzed. The findings and results from both analyses were reported separately and in two sections. First, reasons to engage in PT obtained from narrative analysis were reported, followed by survey results. Second, the findings and results for the reasons not to engage in PT were reported side by side.

To analyze the narrative data, the inductive approach for contents analysis by using an interactive model was employed for the narrative data. This is because the content analysis allows the researcher to gather the data in the specific themes to make it easy to understand the findings, while the interactive model offer researcher's possibility to move within the four analysis components (i.e., data collection, data display, data condensation, and conclusion) (Fraenkel et al., 2012; Miles et al., 2014; Miles & Huberman, 1994). The data were coded for each participant, and the codes were used when a direct quote was needed. Data coding and categorizing were conducted during the data display and condensation. Related information in the data was encoded by themes and sub-themes accordingly. If needed, the researcher contacted the informants for more information or clarification. The agreement between the codings was found to be reliable enough to explain the study's intent. For example, it was 91.08% for tutored students' interviews and 85.28% for non-tutored students (Appendix 9).

Regarding the survey data, since the outcome variable, naming students' PT engagement, was coded as dichotomous, a *Binary Logistics Regression* (Field, 2013; Leech et al., 2005) with *Enter Method* was employed for the data analysis to estimate the effects of predictors on students' decision to engage in PT at Cambodian upper secondary school. To address this, block recursive model was used. The variables included in the regression models were entered in two separated blocks as shown in Table 6.2. First, nine factors were entered to determine the total effects of model 1. Of these, two factors were related to schools, such as school types and school areas, and the rest were individual-related factors. Then, with the net effects of these factors, eight other family-related factors were put in model 2 to estimate the effects. Table 6.3 displays the variables by each construct and their measurement with the number of respondents for each.

Table 6.2: Methods of estimation for students' PT engagement

Model	Blocks of independent variables included in the regression model for analysis
1	(School factors [2 factors] + Individual factors [7 factors])
2	(School factors + Individual factors) + (Family factors [8 factors])

Table 6.3: Description of variables for students' PT engagement (n = 862)

Variables	Measurement	Description	n.	Question
Demand private tutoring ^(a)	Nominal	0 = Not demand PT 1 = Demand PT	(222) (640)	Student Q16
School condition construct				
School type	Nominal	1 = Higher-SES 2 = High-SES 3 = Medium-SES 4 = Low-SES	(324) (290) (0) (248)	
School area	Nominal	1 = Rural area 2 = Urban area 3 = Phnom Penh	(324) (304) (234)	
Demographic construct				
Gender	Nominal	1 = Female 2 = Male	(591) (271)	Student Q1

Learning track	Nominal	1 = Science 2 = Social science	(469) (393)	Student Q2
Perception of teaching and learning construct				
Perception of public-school class (1 factor)	Factor scores ^(b)	1 = no idea, 2 = strongly disagree, 3 = disagree, 4 = agree, 5 = strongly disagree		Student Q3
Perception of tutoring class (1 factor)	Factor scores ^(b)	1 = no idea, 2 = strongly disagree, 3 = disagree, 4 = agree, 5 = strongly disagree		Student Q4
Influence by others (1 factor)	Factor scores ^(b)	1 = no idea, 2 = strongly disagree, 3 = disagree, 4 = agree, 5 = strongly disagree		Student Q5
Teacher's attitude (2 factors): • Uncaring pedagogies • Caring pedagogies	Factor scores ^(b)	1 = no idea, 2 = strongly disagree, 3 = disagree, 4 = agree, 5 = strongly disagree		Student Q28
Socio-economic status construct				
Students' SES (3 factors): • Housing condition • Other income sources • Family loan	Factor scores ^(b)			Parent Q10-22
Parental construct				
Mother's education	Nominal	1 = Primary school 2 = Lower secondary 3 = Upper secondary 4 = Bachelor's degree 5 = Master's degree 6 = Doctoral degree 7 = Post-doctoral	(341) (246) (199) (52) (24) (0) (0)	Parent Q6
Mother's occupation	Nominal	1 = Housewife/farmer 2 = Teacher 3 = Government staff (not teacher) 4 = Non-government staff 5 = Business owner	(455) (50) (54) (60) (243)	Parent Q8
Mother's tutoring experience	Nominal	1 = No 2 = Yes	(620) (242)	
Father's education	Nominal	1 = Primary school 2 = Lower secondary	(363) (146)	

		3 = Upper secondary	(281)
		4 = Bachelor's degree	(55)
		5 = Master's degree	(17)
		6 = Doctoral degree	(0)
		7 = Post-doctoral	(0)
Father's occupation	Nominal	1 = Housewife/farmer	(373)
		2 = Teacher	(31)
		3 = Government staff (not teacher)	(53)
		4 = Non-government staff	(67) (338)
		5 = Business owners	

Note: ^(a) Dependent variable

^(b) Factor scores obtained from Exploratory Factor Analysis using principal axis factoring with Varimax and Kaiser normalization in rotation, and with an absolute value below .40.

6.2 Narrative findings

As seen in Table 6.1, about 42% of all interviewed informants were male, and about 58% were female. Many of them (44.23%) were located in urban areas, followed by Phnom Penh (34.62%) and rural areas (21.15%), respectively. Specifically, 40.38% of these were students, and 36.54% were parents who were labeled as the PT actors in this study. In addition, 15.39% of them were school principals, and 5.77% and 1.92% were POE vice-directors and a staff at the policy level. Moreover, 42.86% out of the total interviewed students were non-tutors. The findings for this RQ#2 were mainly based on the narrative data from students and parents, while the findings obtained from gatekeepers and independent informants were used to triangulate accordingly.

6.2.1 Students' and parents' reasons for undertaking private tutoring

The results of the narrative analysis showed largely consistent reasons to invest in PT between students and parents as exhibited in Table 6.4.

Table 6.4: Display matrix of students and parents' reasons to invest in tutoring

Category	Themes	Students (n =21)	Parents (n =19)	Codes
		f(%)	f(%)	
Personal reason	Learning track	16 (76.19)	6 (31.58)	▪ Practice inquiry • [As a science track,] I have to learn to solve exercises differently. So, we cannot focus on only one style at most or sometimes follow the samples in the textbook. • We can only do simple exercises at school, but more challenging are only in private tutoring classes. • <i>** I was a teacher too, so I know that teachers can give students excellent exercises to practice in private tutoring classes while simple exercises during school.</i> • <i>** I want her to practice more after school. I do not think she can practice enough at school.</i>
				▪ Uphold good grades • I think private tutoring class is good, and I can help me better than others in my class. • I believe that taking private tutoring classes is to build our way to a better grade, so I undertake it. • <i>** I am proud of his result. Thus, I want him to be even better.</i>
System- related	Lack of confidence (Anti- cheating examination)	21 (100)	14 (73.68)	• Unlike before [2014], no one can help us during the [current] examination, so I feel that only private tutoring can help me. • Seeing some good students fail the examination in previous years makes me even fearful and less confident in myself. • We cannot bring any handout to cheat or pay to cheat now. So, I do not think I can pass without taking private tutoring. • <i>** I always told my daughter to take private tutoring, although I know she is working hard. I do not think she can pass unless she takes more [private tutoring] classes after school.</i> • <i>** I believe in him [my son] to gain pass grades because he is a good student, but I want him to get better grades, not just pass grades.</i>

Shortage of instructional time	18 (85.71)	13 (68.42)	• The learning period at public school is short, and we cannot learn enough, so we need to go to private tutoring classes for more. • At school, the learning hours are not enough for exam subjects, especially mathematics, physics, and chemistry. • <i>** Learning at public school is not enough because the number of learning hours is few and only half day, but there are many subjects and lessons each.</i> • <i>** I think we [parents] have no other choices but to send them [kids] to private tutoring classes to learn more because the time for learning is less at school. If [we do] not [invest in it], the one who fails is our kid.</i>
Teaching pedagogies	12 (57.14)	10 (52.63)	▪ Uncaring pedagogy (splitting the syllabus) • Teachers sometimes skipped some parts of the lessons or explained them briefly. • Some teachers explained the lesson a bit fast and gave us some homework. • We could learn only theories or formulas, but its practices are in private tutoring classes. • <i>** Since I was a student, we could not learn all the important parts of the lesson if we did not go to private tutoring. I still hear this from my son now.</i>
			▪ Caring pedagogy • Teachers explained lessons clearly, and it is easy to understand. However, due to limited time, they could not give more exercises to practice during school hours. • I think they teach in the same style and explain the lesson clearly. However, the difference is that we had fewer practices during school hours. • <i>** I heard from my daughter that her teachers are good and never absent unlike during my time [when I was a student].</i>
			▪ Teachers' pressure • I could learn similar patterns of exercise during private tutoring classes before the test. • <i>** I do not blame them [teachers] because they also need to earn for their family. However, they should not force students to take private tutoring.</i>
Unethical behavior	2 (9.52)	8 (42.11)	

Society-related	Associated friendship and safety concerns	-	9 (47.36)	• ** <i>My husband and I are busy earning for our living. We do not have enough time to follow up with kids. So, we pay for private tutoring to keep them busy with learning.</i> • ** <i>I am happy to pay for private tutoring classes, so they are busy and do not have time to associate with some deviant peers.</i>
	Peer influence	1 ^(a)	10 (52.63)	• ** <i>I think it is okay to pay for his private tutoring. It helps him gain knowledge and get along with his classmates.</i> • ** <i>Everyone takes private tutoring, so if she cannot take it like her friends, I think she may feel upset and sad.</i>
	Parental education	2 ^(a)	13 (68.42)	• ** <i>Her grade [Grade 12] is beyond my ability to support her at home.</i> • ** <i>I forgot almost everything, especially mathematics or physics, so I cannot help her as I used to when she was in primary school.</i>

Note: *f* = frequency; ^(a) = students described about what their parent(s) told them; ****** quote of parent

6.2.1.1 Personal aspect

The study unveiled that the *learning track* was one of the main reasons for PT engagement of Cambodian students at upper secondary school. This theme embedded two sub-themes: “*need more practice*” and “*uphold good grades*”. First, more than 76% of students explained that their learning track, naming science, required *more practice to master the knowledge and skills*. There were limited practices during their public-school hours. In the same line, 31.58% of parents pointed out that the more practices, the better for their children’s learning track. One paired student and father, for example, explained that:

... [In science track,] thus, I need to do [practice] many exercises, or I could not understand and do it well [master the knowledge and skills]. Sure! We could practice in public-school hours, but about one or two [exercises]. – **Urban TS07: tutee in science**

I knew that she needed to do well in all subjects to pass, and I do not think that memorizing worked for her subject [learning track]. How could we memorize

mathematics or physics? Therefore, I did not mind paying for her PT because she could practice again and again in one thing. – **Urban PTS07: Parent of tutee in science**

Notably, students following social science who aimed to switch their track at university undertook PT of subjects that are not the examination subjects for their learning track. They decided to enroll in social science to maximize their probability of obtaining the pass grade in their baccalaureate examination. One informant (Rural TS17: tutee in social science), explained this situation when probed for the reason of their decision as follows:

Moderator: Can you tell me if you do not mind this? Why did you decide to take tutoring in Chemistry? If I am not mistaken, social science students do not take this subject.

TS17: In fact, I would have liked to take a science track, but I am afraid I cannot pass the examination if I choose that [science] track. I feel that being in social science is easier to [get a] pass [grade]. ... I want to study to be a medical doctor if I can pass [Grade 12 baccalaureate examination].

Second, aiming to *uphold better performance* in their learning track was found to have an impact on engaging in PT of students in the Cambodian context. Across the learning track, 42.86% of students and 63.16% of parents viewed that PT could assist them to gain better academic achievement. It stated, for example, that “I think tutoring classes are useful. ... I proud to be one of the outstanding students in the best class¹². I do not think I could be selected in this class if I learned only in public schools” (Urban TS03: tutee in science). Of these, all nine

¹² Many schools assigned best students to one class. Particularly, this school named this class as BS (Best Student) class.

students were science track. However, only five out of their parents expressed the same viewpoints. Of 63.16%, more than 58% were parents of students in social science track. Two parents expressed that:

... [My son] is smart and is now in BS class. I am proud of him and want him to keep up with tutoring classes in all subjects. He has been taking tutoring classes since he was in primary school. – **Urban PTS03: Parent of tutee in science**

If she did not go to PT classes, I do not think she can get 1st or 2nd rank [monthly result] in her class. Since she was in upper secondary school, she was in a top 10 almost every month. So, I kept paying for PT. – **Phnom Penh PTS09: Parent of tutee in social science**

6.2.1.2 System-related aspect

The narrative analysis showed that students and parents continue to invest in PT due to some internal issues of education such as *lack of confidence due to anti-cheating examinations, shortage of instructional time, teaching pedagogies, and teachers' oppression*. First, all students and 73.68% of parents pointed out that PT was a critical supplementary source to prepare them to succeed in the baccalaureate examination since the beginning of the *anti-cheating examination policy*. For instance, one informant (Rural TS20: tutee in science) explained her feeling saying "... [The current examination] is so challenging and strict. We cannot bring any handouts with us, or we automatically fail if we do so. So, the only way to succeed is to be sure that I am qualified. I think we can learn more by practicing various exercises in the tutoring classes." In the same vein, students repeatedly expressed that they were not confident in their ability to gain the pass grade or obtain their wanted grade in the current examination, particularly when MoEYS implemented the anti-cheating policy. Simply put, students felt *less confident* in succeeding the baccalaureate examination without

undertaking PT. In the same line, parents explained that they could not trust that their kid could succeed in the baccalaureate examination if they did not invest in PT. Of these, about 43% seemed to believe in their children to obtain the passing grade, but they did not trust that they could get a good grade. Two informants explained their feeling about their kids that:

... [Since the examination reform in 2014,] I saw some of my neighbors' kids failed and one of my colleagues' daughters also failed. I always asked my kid to study hard and go to PT. However, she sometimes said to me that 'do not worry mum. I will pass', but I do not trust. – **Rural PTS15: Parent of tutees in science**

... [To me,] she will pass this exam. Her teachers and friends also said same about her to me. She is a good student in almost every subject. However, I want her to get the good grade. I do not expect her to get [Grade] A, but B at least C. She told me she has to get at least Grade B. That is why she kept going to take PT of all subjects. – **Phnom Penh PTS05: Parent of tutees in science**

Second, *the shortage of instructional time* to complete the public-school syllabus was found to be one of the factors impacting Cambodian students and their parents to continue investing in PT at upper secondary school. 85.71% of students and 68.42% of their parents consistently pointed out insufficient instructional time at the public school. They believed this was one of the primary causes that their schoolteachers could not explain the lesson in detail. It stated, for instance, that "... [At the public school,] school hours should be longer. I mean we should study both morning and afternoon, so there are more hours for each subject. We could not learn much as the number of hours are few for each subject, especially mathematics or physics, chemistry and Khmer composition, I think" (Rural TS15: tutee in science). Similarly, one parent explained this situation through her experience that:

I noted that number of learning hours at public school is few and number of lessons is more. The same issue happened when I was a student, and it is still happening now. Not only I who think like this but also other parents as well as students they felt same. I heard my daughter and her friends discussed this too. However, the tests in the [baccalaureate] examination cover everything, so if we do not pay for PT, our children may fail. – **Urban PTS01: Parent of tutee in science**

Third, the narrative data unveiled that *teaching pedagogies* were also found to have an impact on students' and parents' PT engagement. The findings depicted that both uncaring and caring pedagogies¹³ influenced their PT engagement. However, more informants consistently pointed out the *uncaring pedagogies* was the cause of their decision. The study found that schoolteachers differentiated their focus between public school and tutoring classes. On the one hand, as seen in Table 6.4, more than 57% of students and 52% of parents claimed that their schoolteachers employed uncaring pedagogies in the public school. Although teaching at public schools did not meet their satisfactory level, they reluctantly blamed their schoolteacher but the shortage of learning hours at the public school. Two informants explained this situation:

... [At only public school,] ... I still think that teachers also cannot teach or explain us the way we want, because they have to follow their plan. So, they explained to us briefly and gave us some practices. ... I do not blame them because [number of] learning hours is not enough for them to help us acquire enough knowledge for the examination. – **Rural TS15: tutee in science**

... [At public school,] teachers taught us fast [hurried teaching], so it was not easy to understand if we did not go to tutoring classes. I think only tutoring classes could fill in this gap, or we may fail the examination. – **Urban TS07: tutee in social science**

¹³ See Table 4.5 for their meanings.

On the other hand, approximately 43% of students and 21% of parents expressed that the schoolteacher gave more care in teaching during public school hours, especially giving precise explanations and making lessons easy to understand. However, they agreed with their peers that they could practice a few simple exercises. One student explained their point:

Most teachers are good and better now than my teachers in Grades 9 or 10. Their explanation was clear and easy to understand. They explained to us repeatedly until we all understood before they continued to the next stage. ... I would say it [the way of teaching] was very same between public school and tutoring hours. However, the difference was during tutoring classes, we learned [practiced] more exercises, and we learned more theory/formula and practiced only simple exercises in the textbook. –

Phnom Penh TS12: tutee in science

Last, the narrative result also indicated that some students continued to undertake PT due to their *schoolteachers' oppression or unethical behavior*. Only about 10% of students in this study and about 42% of parents, particularly in urban areas and Phnom Penh, expressed that their schoolteachers taught the test items in advance and made fun of students who did not undertake PT before the class during the public-school hour. An informant described this situation as follows:

[In my mathematics tutoring class,] I could learn some exercises before the examination day. Although those exercises were not exactly the same as on the test, their patterns were the same. Thus, I could do well with more confidence. No! I could not cheat, or I was given zero marks. Of course, we could when I was in Grade 9 or 8. We were tutees; we could check a little bit if we forgot how to solve those exercises. However, I think different teachers may act differently. I do not think we can do it now. – **Phnom Penh TSS 09: tutee in social science**

6.2.1.3 Society-related aspect

The study showed that *child's associated friendship and safety concerns, peer influence, and parents' education* influenced parents' decision to investigate children's PT. Parents rather than the students mostly addressed this aspect-related issue. First, with the concern for their children's safety and their associated friendship, more than 47% of parents believed that investing in PT could keep their children busy and have more homework to practice. Of these, 66.67% expressed their concern with their children's bad associations since they did not have enough time to associate with them due to their business on the one hand. However, 55.56% pointed out the concern about their daughter's safety, especially when they returned home in the late evening. One parent narrated her concern as follows when asked whether she had any other concerns before closing the interview:

Honestly, no one wanted to spend more money on what we were supposed to give for free. However, one thing we wanted to see was our children's bright future, so we had to struggle with all expenses for their learning [tutoring]. More than gaining knowledge, they were busy all day with their learning, so we were not worried about their friendship association. ... At the same time, we were worried about his safety. He came back home late after his tutoring classes. Sometimes, my husband went to wait for him on the main road because our home is on a small road about 2 or 3 km away from that main road. – **Urban PTS03: Parent of tutee in science**

Second, about 53% of them viewed sending their children to PT as motivation because this investment could help them get along with their peers at school. It is stated that "... many of her friends undertook PT, so she must feel different from others if she could not take PT. ... When she was in primary school, she used to tell me that she wanted to be as smart as her friends ... because they went to tutoring classes." (Urban PTS02: Parent of tutee in social science).

Last, more than 68% of parents, regardless of their educational attainment, continued to invest in their children's PT because they could not provide them with any academic support as they used to when their children were at the lower levels (i.e., primary school). For example, one informant explained that '... I could not help him when he could not work on any problem solving because I forgot almost everything, especially his Grade-12 mathematics and physics. So, he can get help from tutors or his friends at the tutoring classes' (Urban PT03: Parent of tutee in science).

6.3 Survey results

6.3.1 Descriptive results

Table 4.10 indicates descriptive statistics ($M = \text{mean}$; $SD = \text{standard deviation}$) of variables included in the analysis model. As dependent variables, gender, learning track, and mother's PT experience were dichotomously measured, so their mean score could not be performed. However, of 862 participants, Table 6.3 indicates that 25.75% were non-tutees and 74.25% were tutees. While 68.56% were female and 31.44% were male students. From the learning track perspective, 54.41% of the participants followed a science track, and 45.59% were in social science. Among those students, 71.93% of their mothers reported having no experience in taking PT while 28.07% experienced opting for PT during their schooling. Regarding the school-related factors, none of this group of participants was from a medium-SES school type. Also, 37.59% were from higher-SES schools, and 33.64% and 28.77% were in high-SES and low-SES one, respectively. Of them, 37.59% were in rural areas, while 35.27% were in urban areas, followed by 27.14% in Phnom Penh.

Table 6.5 explains that the respondents' education level of mothers and fathers was between primary school and master's degrees with ($M = 2.05$; $SD = 1.08$) and ($M = 2.10$; $SD = 1.09$),

respectively. These descriptive results explained that the majority of them experienced basic education. Similarly, majority of mother and father were housewife/farmer and teachers as well as government staff ($M = 2.52$; $SD = 1.77$) and ($M = 2.96$; $SD = 1.85$) respectively.

Table 6.5: Descriptive results of variables included in the analysis

Variables	n	Minimum	Maximum	Mean	SD
Dependent					
Demand PT	862	0	1	-	-
Independent					
• School factors					
School type	862	1	4	2.20	1.22
School area	862	1	3	1.90	.798
• Individual factors					
Gender	862	1	2	-	-
Learning track	862	1	2	-	-
Factor scores: perception of public school class	862	-	-	-	-
Factor scores: perception of tutoring class	862	-	-	-	-
Factor scores: influence by others	862	-	-	-	-
Factor scores: teachers' uncaring pedagogies	862	-	-	-	-
Factor scores: teachers' caring pedagogies	862	-	-	-	-
• Parent-related factors					
Factor scores SES: home condition	862	-	-	-	-
Factor scores SES: other income source	862	-	-	-	-
Factor scores SES: using bank loan	862	-	-	-	-
Mother's educational attainment	862	1	5	2.05	1.076
Mother's occupation	862	1	5	2.52	1.772
Father's educational attainment	862	1	5	2.10	1.094
Father's occupation	862	1	5	2.96	1.848
Mother's tutoring experience	862	1	2	-	-

The logistic regression analysis exhibited that the total factors related to students' choice to undertake PT at Cambodian upper secondary school could explain 55.1% of the variance (Cox & Snell R square = .551), as shown in Table 6.6. To be specific, without having any effect from other factors of individuals, including school-related factors, model 1 indicated four significant variables such as *learning track*, *students' perceptions of public school*, *being influenced by others*, and teaching pedagogies, namely *uncaring* and *caring pedagogies* with

53.2% of total variance explaining students' decision (Cox & Snell R square = .532). Gender and school-related factors (i.e., school type and area) did not significantly impact Cambodian students' PT engagement. With the net effects of school and individual-related variables (model 1), the inclusion of the family-related factors (model 2) increased the value to 55.1% (Cox & Snell R square = .551). As seen in Table 6.6, model 2 exhibited that the *mother's education* (primary and lower secondary school), *mother's occupation* (non-government staff), and *mother's PT experience* were significant predictors of students' PT engagement.

Table 6.6: Regression coefficient of factors affecting students' PT engagement

Variables	Model 1		Model 2	
	β (SE)	Exp(β)	β (SE)	Exp(β)
<i>School type (ref.: Low-SES)</i>				
Higher-SES	.16(.45)	1.17	-.16(.56)	.85
High-SES	.25(.38)	1.28	-.06(.43)	.94
<i>School area (ref.: Phnom Penh)</i>				
Urban areas	.36(.38)	1.426	.38(.45)	1.46
Gender	-.60(.32)	.55	-.67(.36)	.51
Learning track	-.69(.29)*	.50	-.79(.33)*	.45
Perception of public-school class	1.80(.30)***	6.07	1.95(.36)***	7.03
Perception of PT class	.38(.25)	1.46	.41(.27)	1.51
Influenced by others	2.74(.33)***	15.51	2.98(.38)***	19.68
Uncaring pedagogies	.80(.15)***	.45	.95(.17)***	.39
Caring pedagogies	-.62(.14)***	.54	-.72(.15)***	.49
SES housing condition			.18(.22)	1.19
SES other income sources			.37(.25)	1.45
SES family loan			.17(.27)	1.19
<i>Mother's education (ref.: Master's degree)</i>				
Primary school			3.28(1.49)*	26.59
Lower sec. school			3.00(1.46)*	20.11
Upper sec. school			1.56(1.45)	4.76
Bachelor's degree			2.63(1.56)	13.84
<i>Mother's occupation (ref.: Business owner)</i>				
Housewife/farmer			.234(.45)	1.26
Teacher			.40(.91)	1.49
Government staff (not teacher)			.52(.818)	1.68
Nongovernment staff			1.86(.74)*	6.41
<i>Father's education (ref.: Master's degree)</i>				
Primary school			-1.3(1.54)	.28
Lower sec. school			-.61(1.53)	.55
Upper sec. school			-.29(1.55)	.75
Bachelor's degree			-.59(1.60)	.56

Father's occupation (ref.: Business owner)

Housewife/famer		.30(.42)	1.35
Teacher		.88(1.14)	2.40
Government staff (not teacher)		.36(.75)	1.44
Nongovernment staff		.99(.77)	.37
Mother's PT experience		1.16(.42)**	3.20
Cox & Snell R Square	.532	.551	
Nagelkerke R Square	.781	.810	

*Note: ref. = reference group; PT = private tutoring; * when $p < .05$; ** when $p < .01$; *** when $p < .001$*

6.3.2 School and individual-related factors

The results of this logistic regression analysis showed that individual-related factors significantly impacted Cambodian students' PT engagement. As indicated in Table 6.7, the model explained 53.2% of the total variance (Cox & Snell R Square = .532). The significant factors predicting students' PT investment were *learning track* ($\text{Exp}(\beta) = .50$), *students' perceptions of public-school classes* ($\text{Exp}(\beta) = 6.07$), *being influenced by others* ($\text{Exp}(\beta) = 15.51$), and *teaching pedagogies* such as uncaring ($\text{Exp}(\beta) = .45$) and caring ones ($\text{Exp}(\beta) = .54$). First, Cambodian students who followed science track were more likely to invest in PT at the rate of one-half time than their peers who in social science one ($\text{Exp}(\beta) = .50$, $p < .50$). Second, students who perceived that *teaching and learning at public school* were not good enough nor in good learning condition tended to opt for PT. They were more likely to take PT at a rate of 6.07 times higher than their peers ($\text{Exp}(\beta) = 6.07$, $p < .001$). Third, the analysis results indicated that students' decisions to engage in PT were significantly impacted by other people around them, such as peers and their parents ($\text{Exp}(\beta) = 15.51$, $p < .001$). Statistically speaking, the odds of their decision increased by more than 15 times if there was a one-unit change in their perceptions of being influenced by their peers and parents. Finally, teachers' *teaching pedagogies* were significant predictors of students' demand for PT at Cambodian upper secondary school. The analysis highlighted both uncaring pedagogies and caring pedagogies had significant impact on students' decision for PT ($\text{Exp}(\beta) = .45$, $p < .001$; $\text{Exp}(\beta)$

= .54, $p < .001$) respectively. The results indicated that students continued with PT when they felt that the teaching at public school was not good enough to prepare them for their examinations.

Table 6.7: Significant individual-related factors predicted students' decision to demand PT

Model 1: individual-related factors	β (SE)	95% C.I. for $\text{Exp}(\beta)$		
		Lower	$\text{Exp}(\beta)$	Upper
Constant	5.16(.81)***	-	.00	-
Learning track	-.69(.29)*	.283	.50	.891
Perception of public-school class	1.80(.30)***	3.372	6.07	10.923
Influenced by others	2.74(.33)***	8.121	15.51	29.616
Uncaring pedagogies	.80(.15)***	.339	.45	.598
Caring pedagogies	-.62(.14)***	.412	.54	.698
Cox & Snell R Square	.532			
Nagelkerke R Square	.782			

Note: * when $p < .05$; ** when $p < .01$; *** when $p < .001$

6.3.3 Family-related factors

Table 6.8 indicates that the model overall explained 0.19% of the variance explaining students' decision to demand PT (Cox & Snell R Square = .019). Among the key variables, mother's education, mother's occupation, and mother's PT experience were found to be significant predictors of students' PT engagement in this study context. Regarding *mother's education*, a student whose mother attained only primary education and lower secondary education was more likely to invest in PT when a reference group was a mother with a master's degree. If a student with a mother completed primary school and lower secondary school, their probability of opting for PT increases by 26.59 times and 20.11 times higher than their peers whose mothers had a master's degree ($\text{Exp}(\beta) = 26.59$, $p < .05$; $\text{Exp}(\beta) = 20.11$, $p < .05$) respectively. Among mothers' occupations, students with a *non-government staff mother* were more likely to undertake PT than their peers whose parents are business owners. Statistically, if students had a mother working as a non-government staff, their probability of taking PT increases by

6.41 times higher than their peers ($\text{Exp}(\beta) = 6.41$, $p < .05$), with variations ranging from 1.52 and 27.09. One family-related variable that significantly impacted students' decision for PT engagement was the mother's PT experience during schooling. It should be noted that this variable was measured dichotomously. Specifically, a change of one unit of a mother's PT experience increased in odds of students opting for PT by a factor of 3.20 times ($\text{Exp}(\beta) = 3.20$, $p < .01$), with variation ranging from 1.41 to 7.26 in the upper bound of the 95% of CI.

Table 6.8: Significant parent-related factors predicted students' PT engagement

Model 2: parent-related factors	$\beta(\text{SE})$	95% C.I. for $\text{Exp}(\beta)$		
		Lower	$\text{Exp}(\beta)$	Upper
Constant	.968(1.70)	-	.00	-
<i>Mother's education (ref.: Master's degree)</i>				
Primary school	3.28(1.49)*	1.449	26.59	487.91
Lower sec. school	3.00(1.46)*	1.152	20.11	350.93
<i>Mother's occupation (ref.: Business owner)</i>				
Non-government staff	1.86(.74)*	1.516	6.41	27.087
Mother's PT experience	1.16(.42)**	1.406	3.20	7.258
Cox & Snell R Square	.019			
Nagelkerke R Square	.029			

Note: ref. = reference group; PT = private tutoring; * when $p < .05$; ** when $p < .01$

6.4 Students who opted out of private tutoring

Of the 21 students selected for the semi-structured interviews, nine did not undertake PT (see Table 6.1). The narrative data analysis found the reasons that they decided to opt out of PT was related to their personal issues, which were thematized in four main themes, as shown in Table 6.9. Of these four reasons, “*the distance from home to school including personal safety concern*” was identified as the primary reason, followed by the fact that their “*family need their help in either housework or a small business at home*”. Table 6.9 exhibited that more than 77% and 55% of them opted out of PT for these two reasons, respectively. In the same vein, 87.5% and 77% of parents who participated in the interviews reported the same. For example, one student said, “I could not make my time for it [mathematics tutoring classes] because I need to

go back home early. The way to my home is quiet” (Rural NTS19: non-tutee in social science). In addition, about 33% of them reported they could learn most of the subjects in the learning track by themselves as those subjects required more memorization skills. Also, a relatively similar percentage of students and parents reported that their families needed them to help make a living. However, all of them wished to undertake PT, particularly mathematics, if they could make it because it could benefit them for their baccalaureate examination.

Table 6.9: Reasons not to invest in PT (Interview)

Category	Themes	Students (n = 9) f (%)	Parents (n = 8) f (%)	Codes
Personal reasons	Home distance and safety concern	7 (77.78)	7 (87.5)	• My home is far, and it is so quiet on the way, especially in the evening. • I dare go back home alone after [private tutoring] class, and no one in my family can come to pick me up if I take private tutoring. • <i>** It is not good to let him study until that late evening. I am afraid that he may be in trouble when riding back home.</i> • <i>** I want her to study [take private tutoring] too, if she were a man.</i>
	Help housework/ home business	5 (55.56)	6 (75%)	• I must help my mother prepare stuff and close her shop at the market every evening. She wanted me to study too, but I cannot let her do that [close shop] alone because some stuff is heavy. • I need to help my mom early because of her health issue. • <i>** Currently, she is the one who helps prepare food for family members because others and I finish work [at the factory] very late, or sometimes we were asked to work overtime.</i>
	Learning track	3 (33.33)	-	• I think I could learn most of my subjects for the examination on my own except mathematics. • I would like to take only [private tutoring of] mathematics if I could because subjects for social science are related to lesson [memorization], not calculation.
	Support for living	2 (22.22)	3 (37.5)	• I worked for one farm near my home after school to help my family survive because my father is disabled. • <i>** I pity him, but I have no choice but to ask him to work for additional income. I could earn only from hand to mouth.</i>

Note: f = frequency; ** quote of parent

Of 862 students who responded to the self-reported survey, 222 reported opting out of PT (see Table 6.3). They were also asked to select one of the five-scale statements, ranging from no idea to absolutely agree, about why they decided not to take PT during their Grade 12. The original five scales in the questionnaire were combined into three categorical responses and calculated in percentage, as indicated in Table 6.10. The scale of “absolutely agree” and “agree” and “absolutely disagree” and “disagree” were computed and labeled as *agree* and *disagree*.

Table 6.10: Reasons not to invest in PT (Survey)

Statements (n = 222)	Agree	No idea	Disagree
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
1. My family cannot afford PT expenses.	109(49.1)	19(8.56)	94(42.34)
2. I am in social science track, so I do not need PT.	104(46.85)	19(8.56)	99(44.59)
3. I can do well in all examination subjects on my own	72(32.43)	24(10.81)	126(56.76)
4. I need time to support my family’s business.	106(47.75)	20(9.01)	96(43.24)
5. I need to me to help with my mother’s housework.	151(68.02)	18(8.11)	53(23.87)
6. I need to earn for living.	86(38.74)	22(9.91)	114(51.35)
7. My home is far from school.	114(51.35)	16(7.21)	92(41.44)
8. I do not have my own transport, so I cannot go for PT.	80(36.04)	13(5.86)	129(58.11)
9. Teaching at a public school is good enough for me.	125(56.31)	21(9.46)	76(34.23)
10. <i>Baccalaureate</i> examination result is not important to me.	38(17.12)	15(6.76)	169(76.13)
11. I do not like the teacher tutoring the subject I want to learn.	28(12.61)	14(6.31)	180(81.08)
12. I will not go to university, so I do not need PT.	48(21.62)	22(9.91)	152(68.47)

Note: f = frequency

Table 6.10 above indicated that there were six common reasons that students decided not to undertake PT. About 68% of the respondents reported they could not undertake PT as they needed spare time to help do household chores. Similarly, about 45% spent their time helping their family business after public school. Furthermore, around 51% opted out of PT because their home was far from school, while less than 50% pointed out their family's economic

constraint in paying for PT. Regarding academic concerns, about 47% of the informant reported they did not need to take PT because they followed social science track. Similarly, around 56% chose not to take PT since they thought the teaching at public school was good enough for them. In short, the survey results largely corroborated the narrative findings, except that their family SES and their satisfaction in public school teaching were found through the survey results.

6.5 Chapter summary

This chapter presents why Grade 12 students and their parents continue investing in PT. The study yielded key findings: *schoolteachers' uncaring pedagogies and oppression* in school, *their learning track*, and *feeling of fear of failure* due to the anti-cheating examination. Additionally, *peer influence* and *the inability to provide academic support* at home were found to be reasons only for parents to continue investing in PT for their children. First, students continued with PT for the core examination of their learning track due to teachers' uncaring pedagogies during school hours. Therefore, they viewed that PT could assist them in practicing more. Second, schoolteachers' pressure impacted students, especially parents, to invest in PT for their children. Third, this study observed the learning tracks and PT rather than observing the percentage as the previous studies did. The study unveiled that students' learning track significantly impacted their decision to undertake PT. Both data analysis consistently revealed that students in science were more likely to undertake PT than their peers in social science. However, some students in social science who were going to switch their track at university also invested in PT of subjects which are not for their baccalaureate examination. Fourth, the study unpredictably found that anti-cheating examinations created fear among students and parents and urged them for PT. Parents and students invested in PT to ensure adequate knowledge and skills to minimize their risk of failure. Fifth, specifically from parents' perspectives, the narrative findings yielded that parents viewed investing in PT through

receiving the loan as the key motivation to help their children to feel along with and keep up with their peers regardless of their financial issues. Last but not least, parents, regardless of educational attainment level, admitted that they could not provide academic support at home, so they decided to invest in PT as a substitute choice.

Chapter 7: DISCUSSION

Briefly, the study was conducted to answer to two research questions using both narrative and survey approach. The narrative data were collected from 89 interviewees (37 schoolteachers, 21 students, 19 parents, eight school principals, three POE (vice-)directors, and one staff at the policy level) while the survey data were obtained from 862 paired students and parents and 198 schoolteachers. Both research questions yielded a number of findings and results in achieving one main purpose – to gain insightful understanding the reasons Cambodian schoolteachers and students continued to engage in PT at upper secondary school. This chapter presents and discusses the findings and results of both research questions together. First, this chapter summarizes all key findings and results of each research question. Then, those key findings are discussed with the previous studies' findings, including the secondary sources and media reports. Next, reasons why some schoolteachers and students did not engage in PT in this study context were also reported before the chapter summary was made to close the chapter.

7.1 Summary of key findings

This study was designed to investigate the reasons PT remained in the demand among schoolteachers and students, aiming to answer to the main research question: *Why schoolteachers and students and their parents still engage in private tutoring at Cambodian upper secondary school?* The study limited its focus to only the secondary education in particularly Grade 12. The study employed both interview and survey data for its data collection and analysis to answer to two research questions. Through the analysis and both narrative and survey data, the study found some key findings accordingly as follows:

- Regarding the first research question, aiming to gain insight into the reasons Cambodian schoolteachers continued to offer PT to their Grade 12 students at upper secondary school, the study could lead to an insight that *overloaded syllabi* with

insufficient instructional time and *low salaries* have still been considered as the reasons for PT engagement of the schoolteachers. In addition to this, *challenging level of examination of mathematics and science subjects* and *feeling of obligation toward the request of students and parents* were the key factors impacting their PT engagement. In the same line, some schoolteachers did not engage in PT because their subjects did not require students to *do more practice* to gain adequate knowledge and skill but only memorization skills. Moreover, engaging in other income-generating activities such as working for a *private school* and *owning a small business at home* was found as reasons for some schoolteachers not providing PT.

- The study yielded some key findings in response to the second research question on why students and parents continued investing in PT at Cambodian upper secondary schools. Schoolteachers' *differentiation of the teaching pedagogies* between public school and tutoring class and their *oppression* has still influenced students and parents to invest in PT. The study also unveiled that they continued to undertake PT due to their learning *track (science in particular)*, and *challenging examination*. Moreover, *peer influence* and inability to offer academic support at home impacted some parents to continue investing in PT for their children. However, home distance, being required to support housework and family business, and following a social science track were the reasons some students opted out of PT in this study.

Overall, in response to the main research question, seeking to gain insightful understanding on why both schoolteachers and students continued demanding PT in Cambodian upper secondary school, the findings were discussed from three aspects: *education system, personal, and societal*.

7.2 Education system aspects

Some reasons which caused PT to remain in demand for both schoolteachers and students and their parents were some issues in the education system itself, such as *teaching pedagogies and syllabus and anti-cheating examination policy*.

7.2.1 Teaching pedagogies and syllabus

First, schoolteachers' uncaring pedagogies were the influential factors impacting students to undertake PT. Additionally, employing uncaring pedagogies during public-school hours was associated with insufficient instructional time to complete the school syllabus. Both schoolteachers and students, including their parents, viewed PT classes as expanding their opportunity to complete and learn all syllabus content and gain adequate knowledge and skills for their baccalaureate examination. As evidence, around 57% of the interviewed student pointed out teachers' uncaring pedagogies impacting their decision to continue undertaking PT. Similarly, the survey result exhibited that a one-unit increase in their perceptions shows an increase of about 6.07 times their possibility to continue PT ($\text{Exp}(\beta) = 6.07$), with the variation ranging from 3.37 to 10.92 of 95% of CI (see Table 6.7). Moreover, almost of students and schoolteachers addressed the issue of insufficient instructional time. In this regard, it could be implied and added to Brehm et al.'s (2012) study with the basic education level that PT in Cambodia functions as not only the continuation of the school syllabus but also supplementation of what had missed during the public school, particularly practice the knowledge and skills for their baccalaureate examination in this study. Additionally, these findings were aligned with the previous studies (see Bray et al., 2018; Brehm & Silova, 2014; Hallsén & Karlsson, 2019): PT helps expand the instructional time of the public school, including increasing time to practice the prescribed knowledge and skills, and building revision skills as well as preparing students for baccalaureate examinations.

Although both schoolteachers and students repeatedly reported insufficient instructional time, some school principals and the POE (vice-)director did not support it. They believed this issue was caused by schoolteachers' lateness and absenteeism, as stated by Bray et al. (2016). Additionally, some studies (e.g., Bray, 2013b; Bray et al., 2016, 2018; Brehm & Silova, 2014; Dawson, 2009; Guill et al., 2021; Liu & Bray, 2020b) found that employing *uncaring pedagogies* during public school was a schoolteachers' trick to blackmail their students into undertaking PT with them for supplementary income.

Unexpectedly, the narrative finding of both students and parents and survey results from schoolteachers conveyed that some of them engaged in PT because of caring pedagogies (see Table 6.4 and 5.7). From a glance at the perspective of teaching pedagogies, it was likely to signal a positive change in terms of teaching attitude during public school teaching. Consistently, MoEYS (MoEYS, 2018c) claimed that the current education reform brought positive behavior changes in both students' learning and teachers' teaching in public schools. However, this study qualitatively unveiled that employing caring pedagogies was one of the marketing strategies schoolteacher-tutors used to maintain their supplementary income. Schoolteachers were found to offer detailed explanations, mainly one theory or formula, and accepted students' questions, yet they offered limited practices. For example, it stated, "My teacher [of chemistry] explained the lessons very well and easy to understand. ... Due to limited time, he could not provide us with more exercises to practice, so I went to his tutoring classes to continue." (Urban TS01: tutee in science). This could imply that schoolteachers tended to split the syllabus by using public-school hours as the theoretical class and practical ones for PT classes through using PT as an additional time for practice (e.g., Bray et al., 2018; Brehm & Silova, 2014; Hallsén & Karlsson, 2019; Khaydarov, 2020). Additionally, it could be explained that abusing authority through uncaring pedagogies or unethical behavior to ensure

supplementary income did not seem to work because the current education reform took away the influences of schoolteachers on the students' pass/fail grades on the baccalaureate examination (Soeung, 2021a).

7.2.2 Anti-cheating examination

Implementing the anti-cheating examination policy was ironically found to contribute to the expansion of PT. Although all participants accepted this current practice as an equitable opportunity, they expressed their worries about failure. Narrative data showed that all schoolteachers and students, including about 74% of parents, expressed this concern. They viewed PT offered them more opportunities and instructional time to practice and gain adequate knowledge and skills for their baccalaureate examination. Similarly, POE and school principals agreed that PT prepared students to succeed in that baccalaureate examination because Cambodian students lacked self-learning skills. This could imply that the public school's quality of teaching and learning was not good enough to prepare students for the baccalaureate examination (Bredenberg, 2022; Brehm & Silova, 2014b). Therefore, students and parents invested both time and money in PT to maximize their chances of gaining a passing grade.

It is worth highlighting that Cambodia's MoEYS first implemented this policy in 2014, aiming to ensure only qualified students pass and to eliminate all cheating and corruption (MoEYS, 2019f; Royal Government of Cambodia, 2007). Cheating and corruption have long been criticized in Cambodian society (see Francis, 1994; Leng, 2015; Maeda, 2019). Since 2014, the media have often reported the positive impacts of this policy (e.g Koyanagi, 2017; The Guardian, 2014). However, Everett and Kaing (2014) reported that improving the quality of

education and increasing teachers' salaries were in need, although about 96% of their samples agreed with the anti-cheating examination policy.

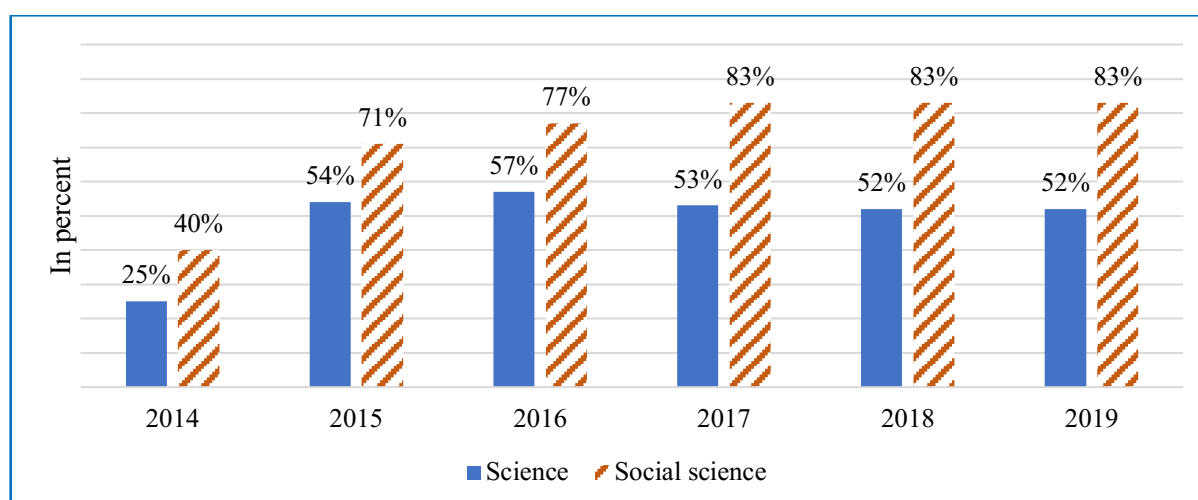
7.3 Personal aspect

In this aspect, factors such as teachers' and students' specialization/learning track and family SES were found to impact continuing PT in this study.

7.3.1 Teachers' specialization and students' learning track

Schoolteachers and students who specialized in science (track), including mathematics, were likelier to engage in this study. Both narrative and survey results consistently unveiled this fact. These findings were aligned with the findings of the local studies (e.g., Bray & Bunly, 2005; Marshall & Fukao, 2019) and that of studies in other contexts (e.g., Kuwait (Alazmi & Alazmi, 2020), Hong Kong (Bray & Kwok, 2003), and Malaysia (Kenayathulla, 2015)): mathematics and science subjects, as well as English, were popular tutoring subjects among the students. Contextually, Bray and Bunly (2005, p. 76) evidenced that due to the popularity of PT, they impacted Cambodian's decision to participate in their teaching profession. Adding to this, the understanding could be even clearer from the viewpoint of current education reform. The examination subjects between science and social science students were differentiated not only in subjects but also in weightage after the 2014 reform (see Table 2.4). This contributed to PT engagement among students and schoolteachers in science and mathematics because their tests are very challenging compared to social science track (Kao & Shimizu, 2020). As indicated in Figure 4.1, students in science track faced more difficulty obtaining the passing grade than their counterparts in social science since the beginning of the reform.

Figure 7.1: Approximate pass rates by learning track from 2014 to 2019



Create by the author

sources: (MoEYS, 2014, 2015, 2016, 2017, 2018, 2019)

Additionally, students who planned to switch their learning track at university undertook PT of subjects not required for their Grade 12 baccalaureate examination, albeit they followed social science track. This decision was narratively explained as a way to avoid the risk of failure. As indicated in Table 7.1, most students undertook PT of subjects required for their learning track. Mathematics is still considered the subject requiring the most tutoring as Bray et al.'s (2018, p. 442) explained that mathematics is known as not only the core subject. In addition, a small proportion of students in social science took PT of elective subjects for science track because they aimed to switch their track at the university level after succeeding this baccalaureate examination.

Table 7.1: Rate differences for private tutoring by learning track and subject

Subject Categories	Tutoring subjects (n = 640)	Science (n = 381)	Social science (n = 259)
		Frequency (%)	Frequency (%)
Compulsory subjects	Mathematics	363 (95.28)	234 (90.35)
	Khmer composition	236 (61.94)	233 (89.96)
	English	128 (33.6)	100 (38.61)
Elective subjects for science track ONLY	Physics	339 (88.98)	26 (10.04)
	Chemistry	338 (88.71)	112 (43.24)
	Biology	304 (79.79)	74 (28.57)

7.3.2 Family socio-economy

Insufficient salaries have still been found as one of the factors influencing Cambodian schoolteachers to continue offering PT to their own students. This study's finding echoed literature in various study contexts (i.e., Benveniste et al., 2008a; Bray, 2003, 2013; Bray et al., 2016, 2018; Dang & King, 2016; Dawson, 2009, 2010; Manzon, 2018; Tandon & Fukao, 2015). As evidence, about 77% of schoolteachers reported offering PT due to financial issues. Although the survey analysis showed no association between schoolteachers' PT engagement and their family SES, it revealed that schoolteachers who were in bank loan and whose spouses attained only primary education level were more likely to continue with PT.

Additionally, the study found that during the equitable opportunity of education through the anti-cheating examination, the financial burden was in the hand of some particular groups of students' families. Although household SES did not have any significant association with students' PT investment in the survey result, the narrative finding revealed that some parents used the informal loan to send their children for PT to obtain a better return. One informant, for instance, described this situation when asked how much she paid for her son's PT that "... it is not much. I do not know because some are paid monthly, weekly, and hourly. As I know, it costs only 1,000 riels [approximately USD 0.25] per subject. I got a loan from one family in my village for him, and I have to pay back daily about 10,000 riels [approximately USD 2.50]. However, this is not a big deal when thinking about his future" (Rural PTS17: Parent of tutee in science). It should be noted that although Cambodia has performed well in GDP growth at an annual average of 7.7% from 2010 to 2019 (World Bank, 2019), Asian Development Bank (ADB) (2019) reported that 17.8% of the Cambodian population was living under the poverty line. Therefore, although CSES' national survey result revealed that one household approximately paid USD 68, in average per year for total tuition fee (see Figure 2.4), yet the

payment remained a burden for this proportion of population in obtaining social mobility through this standardized baccalaureate examination.

7.4 Societal aspect

To gain social mobility through the baccalaureate examination, Cambodian parents were also influenced by their peers to invest in PT for their children and expected a better return (i.e., pass grade) than what their peers' children could gain. Additionally, they viewed the PT investment as a kind of motivation to assist their children in learning and keep up with their counterparts. In the same line, Bray (2003) explained that to succeed in standardized examination, poor and middle-income families invested in PT to keep up with their high-income peers and improve children's self-esteem (Hajar, 2018). Additionally, some parents viewed that PT could keep their children busy after their daily school schedule, so they did not have time to associate with some deviant peers in society. These findings extended an insight on the concepts of "child-minding" or "babysitting" with the Cambodian primary school children, found by Bray (1999b) and Dawson (2009), to ensure their child safety as they did not have enough time to involve with them after school. Additionally, some schoolteachers felt obligated to continue PT before or after official school hour due to the request of students or parents and the school principal.

7.5 Private tutoring and social mobility

Edwards et al. (2020) explained that many different aspects of social mobility could be discussed in relation to private tutoring. They discussed PT and social mobility of Cambodian students at the basic education level in five different aspects as examples of economic and social capital such as gender, schoolteachers' socio-spatial position, family situation, distance and safety, and physical competence.

This study showed contradicting findings in some of these aspects, such as gender. It is worth noting that this study chiefly focuses on upper secondary school, Grade 12 specifically. The level of education brought into the study's focus could affect the possibility of spatial movement of Cambodian students. The societal aspect of home distance and safety impacted the equitable possibility of obtaining social mobility in baccalaureate examination of Cambodian Grade 12 students through the institutional configuration of space (i.e., PT) rather than gender and household's SES. This current study found there was no disparity between female and male students to mobile through PT possibility toward their goal of earning a passing grade. A family whose daughters could reach this senior grade was likely to go beyond the cultural and traditional stigma of females: women were believed to stay home helping housework and be housewives (Vickery, 1984). Families, regardless of their SES level, invested in PT to maximize their chance to gain social mobility through this baccalaureate examination to assist their child to keep up with their peers (Bray, 2003). However, when carefully looking through narrative findings, geographical configuration of space (i.e., home distance and safety) impacted students' possibility to mobile, albeit the survey analysis result showed an insignificant association between school area and PT engagement in this study. Simply put, regardless of school areas (Phnom Penh, urban and rural areas), students whose home was located away or the road to their home was quiet/dark could not participate in PT. Narratively, parents and students expressed concerns about their personal security during returning home in the late evenings after PT classes. Similarly, local media reports and studies (e.g., Chum Kriel Youth, 2022; Edwards et al., 2020; Women's Media Center of Cambodia, 2021) revealed parents' and students' concerns about their (child's) safety when returning home after PT classes alone in the late evening.

7.6 Chapter summary

The reasons schoolteachers and students, including their parents, have been categorized into three aspects: education system, personal and societal. First, the education system aspect embedded two reasons PT in Cambodia remained in demand: “teaching pedagogies and syllabus” and “anti-cheating examination.” The teaching quality at the public school could not prepare students for their baccalaureate examination, so students decided to opt for PT as another additional opportunity to continue the school syllabus and to supplement what their schoolteachers did not offer them. Both schoolteachers and students also viewed insufficient instructional time as one of the main causes of splitting the school syllabus or using hurried teaching by some schoolteachers. Second, some reasons to continue PT were nested in the personal aspect, such as teachers, students’ learning track, and family socio-economy. Mathematics and science subjects were more in need than the rest of the examination. Students who were in science track engaged in PT because of the challenging level of their mathematics and science tests. Also, their subjects required more practice to acquire adequate knowledge and skills. However, some students in social science track decided to invest in PT of their non-core examination subjects as they considered switching their learning track at the university. They enrolled in social science track at the current level to maximize their chances of obtaining a passing grade as mathematics, and social science were less challenging. With the same personal aspect, teachers’ low salaries were found to be one of the reasons that schoolteachers continue providing PT to their students. Although some parents face financial issues, they invest in PT for their children through an informal loan. Third, some reasons for continuing PT were categorized in societal aspects. These reasons were mainly expressed by parents rather than students. With the concern of a bad friendship association, some parents decided to continue investing for PT to increase their academic workload. Similarly, due to their time constraints, they viewed investing in PT as “child-minding” or “babysitting” techniques. Some

parents viewed PT as a key motivation for their children as it could help them feel along with and could keep up with their peers. Regarding schoolteachers, they felt obligated to offer PT as requested by the parents, including the school principal.

Chapter 8: CONCLUSION

This empirical study was conducted to answer two research questions employing a survey questionnaire and interviews, aiming to gain insightful understanding on why PT remained in demand for both schoolteachers and students. This chapter starts with a brief overview of the study, followed by a summary of key findings and conclusions for each research question. Then it is used to provide an overall discussion of the key findings for the main research objective. Finally, this chapter offers the conclusion and the final last part.

PT has brought an equitable issue in access to education among students as it pushed students who could not afford PT at a disadvantage. Students who could afford the same could continue learning the left-over school syllabus after or before public school hours with effective teaching pedagogies (Bray, 2013; Bray et al., 2019; Brehm et al., 2012; Brehm & Silova, 2014b). Due to low salaries, Cambodian schoolteachers committed unprofessionalism such as withholding some content, slowing down their teaching, using uncaring pedagogy during public school and inclining favor to their tutee etc. to promote their PT classes with their own students for supplementary income (Bray, 1999b; Bray et al., 2016, 2018; Brehm & Aktas, 2020; Dawson, 2009). Giving unfair treatment in teaching activities and examinations was found to impact Cambodian students to engage in cheating during the examination (Maeda, 2019). RGC and MoEYS have conducted many actions in response to the society's criticism of inequitable and schoolteacher unprofessionalism, such as abolishing school fees and informal payment, including PT fees, increasing schoolteachers' payment substantially, and employing discouragement scenarios to signal schoolteachers not to engage in PT as well as the anti-cheating examination. However, rates of students undertaking PT outside school hours kept increasing according to the national survey of CSES (Figure 2.2). Hence, the question is *why PT is still in demand in Cambodia*. In response to this, this study aimed to answer to two

research questions: (1) *Why did schoolteachers continue to offer PT at Cambodian upper secondary schools?* (2) *Why did students and parents continue to invest in PT at Cambodian upper secondary schools?* To answer these research questions, the study employed interview and survey approaches for data collection and analysis to gain an insightful understanding of this issue. A self-reported survey collected narrative data from 89 interviewees, including different educational stakeholders, 198 schoolteachers, and 862 paired students and parents. These data were collected from 12 upper secondary schools in Phnom Penh and four provinces through online applications due to the school closure following the COVID-19 pandemic.

8.1 Summary of key findings

The first research question aimed to gain insight into why schoolteachers at upper secondary schools continue offering PT to their Grade 12 students. Overall, *the primary reasons Cambodian schoolteachers continue engaging in PT for their students were the shortage of instructional time, low salaries, teacher specialization, parents' requests included some school principals, and anti-cheating examinations.* First, like the previous studies (e.g., Bray, 2008; Brehm & Silova, 2014b), schoolteachers unveiled that the MoEYS' given instructional time was insufficient for them to complete or cover all syllabus contents. To avoid being blamed, some schoolteachers focused on only theories or formulas during public school and left out the practical stage at their tutoring classes. However, from the leadership point of view, the study revealed that schoolteachers' lateness and absenteeism were the causes of the overloaded syllabus. This was in line with Bray et al.'s finding (2016) in the same study context. Second, in line with the literature and local media reports (Dawson, 2009; Khy, 2019), schoolteachers' low salaries had an impact on PT engagement in this study. Although RGC has increased their salaries substantially, it could not meet their family's daily needs due to the simultaneous increase in living costs. However, some schoolteachers did not engage in PT due to having

other income sources such as working for private schools and/or from their own/family's business. Third, like previous studies (e.g., Alazmi & Alazmi, 2020; Bray & Bunly, 2005; Kenayathulla, 2015; Marshall & Fukao, 2019), schoolteacher's teaching specialization, particularly mathematics and science subjects, was found to impact schoolteachers' decision to continue PT for their students. This is because most of their subjects require practice to master knowledge and skills, unlike English and social sciences, which students could learn on their own through memorization skills. Fourth, schoolteachers felt obligated to offer PT due to the request from either students or parents. Dawson (2009), also claimed similar findings in the Cambodian context. Adding to this, the study unveiled that school principals requested schoolteachers of examination subjects to offer PT to the students because they feared that students could not learn the entire syllabus or be qualified enough to succeed the baccalaureate examination through learning at only public school. Similarly, POE (vice)director agreed that PT was in place to assist students outside school hours due to the poor self-learning skills of students. Last, the study unexpectedly found that anti-cheating examinations ironically impacted schoolteachers to continue PT in response to the demand increase because students and parents feared failure in their examinations.

The second question is intended to investigate why Cambodian Grade 12 students and their parents invest in PT. The study yielded some key findings, such as *schoolteachers' uncaring pedagogies* and *oppression* in school, their *learning tracks* (science and social science), and *feeling of fear caused by the anti-cheating examination*. Additionally, *peer influence* and the inability to provide academic support at home were found to be reasons only for parents to continue investing in PT for their children. First, students viewed that PT for the main subjects for their examination was in demand due to the ineffective teaching or uncaring pedagogies (e.g., hurried teaching, theory-based learning) during their official school hours. Therefore,

they had to undertake PT to catch up with the practical parts of those theories. Some students narratively explained their schoolteachers' teaching employed caring pedagogies in the school (i.e., explained theory in detail, accepted and responded to questions), but they agreed that they could obtain very few practices. Second, some parents and students felt that schoolteachers' pressure was the reason of their PT engagement. Parents (42.11%) mainly narrated this issue, while only about 10% of students did. Third, this study observed the association of the learning tracks with PT rather than observing on the rates of students taking PT for each academic as the previous studies did (e.g., Bray et al., 2015, 2018; Brehm et al., 2012; Brehm & Silova, 2014b). The study unveiled that students' learning track significantly impacted their decision to undertake PT. Both data analysis consistently revealed that students in social science were more likely to undertake of PT than their peers in social science because their mathematics and science tests were more challenging (Kao & Shimizu, 2020). Additionally, about 90% of students in social science track continued to undertake PT of the compulsory subjects (i.e., mathematics and Khmer composition). However, some students in social science track who were going to switch their track at university also invested in PT of subjects not for their baccalaureate examination, but for their university entrance one. Fourth, the study unpredictably found that anti-cheating examinations created fear among students and parents and drove them to continue in PT. Parents and students invested in PT to ensure adequate knowledge and skills to minimize risk of failure in the anti-cheating examination. Studies, reports and media criticized that students could cheat to earn a passing grade (Francis, 1994; Kem et al., 2012; Maeda, 2019). Fifth, specifically from parents' perspectives, the narrative findings yielded that parents viewed investing in PT through receiving the loan as the key motivation to help their children to feel along with and keep up with their peers regardless of their financial issues. Last but not least, parents, regardless of educational attainment level,

admitted that they could not provide academic support at home, so they decided to invest in PT as a substitute choice.

8.2 Overall discussion of the main objective

Overall, this current study's findings were largely aligned with the previous studies of PT in the primary or lower secondary education level, such as insufficient instructional time to complete the intended syllabus and schoolteacher-related aspects (i.e., teaching pedagogies, the behavior of oppression, and low salaries). However, this study showed context-specific findings in upper secondary schools such as fear of failure in the anti-cheating examination and the learning tracks. These could shed light on new perspectives of reasons PT in Cambodia was in demand. By combining the findings and results from both research questions, the study could draw an overall discussion in response to the specific research question as follows.

8.2.1 Anti-cheating examination

It is worth briefly noting that the anti-cheating examination is one of the 2014 educational reform agendas, aiming to establish equity in secondary education by eliminating all unethical behavior such as cheating and corruption, as criticized by society and media reports (MoEYS, 2014b, 2015b). To guarantee its success, MoEYS decreed the corruption law to punish students, schoolteachers, and anyone who engaged in cheating, corruption, and leaking the tests accordingly. Furthermore, the government's Anti-Corruption Unit inspected the entire examination as the corruption law reinforcement (see MoEYS, 2014c, 2016c). Additionally, this reform differentiated examination subjects and offered different weightage to subjects according to the learning track (see Table 2.4); it stopped counting the students' annual average scores in the school-based assessment administered by schoolteachers to eliminate local school or schoolteachers' influences or misuse of their authorities (MoEYS, 2014b, 2019f).

Although the anti-cheating examination policy provides Cambodian Grade 12 students with an equitable opportunity and society has been satisfied with this practice (e.g., Koyanagi, 2017; The Guardian, 2014), it was ironically found to *expand PT engagement* and *burden* some students and parents, particularly science track. Students and parents feared failure at their baccalaureate examination since they did not really trust in only learning in school. As Biesta et al.'s (2021 p.2) explanation on two erosions of public education, this could simply infer that when the competition or pressure for the standard is intensified, PT is there to play its role. Specifically, from the perspectives of schoolteachers and students, including their parents, the expansion of PT engagement was associated with insufficient instructional time to complete all contents of the MoEYS syllabus. Concerning the shortage of instructional time, schoolteachers and students used PT to extend their opportunity to continue what could not be covered during the official hours. This finding was in line with the previous studies (e.g., Bray et al., 2018; Brehm et al., 2012; Brehm & Silova, 2014b; Hallsén & Karlsson, 2019). This was more prominent in mathematics and science subjects. The narrative findings explained that they continued PT for more practices to master both knowledge and skills (e.g., PP-TT21, Urban TT26, Urban TS07). However, from the leadership position's perspective, the shortage of instructional time or overloaded curriculum resulted from schoolteachers' lateness and absenteeism in their daily work. This could be furthered by Biswal's (1999) finding in different contexts of developing countries that lack of school accountability and monitoring system was one of the reasons schoolteachers could engage in PT, and poor school leadership of school principals was another reason, specifically in Cambodian context (Bredenberg, 2022). In this aspect, they viewed the shortage of instructional time as malpractices/tricks of schoolteachers to blackmail their students for PT, as has been discussed in the literature (e.g., Bray, 1999b, 2013; Bray et al., 2016, 2019; Brehm & Silova, 2014b; Dawson, 2009). Therefore, it could be implied that regardless of educational level, using PT as an oppression happened when the

schoolteachers could offer PT to their students. By viewing from the curriculum perspective, within the new curriculum framework¹⁴, MoEYS (2016b, 2020) aimed to expand the instructional time from 32 to 40 hours a week in both learning tracks. This could signal that MoEYS has been attempting to respond to the issue of instructional time. However, schools reported implementing only 32 or 34 hours in their daily practice (see Table 2.3). One school principal explained this situation when discussed on his school's instructional time "I heard about this [40 hours a week] some [3 or 4] years ago, but I never received that instructional guideline from POE, only the same one which we have [my school has] been using since 2011, but POE allowed us to add [instructional hours] according to our availability. [In my school,] I used 34 hours for Grade 12 as I do not use it [two hours] for ICT" (SP04: rural school principal).

8.2.2 Learning tracks

To cope with their fear of failure in the anti-cheating examination, students in science track faced more financial burden and time constraints through investing in PT compared to their counterparts in social science. The study unveiled that they invested time and money to ensure they could be qualified enough to pass. Kao and Shimizu (2020) also explained that their mathematics and science tests were more challenging than their peers' mathematics and social science tests. The data from this study could also explain that they needed more time to practice in order to master the intended knowledge and skills of the syllabus for almost their examination subjects. On the contrary, students in social science were less likely to undertake PT because they could only need memorization skills for their subjects, or their core examination subjects are not necessary to undertake PT. About 90% of them also took mathematics and Khmer composition. Still, they received less burden of not only finance but

¹⁴ A 'curriculum and core book' reform is one of the 2014 reform agenda (see MoEYS, 2018b, pp.7–8).

also chances to pass. These fewer burdens may have affected and will affect the declined rates of students enrolled in science at upper secondary school. For example, during the first year of the reform in 2014, 95.83% of students followed science track. However, the rates kept dropping subsequent years to 49.16% in 2019. At the same time, social science rates rose from approximately 4% to about 51% in the same period (MoEYS, 2019i). Then the rates of students in social science overtook that of science in subsequent years, up to 27.7 percentage points in 2021 (MoEYS, 2021c). The plunge in a science track showed the great concern for MoEYS when attempting to promote science and mathematics in specific for Science, Technology, Engineering and Mathematics (STEM) enrollment at university. Some students may return to the science track when enrolling in university, as shown in this study. However, it remained in a small percentage as Ung et al. (2021) pointed out that only about 10% of students in social science switch to science majors. Similarly, this falling trend will affect the 2030 RGC's national goal, which requires more STEM human capital – 50% of students are expected to be in STEM majors at university based on RGC's roadmap 2030 (RGC, 2021, p. 4).

8.3 Equity issue among learning track/teaching specialization

Following the anti-cheating examination, PT expansion brought some inequitable opportunity to students, parents, and schoolteachers. First, PT expansion generates inequitable concern to some particular parents. This study's samples reported that one-hour PT cost 1,000 riels (approximately USD 0.25) regardless of subject on average. This may be affordable for many parents. However, about 21% of parents in this study reported using informal loans to send their children to PT to gain social mobility through the baccalaureate examination and considered this investment a motivational means for their children. Similarly, Bray et al. (2018) found that some Cambodian parents used loans or worked additional jobs to pay for their

children's PT. Therefore, students at financial disadvantage will face more challenges or will not enroll in science track although they are interested in it. It should be noted that 17.8% of Cambodian people live under the poverty line (Asian Development Bank, 2019).

Second, PT expansion also created inequity within the teaching profession at upper secondary schools. This will affect their daily performance especially schoolteachers whose specialization was not mathematics or science subjects. The survey results showed that schoolteachers who reported to employ caring pedagogies were more likely to engage in PT (see Table 5.6). Conversely, some schoolteachers who did not earn additional income with their own students through PT employed uncaring ones. This could be worrisome toward the public school's teaching and learning quality.

8.4 Conclusion

PT for Grade 12 students, in particular, remained in a large demand among schoolteachers and students in Cambodia for reasons such as avoiding risk of failure in the anti-cheating examination and *students' learning tracks*. In this study context, PT played a role of not only in the continuation of the school syllabus, but also in the supplementation of what was left out in the public school, especially the practical part, and examination preparation in order to gain adequate knowledge and skills for the baccalaureate examination which is believed as the cheating and corruption free examination after the 2014 education reform. Ironically, implementing an anti-cheating examination contributed to the PT expansion in Cambodia, although it could give the nation an equitable opportunity in the Grade-12 baccalaureate examination. This expansion was associated to the limited trust in the teaching and learning quality during the public school through the common excuses of having insufficient instructional time to complete the intended contents of the school syllabus. This issue also

pushed the financial burden into the hands of students' families whose child followed the science track. Although the PT fee remained low, which seemed to be affordable by many Cambodian households, the expansion of PT developed an inequitable opportunity for some particular groups of families living under the poverty line. This expansion would push them into debt and shift some students from science track to social science in order to gain social mobility through the anti-cheating examination.

8.5 Final remarks

Cambodia requires extensive efforts toward school curriculum reform and improving schoolteachers' working conditions. Also, MoEYS should consider extending the practice of the PT regulation used in the New Generation Schools to all schools in Cambodia. However, this practice should be done with caution or it may enlarge the gap of inequitable access to the additional education, especially when the quality of education at school is still questionable. Last but not least, MoEYS should also consider offering other types of free additional education so it could give more opportunities to particular groups who are not be able to afford PT.

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APPENDIXES

Appendix 1: Research permit issued by MoEYS



ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

ក្រសួងអប់រំ យុវជន និងកីឡា
លេខ: ៩២៦ អយក.ទវរ

ថ្ងៃ អង្គារ ៤ ធ្នូ ខែ ធ្នូ ឆ្នាំ ជូត ទោស័ក ព.ស. ២៥៦៤
រាជធានីភ្នំពេញ ថ្ងៃទី ០២ ខែ មីនា ឆ្នាំ ២០២១

ជម្រាបជូន

- លោកស្រីប្រធាននាយកដ្ឋានគោលនយោបាយ
- លោកប្រធាននាយកដ្ឋានបច្ចេកទេសសិក្សាចំណេះទូទៅ
- លោកប្រធាននាយកដ្ឋានកិច្ចការប្រឡង
- លោកប្រធានមន្ទីរអប់រំ យុវជន និងកីឡារាជធានីភ្នំពេញ ខេត្តបាត់ដំបង ខេត្តកំពង់ស្ពឺ ខេត្តកំពត ខេត្តកោះកុង ខេត្តស្ទឹងត្រែង ខេត្តក្រចេះ ខេត្តកំពង់ឆ្នាំង ខេត្តកំពង់ឆ្នាំង

កម្មវត្ថុ: សំណើសុំអនុញ្ញាតឲ្យលោក សៀង សុផា ចុះធ្វើការសិក្សាស្រាវជ្រាវប្រមូលទិន្នន័យ សម្រាប់សរសេរ និក្ខេបបទបញ្ចប់ការសិក្សាពីខែមីនា ឆ្នាំ២០២១រហូតដល់ខែមិថុនា ឆ្នាំ២០២១។

យោង: -លិខិតរបស់សាកលវិទ្យាល័យហ៊ីរ៉ូស៊ីម៉ា នៃប្រទេសជប៉ុនចុះថ្ងៃទី១២ ខែកុម្ភៈ ឆ្នាំ២០២១។
-ពាក្យស្នើសុំរបស់សាមីជនចុះថ្ងៃទី១៥ ខែកុម្ភៈ ឆ្នាំ២០២១។

តបតាមកម្មវត្ថុ និងយោងខាងលើ ខ្ញុំសូមជម្រាបជូន លោកស្រីប្រធាន ជ្រាបថា៖ លោក សៀង សុផា ជានិស្សិតអាហារូបករណ៍ថ្នាក់បណ្ឌិត ផ្នែកអប់រំ នៃសាកលវិទ្យាល័យហ៊ីរ៉ូស៊ីម៉ា នៃប្រទេសជប៉ុន បានស្នើសុំចុះ ធ្វើការសិក្សាស្រាវជ្រាវ និងប្រមូលទិន្នន័យនៅតាមរយៈកម្រងសំណួរ និងការសម្ភាសន៍ផ្ទាល់ជាមួយលោក លោកស្រី ប្រធាននាយកដ្ឋានជំនាញ ប្រធានឬអនុប្រធានមន្ទីរអប់រំ យុវជន និងកីឡារាជធានីខេត្ត នាយក នាយិកា គ្រូ សិស្ស និងអាណាព្យាបាល នៅតាមសាលាគោលដៅ (ដូចមានក្នុងតារាងឧបសម្ព័ន្ធជូនភ្ជាប់) ចាប់ពីខែមីនា ឆ្នាំ២០២១ រហូតដល់ខែមិថុនា ឆ្នាំ២០២១ ដើម្បីសរសេរនិក្ខេបបទបញ្ចប់ការសិក្សារបស់ខ្លួនលើប្រធានបទ "កត្តាជះឥទ្ធិពល លើផ្នត់គំនិត នៃការរៀនគួរនៅវិទ្យាល័យ នៃប្រទេសកម្ពុជា"។

អាស្រ័យដូចបានជម្រាបជូនខាងលើ សូម លោកស្រីប្រធាន អនុញ្ញាតឲ្យលោក សៀង សុផា បានចុះ ធ្វើការសិក្សាស្រាវជ្រាវប្រមូលទិន្នន័យនៅតាមអង្គភាពក្រោមការគ្រប់គ្រងរបស់លោកស្រីប្រធាន តាមកាលបរិច្ឆេទ ខាងលើតាមការគួរ។

សូម លោកប្រធាន ទទួលនូវការរាប់អានដ៏ស្មោះពីខ្ញុំ

បង្គោលជូន:

- អគ្គនាយកដ្ឋានរដ្ឋបាល និងហិរញ្ញវត្ថុ
- ឧទ្ធរណ៍យន្តការក្នុងក្រសួងសភាបាឡារដ្ឋមន្ត្រី
- "ដើម្បីជ្រាបជាព័ត៌មាន"
- កាលប្បវត្តិ-ឯកសារ ន.ទវរ

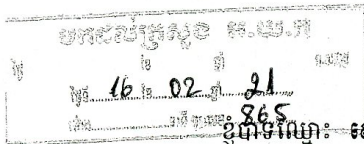


ក្រសួងអប់រំ យុវជន និងកីឡា
អគ្គនាយករង

ហ៊ុន ប៊ាណី

អាសយដ្ឋានលេខ៨០ មហាវិថី ព្រះនរោត្តម ភ្នំពេញ កម្ពុជា ទូរស័ព្ទ: (៨៥៥-២៣) ២២០ ៦៧៣ / ២២០ ៣០៤ ទូរសារ: (៨៥៥-២៣) ២១៧ ២៥០ / ២១២ ៥១២
អ៊ីមែល: info@moeys.gov.kh / administration@moeys.gov.kh គេហទំព័រ: www.moeys.gov.kh

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ



លិខិតស្នើសុំចុះសិក្សាស្រាវជ្រាវ

ខ្ញុំបាទឈ្មោះ **សៀង សុផា** ជាគ្រូឧទ្ទេស នៃវិទ្យាស្ថានជាតិអប់រំ បច្ចុប្បន្នកំពុងបន្តការសិក្សានៅសាកលវិទ្យាល័យហ៊ីរ៉ូស៊ីម៉ា ប្រទេសជប៉ុន តាមរយៈកម្មវិធីអារូបករណ៍ JDS សម្រាប់ឆ្នាំ ២០១៩ ដល់ ឆ្នាំ ២០២២។

សូមគោរពជូន

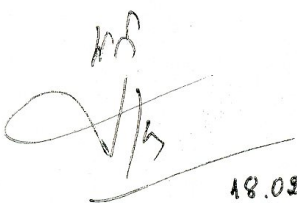
ឯកឧត្តមបណ្ឌិតសភាចារ្យ រដ្ឋមន្ត្រីក្រសួងអប់រំ យុវជន និងកីឡា

កម្មវត្ថុ៖ សំណើសុំចុះធ្វើការស្រាវជ្រាវនិងប្រមូលទិន្នន័យសម្រាប់សរសេរនិក្ខេបបទបញ្ចប់ការសិក្សាថ្នាក់បណ្ឌិត។
យោង៖ លិខិតចុះថ្ងៃទី១២ ខែកុម្ភៈ ឆ្នាំ២០២១ របស់លោក **HOTTA Taiji, Ph.D.**, សាស្ត្រាចារ្យនៃសកលវិទ្យាល័យ Hiroshima ស្តីពីការស្នើសុំការអនុញ្ញាតិដើម្បីចុះប្រមូលទិន្នន័យ (Requesting for your permission to conduct data collection)។

តាមកម្មវត្ថុ និងយោងខាងលើ ខ្ញុំបាទសូមគោរពជម្រាបជូន **ឯកឧត្តមបណ្ឌិតសភាចារ្យ រដ្ឋមន្ត្រីក្រសួងអប់រំ យុវជន និងកីឡា** មេត្តាជ្រាបថា៖ ខ្ញុំបាទមានគម្រោងចុះធ្វើការស្រាវជ្រាវលើប្រធានបទ “**កត្តាជះឥទ្ធិពល លើផ្នត់គំនិតនៃការរៀនគួរនៅវិទ្យាល័យ នៃប្រទេសកម្ពុជា**” ដើម្បីទទួលបានទិន្នន័យសម្រាប់សរសេរនិក្ខេបបទបញ្ចប់ការសិក្សាថ្នាក់បណ្ឌិតផ្នែកអប់រំនៅសាកលវិទ្យាល័យហ៊ីរ៉ូស៊ីម៉ា (Hiroshima) នៃប្រទេសជប៉ុន។ ក្នុងការសិក្សាស្រាវជ្រាវនេះ ខ្ញុំបាទនឹងប្រើប្រាស់វិធីសាស្ត្រពីដើម្បីប្រមូលទិន្នន័យ៖

១. ការប្រើប្រាស់កម្រងសំណួរ ជាមួយ គ្រូ សិស្ស និងអាណាព្យាបាល
២. កិច្ចសម្ភាសន៍ផ្ទាល់ ជាមួយប្រធានឬអនុប្រធាន នាយកដ្ឋានជំនាញមួយចំនួន ប្រធានឬអនុប្រធានមន្ទីរអប់រំ យុវជន និងកីឡា រាជធានី ខេត្ត នាយកសាលា គ្រូ សិស្ស និងអ្នកអាណាព្យាបាលសិស្ស នៅតាមសាលាគោលដៅ (ដូចមានតារាងឧបសម្ព័ន្ធជូនភ្ជាប់)។ ការចុះប្រមូលទិន្នន័យនេះ ចាប់ផ្តើមពីខែមីនា ឆ្នាំ២០២១ ដល់ ខែមិថុនា ឆ្នាំ២០២១។

អាស្រ័យដូចបានគោរពជម្រាបជូនខាងលើ សូម **ឯកឧត្តមបណ្ឌិតសភាចារ្យរដ្ឋមន្ត្រី** មេត្តាអនុញ្ញាតឱ្យខ្ញុំបាទ ដើម្បីបានចុះធ្វើការសិក្សាស្រាវជ្រាវ និងប្រមូលទិន្នន័យ ដោយក្តីអនុគ្រោះ។
សូម ឯកឧត្តមបណ្ឌិតសភាចារ្យ រដ្ឋមន្ត្រី ទទួលនូវការគោរពដ៏ស្មោះអំពីខ្ញុំបាទ។


 18.02.2021

ថ្ងៃចន្ទ ៤កើត ខែផល្គុន ឆ្នាំជូត ទោស័ក ព.ស២៥៦៤
 រាជធានីភ្នំពេញ ថ្ងៃទី១៥ ខែកុម្ភៈ ឆ្នាំ២០២១
ហត្ថលេខា

សៀង សុផា



HIROSHIMA UNIVERSITY

1-1-1 Kagamiyama Higashi-Hiroshima, Hiroshima, Japan 739-8524
Tel/Fax: +81-(0)82-424-6284

Date: 12th February 2021

H.E. Dr. Hang Chuon Naron
Minister, Ministry of Education Youth and Sport
Building 80 Norodom Blvd., Phnom Penh
Cambodia

Subject: Requesting for your permission to conduct data collection

Your Excellency,

I am writing to seek your permission to allow Mr. **Soeung Sopha**, a graduate student under my supervision to conduct his research in 24 upper secondary schools in Phnom Penh and other six provinces in Cambodia.

Mr. Soeung Sopha, teacher trainer at National Institute of Education, is a second-year student pursuing his doctoral degree in Education at the Graduate School for Humanities and Social Sciences, Hiroshima University, Japan under the Project for Human Resource Development Scholarship by Japanese Grant Aid (JDS).

Mr. Soeung Sopha is conducting fieldwork for his dissertation entitled **Factors Impacting Perceptions of Private Tutoring in Cambodian Upper Secondary Schools**. His field work is scheduled from March to June 2021. His study aims to explore factors and patterns of private tutoring in different areas across Cambodia. This study, furthermore, aims to collect data from different educational stakeholders from school to policy level through survey questionnaire and interview to answer to four research questions:

1. What are the stakeholders' perceptions of private tutoring in Cambodia before the national examination reform?
2. What determinants impact Cambodian teachers to supply private tutoring?
3. What factors influence Cambodian students to demand private tutoring?
4. What are the current patterns of private tutoring in Cambodia after the national examination reform?

I strongly believe that his study will make important contributions towards improving the quality of education in Cambodia.

Finally, I would be very highly appreciated if you could kindly permit him and provide him with possible facilitation. Thank you so much for your kind understanding and cooperation.

Faithfully yours,

HOTTA Taiji, Ph.D.,

Assistant to the Executive Vice-President,
Professor, MORITO Institute of Global Higher Education, Hiroshima University
[Post-Graduate Program] the International Education Development Program,
Division of Educational Sciences, Graduate School for Humanities and Social Sciences
Email: hotta@hiroshima-u.ac.jp

Appendix 2: Research ethics from university

Appended form No. 1

Application for Review

7/MM 28/DD2021/YYYY

To the Chair of the Ethics Committee of
Graduate School for International Development and Cooperation

Review Item	☒ Research plan	☐ Research report
Title	Factors Impacting Perceptions of Private Tutoring at Cambodian Upper Secondary Schools	
Name of the Applicant	Name: SOEUNG SOPHA 	Extension number:
(Academic Advisor)	(Course, if the applicant is a student.) Educational development Department: Educational development and cultural studies	(ID No., if the applicant is a student.) ID192448 Position: Professor
(Academic Advisor)	Name HOTTA Taiji 	Extension number:
Other (Publication, etc.)		

Notes:

1. The applicant's signature or seal is required in the "Name of the Applicant" field.
2. Check ☐ "Research plan" if you are applying before you begin the research.
3. Check ☐ "Research result" if you are applying after or during the research.
4. Specify about publication means, conference name, journal name, etc., in the "Other (Publication, etc.)" field if you check "Research result."

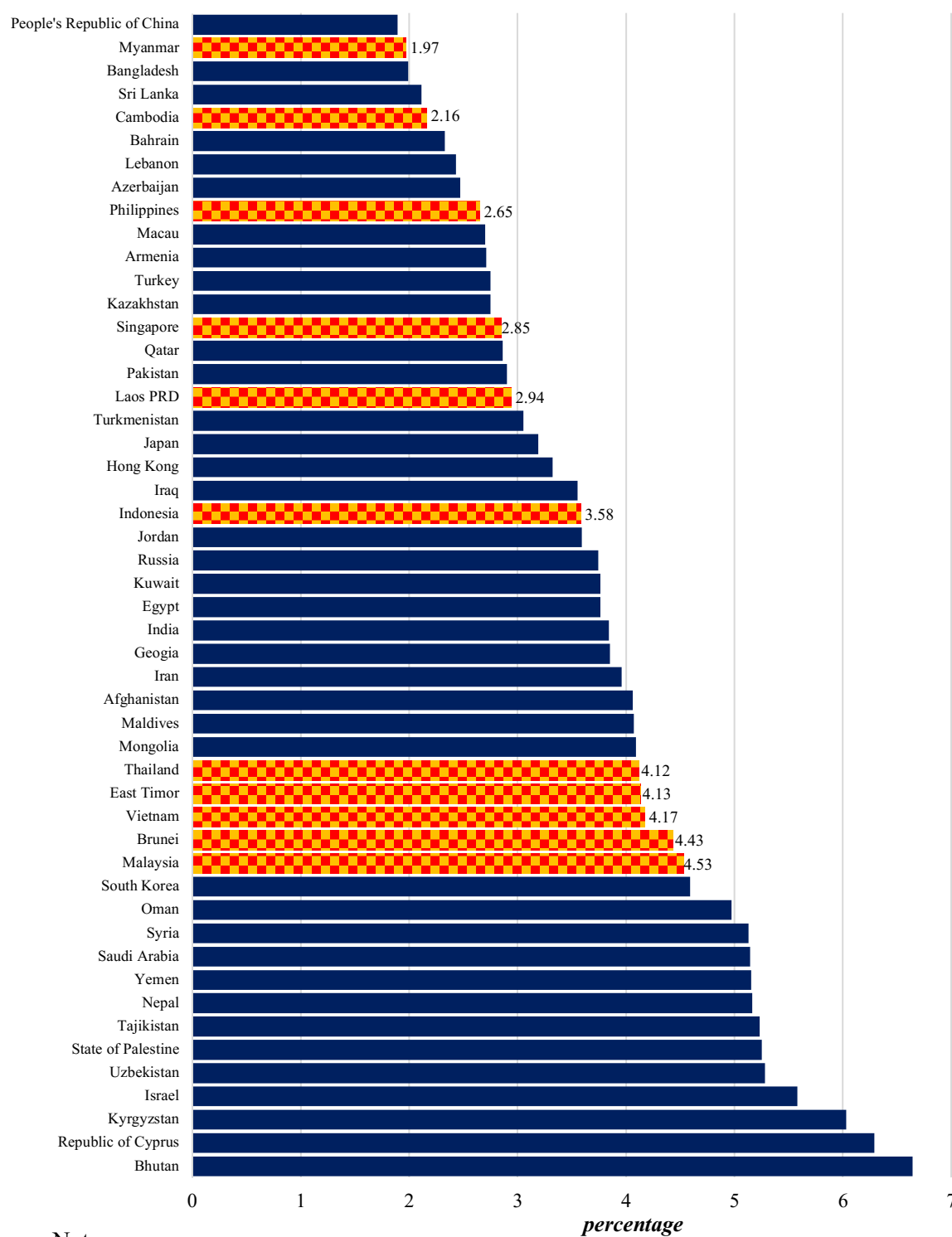
.....(the Ethics Committee Only).....

Determination	1. Approved	2. Changes Recommended	3. Not Approved	4. Not Applicable
Reason for Determination or Recommendation	Approved August 18, 2021			

Appendix 3: Cambodia's education system

24	Higher Education	Universities and Institutions				Non-formal Education
23						
22						
21						
20						
19						
18						
17	Upper Secondary	Grade 12	Tracking	Baccalaureate examination		
16		Grade 11				
15		Grade 10				
14	Basic Education	Lower Secondary	Grade 9	Leaving examination		
13			Grade 8			
12			Grade 7			
11		Primary	Grade 6			
10			Grade 5			
9			Grade 4			
8			Grade 3			
7			Grade 2			
6			Grade 1			
5	Pre-school	Upper step				
4		Medium step				
3		Lower step				

Appendix 4: Expenditure on education (% of GDP) of Asian countries

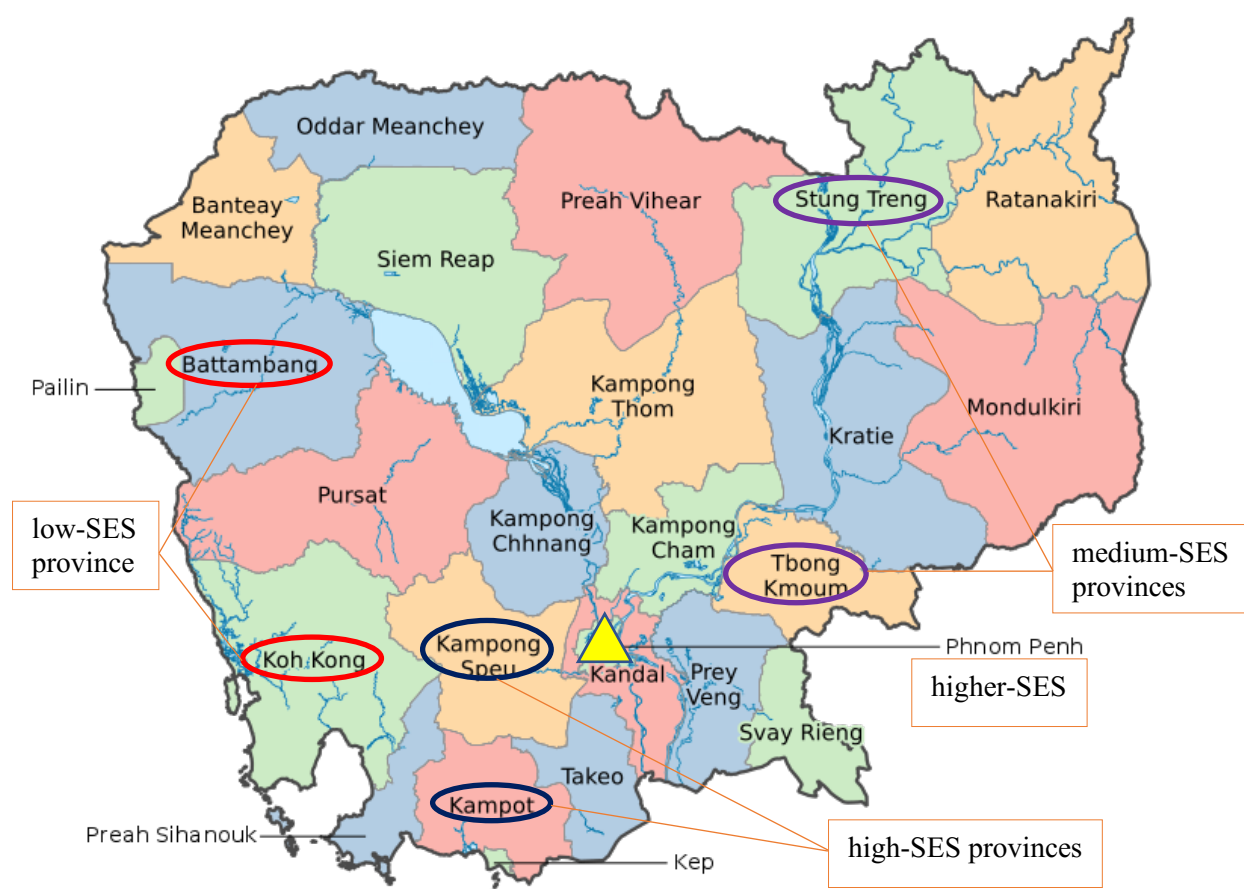


Note:

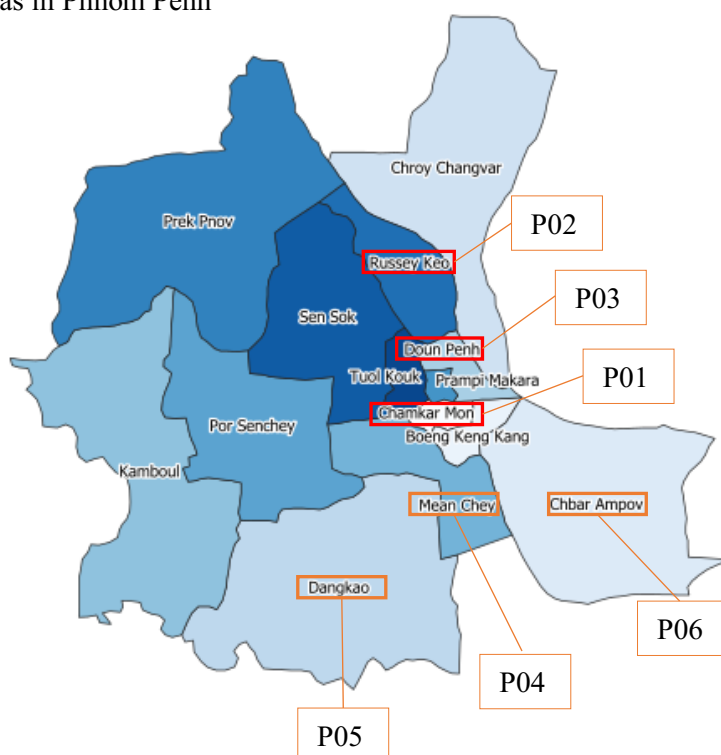
 ASEAN countries

Source: World Bank (2020b)

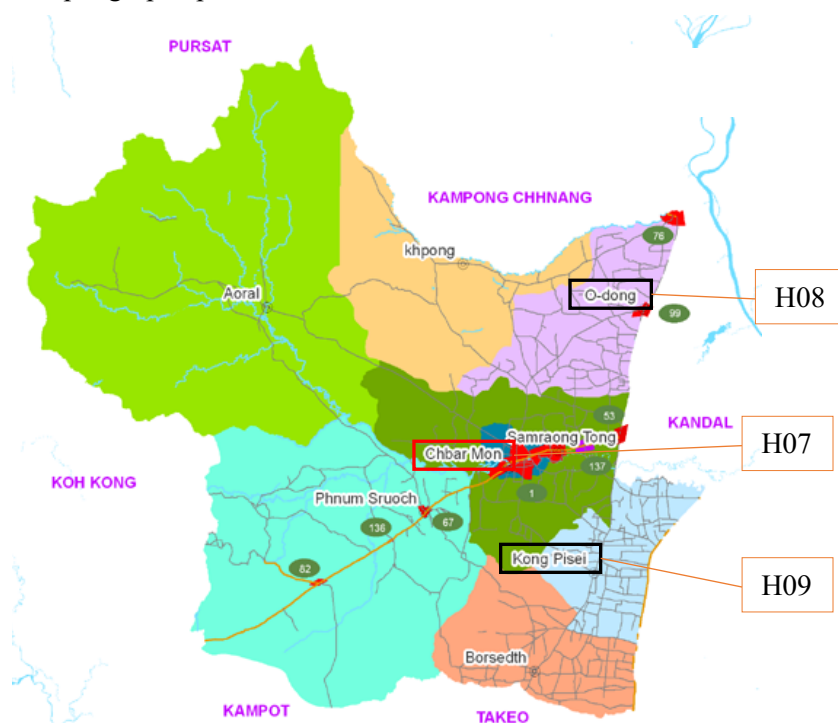
Appendix 5: Research settings



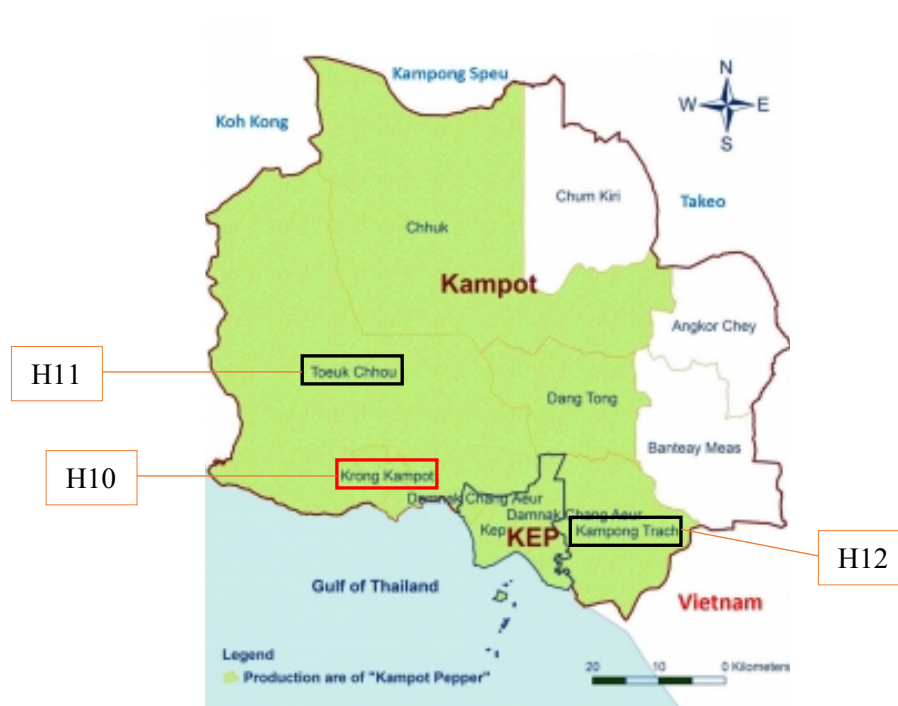
Selected areas in Phnom Penh



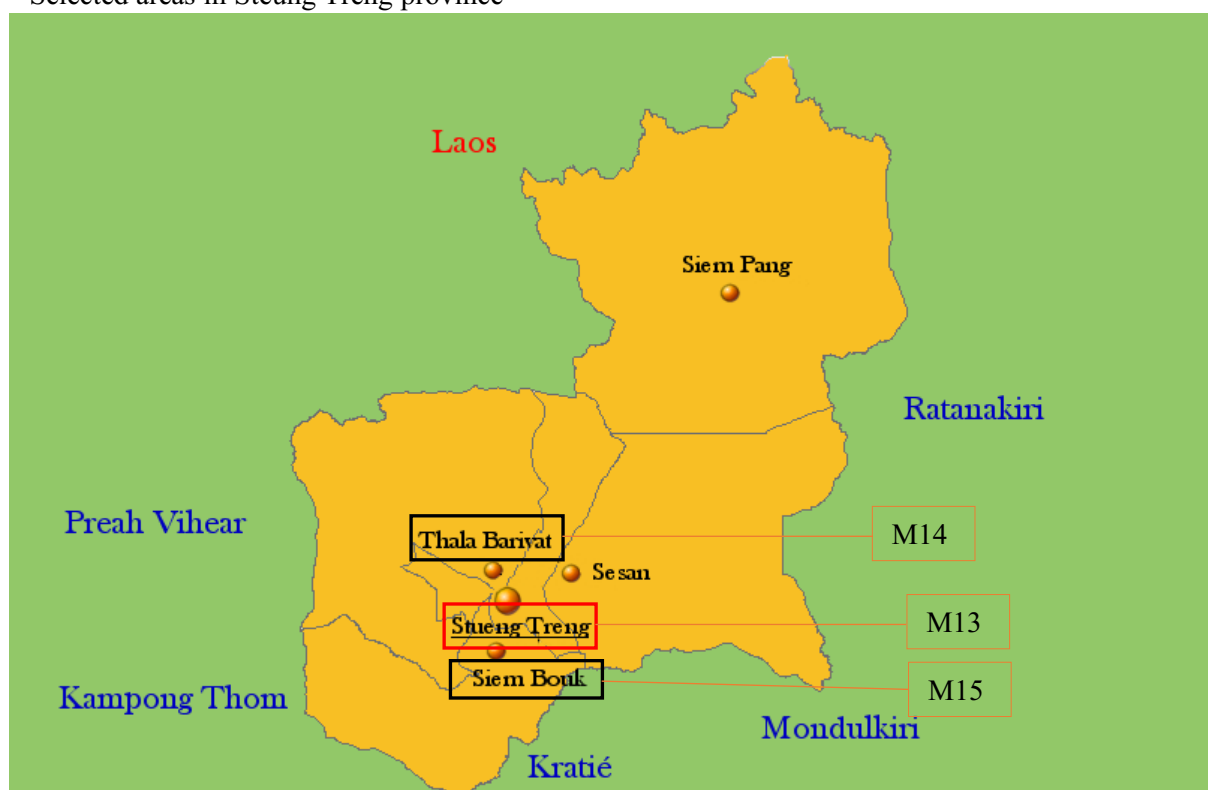
Selected areas in Kampong Speu province



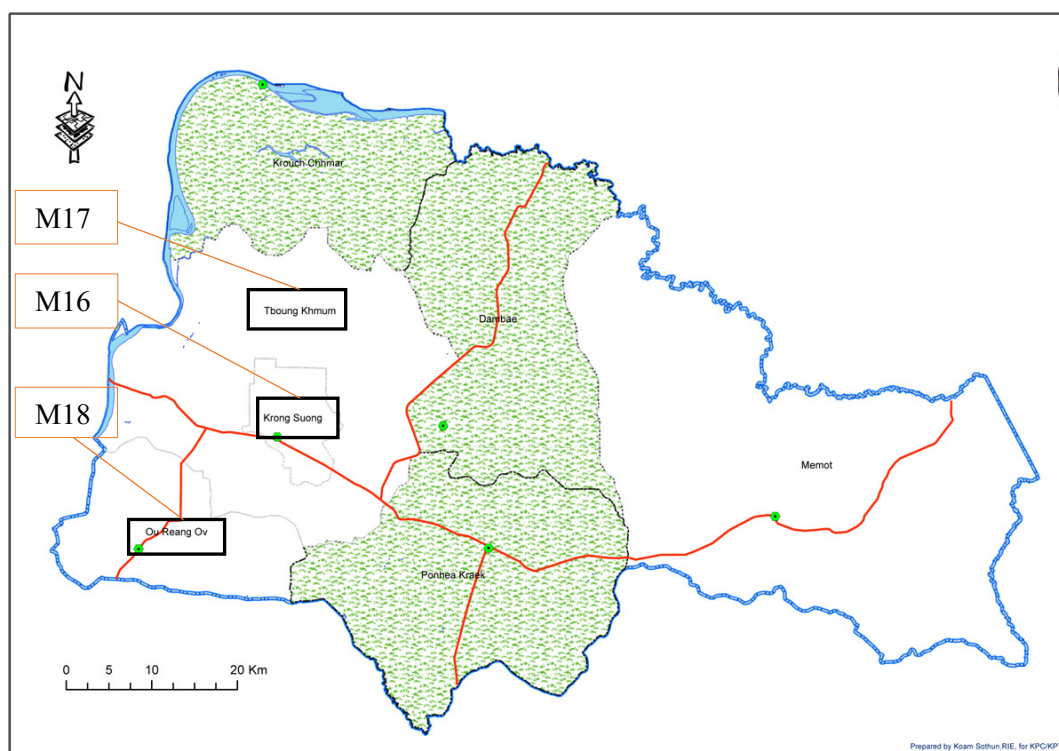
Selected areas in Kampot province



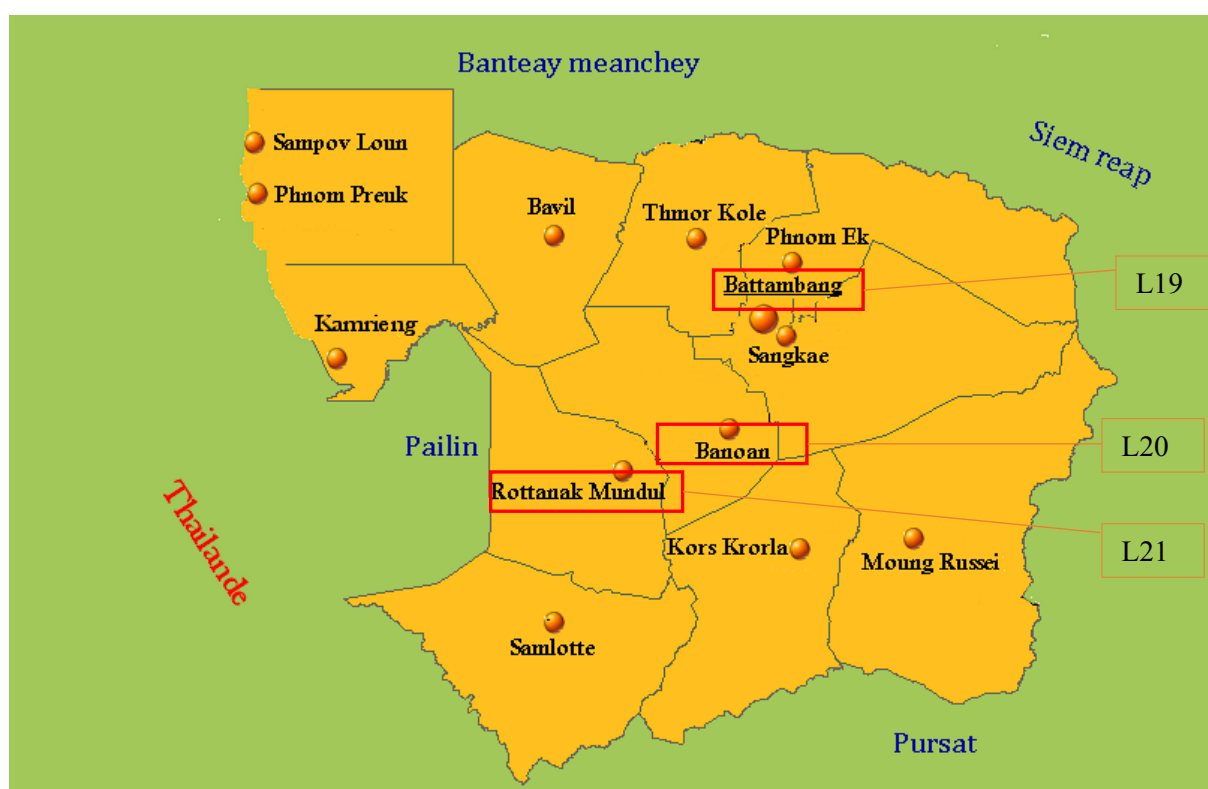
Selected areas in Steung Treng province



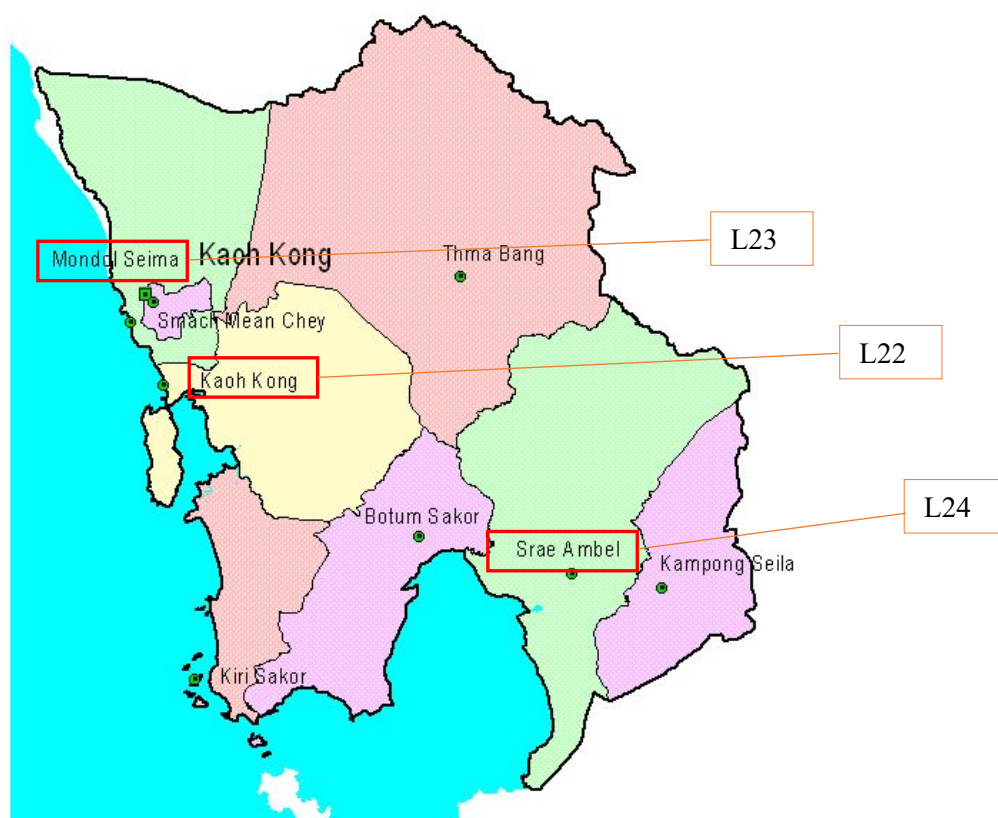
Selected areas in Tboung Khum province



Selected areas in Battambang province



Selected areas in Koh Kong province



Appendix 6: Written consent form

ប្រធានបទស្រាវជ្រាវ

Research topic:

កត្តាជះឥទ្ធិពលលើផ្នត់គំនិតនៃការរៀននិងបង្រៀនគួរ នៅវិទ្យាល័យក្នុងប្រទេសកម្ពុជា

Factors Influencing Engagement of Private Tutoring at Cambodian Upper Secondary Schools

លិខិតបញ្ជាក់ការយល់ព្រមចូលរួមផ្តល់បទសម្ភាសន៍ សម្រាប់ការស្រាវជ្រាវ

Consent Letter for Interviewing Informants

១. ខ្ញុំបាទ/នាងខ្ញុំឈ្មោះ: _____ ឯកភាពដោយស្ម័គ្រចិត្តដើម្បី ផ្តល់បទសម្ភាសន៍ សម្រាប់ការសិក្សាស្រាវជ្រាវលើប្រធានបទដូចខាងលើ។

I _____ voluntarily participate in interviewing for this research study.

២. ខ្ញុំបាទជ្រាបច្បាស់ថា ខ្ញុំនៅតែអាចដកខ្លួនចេញបាននៅពេលណាក៏បាន ឬបដិសេធមិនឱ្យប្រើប្រាស់ ចម្លើយណាមួយក៏បានដោយមិនមានផលលំបាកអ្វីឡើយ។

I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.

៣. ខ្ញុំបាទជ្រាបច្បាស់ថា ខ្ញុំអាចសុំមិនអោយប្រើប្រាស់បទសម្ភាសន៍របស់ខ្ញុំ ក្នុងរយៈពេល២ (ពីរ) សប្តាហ៍ បន្ទាប់ពីការសម្ភាសន៍ជាមួយខ្ញុំបានចប់សព្វគ្រប់ ហើយខ្សែសម្លេងដែលបានថតតម្រូវអោយធ្វើការលុបចោល ទាំងស្រុង។

I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.

៤. ខ្ញុំបាទបានជ្រាបច្បាស់ពីវត្ថុបំណង និងការប្រើប្រាស់ព័ត៌មាននៅក្នុងការស្រាវជ្រាវ និងមូលហេតុដែលខ្ញុំ ត្រូវបានជ្រើសរើស។

I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.

៥. ខ្ញុំជ្រាបច្បាស់ថា ខ្ញុំមិនបានទទួលប្រយោជន៍ដោយផ្ទាល់ពីការចូលរួមក្នុងការស្រាវជ្រាវនេះទេ។

I understand that I will not benefit directly from participating in this research.

៦. ខ្ញុំយល់ស្របអោយថតសម្លេង ការសម្ភាសន៍របស់ខ្ញុំ។

I agree to my interview being audio-recorded.

៧. ខ្ញុំជ្រាបច្បាស់ថា រាល់ព័ត៌មានដែលខ្ញុំបានផ្តល់ជូន នឹងត្រូវប្រើប្រាស់ដោយរក្សាការសម្ងាត់។

I understand that all information I provide for this study will be treated confidentially.

៨. ខ្ញុំជ្រាបច្បាស់ថា នៅក្នុងការរាយការណ៍លទ្ធផលស្រាវជ្រាវនេះ អត្តសញ្ញាណរបស់ខ្ញុំត្រូវបានប្រើ ជា អនាមិក ឬ អត្តសញ្ញាណជំនួស។ ម្យ៉ាងទៀត ឈ្មោះអ្នកដែលខ្ញុំលើកមកនិយាយនឹងត្រូវបានប្រើប្រាស់ ឈ្មោះបែបអត្តសញ្ញាណជំនួស ដែលមិនអាចវាយតម្លៃដឹងបានដោយអ្នកអាន។

I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.

៩. ខ្ញុំជ្រាបច្បាស់ថា ព័ត៌មានរបស់ខ្ញុំក្នុងអត្តសញ្ញាណជំនួស អាចនឹងត្រូវបានដកស្រង់ផ្ទាល់សម្រាប់របាយការណ៍ ស្រាវជ្រាវ។ ម្យ៉ាងទៀត រាល់ព័ត៌មានរបស់ខ្ញុំនឹងត្រូវបានប្រើប្រាស់សម្រាប់៖ និក្ខេបបទបញ្ចប់ការសិក្សា បឋម កថាភូមិសន្និបាតឬសិក្ខាសាលា ការបោះពុម្ពអត្ថបទស្រាវជ្រាវ។

I understand that disguised extracts from my interview may be quoted in writing this report. Additionally, all information in my interview will be used for writing his dissertation, presentation in conference and workshop, and writing academic articles for publications.

១០. ខ្ញុំបានជ្រាបថា លិខិតឯកភាពដែលបានចុះហត្ថលេខារួចនេះ នឹងច្បាប់ដើមរបស់បទសម្ភាសន៍ដែលបាន ថតសម្លេង ត្រូវបានរក្សាទុកនៅទៅកន្លែងសុវត្ថិភាព ដោយមានការរៀបចំលេខសម្ងាត់សុវត្ថិភាព និងមានតែ អ្នកស្រាវជ្រាវតែប៉ុណ្ណោះ ដែលអាចចូលក្នុងកន្លែងសុវត្ថិភាពនោះដើម្បីប្រើប្រាស់ព័ត៌មាន។ ប៉ុន្តែដោយ អ្នក ស្រាវជ្រាវជានិស្សិត គាត់អាចប្រើប្រាស់ និងរក្សាទុកវាបានរហូតដល់គណៈកម្មការប្រឡងបានបញ្ជាក់ លទ្ធផលការសិក្សារបស់គាត់ចប់សព្វគ្រប់ ហើយគាត់អាចបង្ហាញគណៈកម្មការប្រឡងរបស់គាត់បើចាំបាច់។

I understand that signed consent letter and original recordings will be retained in a security place with passcodes. Only the researcher who can access to that place for those pieces of information. Since the researcher is a doctoral student, he can keep information of my interview until his examination committees confirm the results of his examination. He also can show it to his examination committee in case of necessity.

១១. ខ្ញុំជ្រាបច្បាស់ថា សម្រង់បទសម្ភាសន៍ជាសំណេរ ដែលអត្តសញ្ញាណត្រូវបានដកចេញ តាមការឯកភាព នៅចំណុចទីប្រាំបី (៨) ត្រូវបានរក្សាទុក រយៈពេលដប់ (១០) ឆ្នាំក្រោយការប្រឡងរបស់គាត់បានបញ្ចប់។

I understand that a transcript of my interview in which all identifying information has been removed (as mentioned in No. 8) will be retained for ten (10) years from the date of his examination.

១២. ខ្ញុំជ្រាបច្បាស់ថា ខ្ញុំអាចចូលទៅពិនិត្យមើលអត្ថបទសម្ភាសន៍របស់ខ្ញុំនៅកន្លែងរក្សា ដូចចែងក្នុងចំណុច ទីប្រាំបួន (៩) ទុកពេលណាក៏បាន តាមលេខសម្ងាត់សុវត្ថិភាពពីអ្នកស្រាវជ្រាវ។

I understand that under freedom of information legalization I am entitled to access the information I have provided at any time while it is in storage as specified in No. 9 by requesting passcodes from the researcher.

១៣. ខ្ញុំជ្រាបច្បាស់ថា ខ្ញុំអាចទាក់ទងទៅបុគ្គលណាដែលពាក់ព័ន្ធក្នុងការស្រាវជ្រាវនេះ បានដើម្បីស្វែងយល់ពីព័ត៌មាន និងដើម្បីភាពច្បាស់លាស់លើព័ត៌មាន។

I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

អ្នកស្រាវជ្រាវឈ្មោះ **សៀង សុផា** ជាគ្រូឧទ្ទេសឧត្តមសិក្សានៃវិទ្យាស្ថានជាតិអប់រំ និងសព្វថ្ងៃជានិស្សិត ថ្នាក់បណ្ឌិតផ្នែកអប់រំនៃសាកលវិទ្យាល័យហ្វុស៊ីម៉ា ប្រទេសជប៉ុន។ ទំនាក់ទំនងតាម សារអេឡិចត្រូនិច

soeungsopha@gmail.com ឬតេឡេក្រាមលេខ៖ ០៧១ ៥៥៥៥ ៧៩៨។

A researcher, named **Soeung Sopha**, is a trainer at National Institute of Education, and is pursuing a doctoral degree in Education at Hiroshima University, Japan. Email: soeungsopha@gmail.com or Telegram number: (+855) 71-5555-798.

ហត្ថលេខាអ្នកយល់ព្រមសម្ភាសន៍៖ ខ្ញុំសូមបញ្ជាក់ថា ខ្ញុំពិតជាបានអាន និងយល់ព្រមលើ លិខិតឯកភាព

ចូលរួមនេះពិតប្រាកដមែន ដោយចុះហត្ថលេខា និងឈ្មោះដើម្បីបញ្ជាក់។

Interviewee: I would like to declare that I have read and agreed all points mentioned above. As an evidence, I agree to sign with my name on this paper.

_____ ឈ្មោះ: _____ កាលបរិច្ឆេទយល់ព្រម _____
_____ Full name: _____ Date: _____

ហត្ថលេខាអ្នកស្រាវជ្រាវ៖ ខ្ញុំសូមបញ្ជាក់ថា លិខិតឯកភាពចូលរួមនេះពិតជាបានអាន និងយល់ព្រមចុះ

ហត្ថលេខាបញ្ជាក់ការយល់ព្រមពីអ្នកចូលរួមដូចមាននាមខាងលើពិតប្រាកដមែន។

Researcher: I believe the participant is giving informed consent to participate in this study.

_____ ឈ្មោះ: **សៀង សុផា** កាលបរិច្ឆេទទទួលបាន _____
_____ Full name: **Soeung Sopha** Date: _____

..... **ឯកសារនេះមានតែពីរទំព័រគត់ មិនមានឯកសារភ្ជាប់ឡើយ**

.....*This consent letter has only two pages without any attached file*.....

Appendix 7a: Self-reported survey questionnaire for schoolteachers

Dear Respondents,

I am Soeung Sopha, a doctoral student at Hiroshima University, Japan. To fulfill the requirements of my doctoral program, I am conducting a study entitled *Factors Influencing Engagement of Private Tutoring at Cambodian Upper Secondary Schools*. This study aims to explore factors influencing the perceptions of demanding and supplying private tutoring in Cambodian upper secondary schools further to the examination reform.

I would declare that your identity will remain anonymous in any report of this study results. Additionally, your information is surely kept confidential in all circumstances. If there is any information is leaked, I will lawfully responsible.

Thank you so much for your kindness and cooperation. Should you contact us for any inquiry related to this study through soeungsopha@gmail.com or Telegram: (+855)71-5555-798.

***Consent**

We would like to invite you to voluntarily participate in our survey. Your information is going to use for only academic purpose including writing dissertation, presenting in local and international conference, and writing research articles for publication. Your identity is used anonymously in study reports. If you voluntarily give us opportunity to use your information for the above purpose, please kindly choose the bottom 'Agree', or 'Disagree' in case you do not wish to offer.

Agree (continue to the next section) Disagree (submit)

Participant Code [assigned by the researcher]: _____

SECTION I: Personal Information

1. Gender: ₁ Female ₂ Male

2. Year you were born: _____

3. What is your highest level of teaching profession which you obtained?

₁ Lower secondary level

₂ Upper secondary level

4. Choose the main subject you are teaching during this schoolyear (2020-2021)

(Choose ONE only)

- | | |
|---------------|-----------------------------|
| 1 Mathematics | 6 Khmer composition |
| 2 Physics | 3 Geography |
| 3 Chemistry | 3 Earth environment |
| 4 Biology | 3 Moral-civics |
| 5 History | 3 Language (English/French) |

5. Choose group(s) you are teaching this schoolyear (2020-2021)? (*Choose ONE only*)

- 1 Social science class
- 2 Science class
- 3 Both

6. Your highest qualification:

- | | |
|---------------------------------|------------------------------|
| 7 Doctoral degree | 3 Pursuing doctoral degree |
| 6 Master's degree | 2 Pursuing master's degree |
| 5 Bachelor's degree | 1 Pursuing bachelor's degree |
| 4 Upper secondary school degree | |

7. Do you live in the same area where you work?

- 2 Yes, I am a local
- 1 No, I commute to work every day

SECTION II: **Your Family**

8. Choose your status:

- 4 Married
- 3 Divorced with kid(s)
- 2 Single (*Skip to question 12*)
- 1 Divorced without kid(s) (*Skip to question 12*)

***About your spouse**

9. Your spouse's occupation (*Choose ONLY one*)

- 1 Housewife/Unemployed
- 2 Retiree
- 3 Simple income generator (e.g., motordub, taxi driver, hairdresser, seller...)
- 4 Overseas worker
- 5 Farmer (rent land)
- 6 Farmer (own land less than 1 hectare)
- 7 Farmer (own land bigger than 1 hectare)
- 8 Teacher
- 9 Government staff (**NOT** teacher)

- 10 Private company staff
- 11 Local organization staff
- 12 Non-government organization staff
- 13 Vendor (e.g., gold, construction materials, restaurant, hotel,...)
- 14 Others (please specify: _____)

10. Your spouse's qualification (*Choose ONE only*)

- 1 Primary level
- 2 Lower secondary level
- 3 Upper secondary level
- 4 Bachelor's degree
- 5 Master's degree
- 6 Doctoral degree
- 7 Others (Please specify: _____)

11. How many children are under your care? (*Choose ONE only*)

- 1 I do not have
- 2 One child
- 3 Two children
- 4 Three children
- 5 Four children
- 6 Five children

SECTION III: About your home

12. Source of water for your daily use (*Choose ONE only*)

- 1 Buy
- 2 River/pond
- 3 Rain
- 4 Pumping water
- 5 Well
- 6 Hygiene water
- 7 Running water
- 8 Others (please specify: _____)

13. Source of light for your daily use (*Choose ONE only*)

- 1 Candle
- 2 Lantern
- 3 Battery
- 4 Generator
- 5 Electricity/solar panel
- 6 Others (please specify: _____)

14. Number of bedrooms in your home (*Choose ONE only*)

- 1 No room
- 2 One room
- 3 Two rooms
- 4 Three rooms
- 5 More than three rooms

15. Materials of your wall (*Choose ONE only*)

- 1 Used materials
- 2 Bamboo/Thatch/palm tree leaves
- 3 Zine
- 4 Asbestos
- 5 Wooden
- 6 Cement brick
- 7 Others (please specify: _____)

16. Materials of your roof (*Choose ONE only*)

- | | |
|---------------------------|----------------------------------|
| 1 Used materials | 5 Asbestos |
| 2 Tent | 6 Roofing tiles |
| 3 Thatch/palm tree leaves | 7 Cement roof |
| 4 Zine | 8 Others (please specify: _____) |

17. Materials of your floor (*Choose ONE only*)

- | | |
|--------------------|----------------------------------|
| 1 Nothing but soil | 5 Tile |
| 2 Bamboo | 6 Good plywood |
| 3 Simple plywood | 7 Others (please specify: _____) |
| 4 Cement floor | |

18. Type of toilet you have (*Choose ONE only*)

- | | |
|-----------------|----------------------------------|
| 1 No toilet | 5 Unflushed toilet |
| 2 Public toilet | 6 Flushed toilet |
| 3 Pit latrine | 7 Others (please specify: _____) |
| 4 Blair toilet | |

19. Something you use cook your daily meals (*Choose ONE only*)

- | | |
|------------------------|-------------------------------|
| 1 Wood sticks | 5 Cooking gas |
| 2 Coal | 6 Electricity |
| 3 Wood sticks and coal | 7 Cooking gas and electricity |
| 4 Petroleum | 8 Not cook |

20. Do you have house/rooms/land for rent? 2 Yes 1 No

21. Do you have store/car for rent? 2 Yes 1 No

22. Are you using a loan now? 2 Yes 1 No

SECTION IV: Perceptions of teaching and learning

23. The following statements are about **Public School**. To what extent do you agree?
(*Choose ONE for each statement*)

Statements	Absolutely agree	Agree	Disagree	Absolutely disagree	No idea
1. Government salary is low.	5	4	3	2	1
2. Instructional time is not enough to ensure knowledge and skills as required by the national syllabus.	5	4	3	2	1
3. Teachers are required to use learner-based approach during school	5	4	3	2	1

hours, so we need more time to explain students in detail about prescribed knowledge and skills.

4. Students can learn only theories with few practices.

5

4

3

2

1

5. Class size is too big.

5

4

3

2

1

24. Where do the following activities happen the most? (*Choose ONE for each statement*)

Activities	In both classes	Mainstream classes	Tutoring classes	Never in both classes	No idea
1. Group work	5	4	3	2	1
2. Individual work	5	4	3	2	1
3. Focus on theories with few practices	5	4	3	2	1
4. Summarized and dictated lessons	5	4	3	2	1
5. Precise explanation	5	4	3	2	1
6. Assign more homework	5	4	3	2	1
7. Respond most students' questions	5	4	3	2	1
8. More practices on knowledge and skills	5	4	3	2	1
9. Practice previous years' examination exercises	5	4	3	2	1
10. Active interaction between teachers and students	5	4	3	2	1
11. Main purpose is to complete the syllabus	5	4	3	2	1
12. Main purpose is to strengthen students' knowledge and skills	5	4	3	2	1

SECTION V: About Private Tutoring

25. During schoolyear 2018-2019, Did you supply private tutoring?

2 Yes, I am

1 No, I am not *(Skip to question 27)*

26. Who are your private tutees the most by tutoring types? *(Choose ALL the apply to you and then skip to Question 29)*

Subjects	Private tutoring during holiday	Regular private tutoring	Special private tutoring
My students	1	2	3
Students of other classes in my school	1	2	3
Students from other schools	1	2	3
Relatives/friends' relatives or children	1	2	3

27. Why didn't you offer private tutoring during 2018-2019? *(Choose only ONE)*

1 My subject is not an examination subject

2 My subject is an examination subject, but its scores are not important

3 Students can learn my subject by their own through memorization

4 I need time to help my family's business

5 I need time for my housework

6 I work for private school

7 I have a part-time job (e.g., NGOs, private company, ...)

8 I have my own business

9 Government salary is good enough

10 I do not want parents or students devalue your teaching profession

11 Learning at mainstream school is good enough for students

12 Earns from private tutoring cannot compensate my time and commitment

13 My family economy is good enough for me to survive

14 My subject is an examination subject, but its scores are not important

15 My subject is not an examination subject

16 Others (please specify: _____)

28. During schoolyear 2019-2020 (*BEFORE school closure*), Did you supply private tutoring?

2 Yes, I am

1 No, I am not

29. During schoolyear 2019-2020 (*DURING school closure*), Did you supply private tutoring?

2 Yes, I am

1 No, I am not

30. Are you supplying private tutoring this academic year (2020-2021)?

2 Yes, I am

1 No, I am not (*Skip to question 33*)

31. Choose subject(s) and type(s) of private tutoring you are supplying (*Choose ALL apply to you*)

Subjects	Online private tutoring	Regular private tutoring	Special private tutoring	Work for private school
Mathematics	1	2	3	4
Physics	1	2	3	4
Chemistry	1	2	3	4
Biology	1	2	3	4
History	1	2	3	4
Khmer	1	2	3	4
Geography	1	2	3	4
Earth environ	1	2	3	4
Moral-Civics	1	2	3	4
Language	1	2	3	4
Others	1	2	3	4

32. Who are your private tutees the most? (*Choose ALL apply to you*)

Subjects	Online private tutoring	Regular private tutoring	Special private tutoring
My students	1	2	3
Students of other classes in my school	1	2	3
Students from other schools	1	2	3

Relatives/friends' relatives/children	1	2	3
Private school students	1	2	3

33. Please choose the reason you are **NOT** supplying private tutoring **this schoolyear**?
(Choose only ONE)

- 1 My subject is not an examination subject
- 2 My subject is an examination subject, but its scores are not important
- 3 Students can learn my subject by their own through memorization
- 4 I need time to help my family's business
- 5 I need time for my housework
- 6 I have a part-time job (e.g., NGOs, private company, private school...)
- 7 I have my own business
- 8 Government salary is good enough
- 9 I do not want parents or students devalue your teaching profession
- 10 Learning at mainstream school is good enough for students
- 11 Earns from private tutoring cannot compensate my time and commitment
- 12 My family economy is good enough for me to survive
- 13 My subject is an examination subject, but its scores are not important
- 14 My subject is not an examination subject
- 15 Others (please specify: _____)

SECTION VI: Inviting for interviewing stage

34. We would like to invite you to voluntarily participate in our interviewing stage. Are you willing to join?

- 1 Yes, I am
- 2 No, I am not (If NO, please submit)

35. Please choose your best means that you think we can contact you for interviewing

- | | |
|----------------------|---------------|
| 1 Facebook messenger | 5 Skype |
| 2 Telegram | 6 Google meet |
| 3 Line | 7 Zoom |
| 4 Viber 58. | |

36. Please write your account name or address of the selected choice above

Thank you so much for your time and honest responses.

Dear Respondents,

I would declare that your identity will remain anonymous in any report of this study results. Additionally, your information is surely kept confidential in all circumstances. If there is any information is leaked, I will lawfully responsible.

***Consent**

Agree (continue to the next section) Disagree (submit)

SECTION I: Personal information

- ## **SECTION II: Perceptions of teaching and learning**

- | Statements | Absolutely agree | Agree | Disagree | Absolutely disagree | No idea |
|------------|------------------|-------|----------|---------------------|---------|
|------------|------------------|-------|----------|---------------------|---------|

1. Teachers teach lessons so fast.	5	4	3	2	1
2. Teachers focus much on theories.	5	4	3	2	1
3. Teachers cannot cover entire syllabus.	5	4	3	2	1
4. Teachers do not explain lesson in detail.	5	4	3	2	1
5. Teachers give few practices.	5	4	3	2	1
6. Teachers give tough homework.	5	4	3	2	1
7. Teachers emphasize tests before test dates.	5	4	3	2	1
8. Teachers allow tutees to check cheat sheet during the tests.	5	4	3	2	1
9. Instructional hours for core examination are not enough.	5	4	3	2	1
10. Class is too large.	5	4	3	2	1
11. If I do not take private tutoring with her/him, I will never get good grade.	5	4	3	2	1
12. If I do not take private tutoring with her/him, I do not feel comfortable during lesson.	5	4	3	2	1

4. To what extent do you agree with the below statements about what you receive when **taking private tutoring** (*Choose ONE choice for each statement*)

Statements	Absolutely agree	Agree	Disagree	Absolutely disagree	No idea
1. Teaching is easy to understand.	5	4	3	2	1
2. Gain more techniques and skills for examinations.	5	4	3	2	1
3. Can practice previous years' examination tests.	5	4	3	2	1
4. Have more chances to ask questions.	5	4	3	2	1

5. Can have good relationship with our teachers.	5	4	3	2	1
6. Receive more care from teachers.	5	4	3	2	1
7. Improve my academic achievement.	5	4	3	2	1

5. The following statements are about **influence from others**. To what extent do you agree? (*Choose ONE choice for each statement*)

Statements	Absolutely agree	Agree	Disagree	Absolutely disagree	No idea
1. If many of my friends take private tutoring classes, so I do too.	5	4	3	2	1
2. My parent/relative chose tutoring classes for me.	5	4	3	2	1
3. My teachers recommended tutoring classes for me.	5	4	3	2	1
4. My principal recommended us to take tutoring classes.	5	4	3	2	1
5. I do not want to be different from others.	5	4	3	2	1

6. To what extent do you agree that private tutoring has **improved** your _____? (*Choose one choice for each statement*)

Statements	Absolutely agree	Agree	Disagree	Absolutely disagree	No idea
1. Examination grades	5	4	3	2	1
2. Relationship with schoolteachers	5	4	3	2	1
3. Confidence in examinations	5	4	3	2	1
4. Revision skills	5	4	3	2	1
5. Confidence in school performance	5	4	3	2	1
6. Learning strategies	5	4	3	2	1

SECTION III: Private tutoring engagement

7. Did you take private tutoring in schoolyear 2018-2019?

₁ Yes, I did

₂ No, I didn't (Skip to question 9)

8. Choose subject(s) and your tutor(s) (*Choose ALL that apply*)

Subjects	Own teacher	Teacher of other classes	Teacher at another school	Tutorial school/ center	Retiree	University student	Best teacher
Mathematics	1	2	3	4	5	6	7
Physics	1	2	3	4	5	6	7
Chemistry	1	2	3	4	5	6	7
Biology	1	2	3	4	5	6	7
Khmer	1	2	3	4	5	6	7
History	1	2	3	4	5	6	7
Geography	1	2	3	4	5	6	7
Earth environ	1	2	3	4	5	6	7
Moral civics	1	2	3	4	5	6	7
Language	1	2	3	4	5	6	7

9. Did you take private tutoring in academic year 2019-2020 (**before the school closure**)?

₁ Yes, I did

₂ No, I didn't (*Skip to question 12*)

10. if **YES**, please choose subject(s) and type(s) you took (*Choose ALL apply to you*)

Subjects	Online tutoring	Regular private tutoring	Special private tutoring	Private tutoring during school holiday	Private tutoring at private school	Same type but different tutor
Mathematics	1	2	3	4	5	6
Physics	1	2	3	4	5	6
Chemistry	1	2	3	4	5	6
Biology	1	2	3	4	5	6
Khmer	1	2	3	4	5	6

History	1	2	3	4	5	6
Geography	1	2	3	4	5	6
Earth environ	1	2	3	4	5	6
Moral civics	1	2	3	4	5	6
Language	1	2	3	4	5	6

11. Choose subject(s) and your tutor(s) *(Choose ALL that apply to you)*

Subjects	Own teacher	Teacher of other classes	Teacher at another school	Tutorial school/ center	Retiree	University student	Best teacher
Mathematics	1	2	3	4	5	6	7
Physics	1	2	3	4	5	6	7
Chemistry	1	2	3	4	5	6	7
Biology	1	2	3	4	5	6	7
Khmer	1	2	3	4	5	6	7
History	1	2	3	4	5	6	7
Geography	1	2	3	4	5	6	7
Earth environ	1	2	3	4	5	6	7
Moral civics	1	2	3	4	5	6	7
Language	1	2	3	4	5	6	7

12. Did you take private tutoring **during the school closure** (2019-2020)?

1 Yes, I did

2 No, I didn't

13. Are you taking private tutoring this academic year **(2020 - 2021)**?

1 Yes

2 No *(Skip to question 20)*

14. Choose subject(s) and your tutor(s) *(Choose ALL that apply)*

Subjects	Own teacher	Teacher of other classes	Teacher at another school	Tutorial school/ center	Retiree	University student	Best teacher
Mathematics	1	2	3	4	5	6	7
Physics	1	2	3	4	5	6	7

Chemistry	1	2	3	4	5	6	7
Biology	1	2	3	4	5	6	7
Khmer	1	2	3	4	5	6	7
History	1	2	3	4	5	6	7
Geography	1	2	3	4	5	6	7
Earth environ	1	2	3	4	5	6	7
Moral civics	1	2	3	4	5	6	7
Language	1	2	3	4	5	6	7

15. Choose all private tutoring types you are taking (*Choose ALL that apply to you*)

Subjects	Online tutoring	Regular private tutoring	Special private tutoring	Private tutoring during school holiday	Private tutoring at private school	Same type but different tutor
Mathematics	1	2	3	4	5	6
Physics	1	2	3	4	5	6
Chemistry	1	2	3	4	5	6
Biology	1	2	3	4	5	6
Khmer	1	2	3	4	5	6
History	1	2	3	4	5	6
Geography	1	2	3	4	5	6
Earth environ	1	2	3	4	5	6
Moral civics	1	2	3	4	5	6
Language	1	2	3	4	5	6

16. How do you know your tutor(s)? (*Choose ALL that apply to you*)

Subjects	My teacher	Former teachers	Friend recommended	Parent/relative recommended	Through ads (leaflet, social app)
Mathematics	1	2	3	4	5
Physics	1	2	3	4	5
Chemistry	1	2	3	4	5
Biology	1	2	3	4	5
Khmer	1	2	3	4	5

History	1	2	3	4	5
Geography	1	2	3	4	5
Earth environ	1	2	3	4	5
Moral civics	1	2	3	4	5
Language	1	2	3	4	5

17. How many hours are you taking private tutoring **per week** each subject? (*Choose ALL that apply to you*)

Subjects	>10hs	>7hs	7hs	6hs	5hs	4hs	3hs	2hs	1hs
Mathematics	1	2	3	4	5	6	7	8	9
Physics	1	2	3	4	5	6	7	8	9
Chemistry	1	2	3	4	5	6	7	8	9
Biology	1	2	3	4	5	6	7	8	9
Khmer	1	2	3	4	5	6	7	8	9
History	1	2	3	4	5	6	7	8	9
Geography	1	2	3	4	5	6	7	8	9
Earth environ	1	2	3	4	5	6	7	8	9
Moral civics	1	2	3	4	5	6	7	8	9
Language	1	2	3	4	5	6	7	8	9

18. Choose tutoring **fee per-month** in Khmer Riel for tutoring subjects that you are taking.

Subjects	20,000	25,000	30,000	35,000	40,000	>40,000
Mathematics	1	2	3	4	5	6
Physics	1	2	3	4	5	6
Chemistry	1	2	3	4	5	6
Biology	1	2	3	4	5	6
Khmer	1	2	3	4	5	6
History	1	2	3	4	5	6
Geography	1	2	3	4	5	6
Earth environ	1	2	3	4	5	6
Moral civics	1	2	3	4	5	6

Language	1	2	3	4	5	6
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***Reasons for NOT taking private tutoring**

19. The following statements are about **reasons you are NOT TAKING private tutoring this schoolyear (2020-2021)**. To what extent do you agree? (*Choose ONE choice for each statement*)

Statements	Absolutely agree	Agree	Disagree	Absolutely disagree	No idea
1. My family cannot afford it.	5	4	3	2	1
2. I am in social science track, so I do not need PT.	5	4	3	2	1
3. I can do well in all examination subjects on my own.	5	4	3	2	1
4. I need time to support my family's business.	5	4	3	2	1
5. I need time to help housework.	5	4	3	2	1
6. I need to earn for living.	5	4	3	2	1
7. My home is far from school.	5	4	3	2	1
8. I do not have own transportation.	5	4	3	2	1
9. Teaching is good enough at mainstream school.	5	4	3	2	1
10. Results of national examination is not important to me.	5	4	3	2	1
11. I do not really like my tutors.	5	4	3	2	1
12. I will not continue to university.	5	4	3	2	1

20. Did you take private tutoring when you were in **grade 9**?

₁ Yes

₂ No (*Skip to question 22*)

21. Choose subject(s) and your tutor(s) (*Choose ALL that apply*)

Subjects	Own teacher	Teacher of other classes	Teacher at	Tutorial school/ center	Retiree	University student	Best teacher
----------	-------------	--------------------------	------------	-------------------------	---------	--------------------	--------------

	another school						
Mathematics	1	2	3	4	5	6	7
Physics	1	2	3	4	5	6	7
Chemistry	1	2	3	4	5	6	7
Biology	1	2	3	4	5	6	7
Khmer	1	2	3	4	5	6	7
History	1	2	3	4	5	6	7
Geography	1	2	3	4	5	6	7
Earth environ	1	2	3	4	5	6	7
Moral civics	1	2	3	4	5	6	7
Language	1	2	3	4	5	6	7

22. Are you going to further your study at university?

₅ Yes, I am

₂ I will follow my parent's decision

₄ No, I am not

₁ I have no idea

₃ I am not sure yet

23. To what extent do you agree with the following statements **about schoolteachers' teaching at your public school?** (*Choose ONE choice for each statement*)

Statements	Absolutely agree	Agree	Disagree	Absolutely disagree	No idea
1. Teachers skip some contents.	5	4	3	2	1
2. Teachers do not have time for questions.	5	4	3	2	1
3. Teachers give more care to their own tutees.	5	4	3	2	1
4. Teachers often call non-tutees or tutees with other teachers to solve homework or exercises at the board.	5	4	3	2	1
5. Teachers give higher scores to their own tutees.	5	4	3	2	1
6. Teachers explain very briefly.	5	4	3	2	1

7. Teachers teach only theories with few practices.	5	4	3	2	1
8. Teachers teach lessons with care.	5	4	3	2	1
9. Teachers are friendly and approachable.	5	4	3	2	1
10. Teachers are fair to everyone.	5	4	3	2	1

SECTION IV: Contact Information

24. Are you willing to join the interview stage voluntarily?

₁ Yes, I will

₂ No, I will not (if **NO**, please submit)

25. Please choose your best means that you think we can contact you for interviewing

₁ Facebook messenger

₅ Skype

₂ Telegram

₆ Google meet

₃ Line

₇ Zoom

₄ Viber

26. Please write your account name or address of the selected choice above

Thank you so much for your time and honest responses.

Appendix 7c: Self-reported survey questionnaire for parents

Dear Respondents,

I am Soeung Sopha, a doctoral student at Hiroshima University, Japan. To fulfill the requirements of my doctoral program, I am conducting a study entitled *Factors Influencing Engagement of Private Tutoring at Cambodian Upper Secondary Schools*. This study aims to explore factors influencing the perceptions of demanding and supplying private tutoring in Cambodian upper secondary schools further to the examination reform.

I would declare that your identity will remain anonymous in any report of this study results. Additionally, your information is surely kept confidential in all circumstances. If there is any information is leaked, I will lawfully responsible.

Thank you so much for your kindness and cooperation. Should you contact us for any inquiry related to this study through soeungsopha@gmail.com or Telegram: (855)71-5555-798.

***Consent**

We would like to invite you to voluntarily participate in our survey. Your information is going to use for only academic purpose including writing dissertation, presenting in local and international conference, and writing research articles for publication. Your identity is used anonymously in study reports. If you voluntarily give us opportunity to use your information for the above purpose, please kindly choose the bottom ‘Agree’, or ‘Disagree’ in case you do not wish to offer.

Agree *(continue to the next section)* Disagree *(submit)*

Participant Code *[assigned by researcher]*: _____

SECTION I: Personal information

*** About MOTHER:**

1. Year you were born: _____

2. Your highest qualification:

1 Primary level

6 Doctoral

2 Lower secondary certificates

5 Master’s degree

3 Upper secondary certificates

7 Post-doctoral

4 Bachelor’s degree

3. When did you quit or complete general education level (Grade 1 – 12)? _____

4. Your occupation:

- 1 Housewife/Unemployed
- 2 Retiree
- 3 Simple income generator (e.g., motordub, taxi driver, hairdresser, seller...)
- 4 Overseas worker
- 5 Farmer (rent land)
- 6 Farmer (own land less than 1 hectare)
- 7 Farmer (own land bigger than 1 hectare)
- 8 Teacher
- 9 Government staff (**NOT** teacher)
- 10 Private company staff
- 11 Local organization staff
- 12 Non-government organization staff
- 13 Vendor (e.g., gold, construction materials, restaurant, hotel,...)
- 14 Others (please specify: _____)

*** About FATHER:**

5. Year you were born: _____

6. Your highest qualification:

- | | |
|--------------------------------|-------------------|
| 1 Primary level | 6 Doctoral |
| 2 Lower secondary certificates | 5 Master's degree |
| 3 Upper secondary certificates | 7 Post-doctoral |
| 4 Bachelor's degree | |

7. When did you quit or complete general education level (Grade 1 – 12)? _____

8. Your occupation:

- 1 Housewife/Unemployed
- 2 Retiree
- 3 Simple income generator (e.g., motordub, taxi driver, hairdresser, seller...)
- 4 Overseas worker
- 5 Farmer (rent land)
- 6 Farmer (own land less than 1 hectare)
- 7 Farmer (own land bigger than 1 hectare)
- 8 Teacher
- 9 Government staff (**NOT** teacher)

- 10 Private company staff
 11 Local organization staff
 12 Non-government organization staff
 13 Vendor (e.g., gold, construction materials, restaurant, hotel, ...)
 14 Others (please specify: _____)

***About both mother and father**

9. Did you take private tutoring during your schooling?

	Yes, I did	No, I did not
Mother	1	2
Father	1	2

SECTION II: About your home

10. How many children are now under your support? _____

11. Source of water for your daily use (*Choose only ONE*)

- | | |
|-----------------|----------------------------------|
| 1 Buy | 5 Well |
| 2 River/pond | 6 Hygiene water |
| 3 Rain | 7 Running water |
| 4 Pumping water | 8 Others (please specify: _____) |

12. Source of light for your daily use (*Choose only ONE*)

- | | |
|-----------|----------------------------------|
| 1 Candle | 4 Generator |
| 2 Lantern | 5 Electricity/solar panel |
| 3 Battery | 6 Others (please specify: _____) |

13. Number of bedrooms in your home (*Choose only ONE*)

- | | |
|-------------|-------------------------|
| 1 No room | 4 Three rooms |
| 2 One room | 5 More than three rooms |
| 3 Two rooms | |

14. Materials of your wall (*Choose ONLY one*)

- | | |
|----------------------------------|----------------------------------|
| 1 Used materials | 5 Wooden |
| 2 Bamboo/Thatch/palm tree leaves | 6 Cement brick |
| 3 Zine | 7 Others (please specify: _____) |
| 4 Asbestos | |

15. Materials of your roof (*Choose only ONE*)

- | | |
|------------------|------------|
| 1 Used materials | 5 Asbestos |
|------------------|------------|

- | | |
|---------------------------|----------------------------------|
| 2 Tent | 6 Roofing tiles |
| 3 Thatch/palm tree leaves | 7 Cement roof |
| 4 Zine | 8 Others (please specify: _____) |

16. Materials of your floor (*Choose ONLY one*)

- | | |
|--------------------|----------------------------------|
| 1 Nothing but soil | 5 Tile |
| 2 Bamboo | 6 Good plywood |
| 3 Simple plywood | 7 Others (please specify: _____) |
| 4 Cement floor | |

17. Type of toilet you have (*Choose only ONE*)

- | | |
|-----------------|----------------------------------|
| 1 No toilet | 5 Unflushed toilet |
| 2 Public toilet | 6 Flushed toilet |
| 3 Pit latrine | 7 Others (please specify: _____) |
| 4 Blair toilet | |

18. Something you use cook your daily meals (*Choose only ONE*)

- | | |
|------------------------|-------------------------------|
| 1 Wood sticks | 5 Cooking gas |
| 2 Coal | 6 Electricity |
| 3 Wood sticks and coal | 7 Cooking gas and electricity |
| 4 Petroleum | 8 Not cook |

19. Do you have house/rooms/land for rent?

- | | |
|-------|------|
| 2 Yes | 1 No |
|-------|------|

20. Do you have store/car for rent?

- | | |
|-------|------|
| 2 Yes | 1 No |
|-------|------|

21. Are you using the bank loan?

- | | |
|-------------|----------------|
| 1 Yes, I am | 2 No, I am not |
|-------------|----------------|

22. Are you using the informal loan?

- | | |
|-------------|----------------|
| 1 Yes, I am | 2 No, I am not |
|-------------|----------------|

SECTION III: About private tutoring

23. Are you going to send your child (the 12th grade one) to study at university?

- | | |
|---------------------|----------------------------------|
| 5 Yes, I am | 2 I will follow his/her decision |
| 4 No, I am not | 1 I have no idea |
| 3 I am not sure yet | |

24. Is your child, *who is in 12th grade*, taking private tutoring?

- | |
|-------|
| 1 Yes |
|-------|

2 No (*Skip to question 26*)

25. The following statements are about **reasons on investing private tutoring for her/him**. To what extent do you agree? (*Choose one choice for each statement*)

Statements	Absolutely agree	Agree	Disagree	Absolutely disagree	No idea
1. S/he cannot learn well in school, so I want her/him to learn entire school syllabus.	5	4	3	2	1
2. It is impossible for her/him to succeed in examination by not taking private tutoring.	5	4	3	2	1
3. I feel better that I can afford her/his private tutoring.	5	4	3	2	1
4. Everyone around her/him is taking private tutoring and I do not want her/him to fall behind others.	5	4	3	2	1
5. I do not think the learning quality at school is good enough.	5	4	3	2	1
6. I need additional support from private tutoring because I think coursebook is hard for her/him to understand on her/himself.	5	4	3	2	1
7. Instructional time for is not enough for schoolteachers to explain all contents in coursebook.	5	4	3	2	1
8. Private tutoring helps her/him better understand lessons.	5	4	3	2	1
9. Most of my friends send their children to private tutoring classes. I have to do so too.	5	4	3	2	1

26. The following sentences are about **reasons this student is NOT taking private tutoring**. To what extent do you agree with the following sentences? (*Choose one choice for each statement*)

Statements	Absolutely agree	Agree	Disagree	Absolutely disagree	No idea
1. We wish he could take private tutoring, but we cannot afford this.	5	4	3	2	1
2. Her/his learning track is social sciences.	5	4	3	2	1
3. She/he can learn all examination subjects well by themselves.	5	4	3	2	1
4. We need her/him to help our family business.	5	4	3	2	1
5. We need her/him to help housework.	5	4	3	2	1
6. We need her/him to help for family living.	5	4	3	2	1
7. We wish he could take private tutoring, but our home is far from school.	5	4	3	2	1
8. We cannot afford to buy her/him transportation means (i.e., motorbike), so she/he cannot go for private tutoring.	5	4	3	2	1
9. Teaching at mainstream school is good enough.	5	4	3	2	1
10. I don't think the results of national examination (Grade 12) is important to her/him.	5	4	3	2	1
11. She/he will not continue to university.	5	4	3	2	1

SECTION IV: Inviting for interviewing stage

27. We would like to invite you to voluntarily participate in our interviewing stage. Are you willing to join?

- 1 Yes, I am 2 No, I am not (If NO, please submit)

28. Please choose your best means that you think we can contact you for interviewing

- | | |
|----------------------|---------------|
| 1 Facebook messenger | 5 Skype |
| 2 Telegram | 6 Google meet |
| 3 Line | 7 Zoom |
| 4 Viber | |

29. Please write your account name or address of the selected choice above

Thank you so much for your time and honest responses.

Appendix 8a: Interview protocol for schoolteachers

- **Moderator**: Self-introduction, purpose of the study, and reasons that the informant was selected. Additionally, all points stated in the consent form for interview with the informant to re-confirm their voluntary participation.
- **Informant**: Self-introduction including occupation and track(s) as well as teaching grade(s), year of birth, year started teaching profession and teaching specialization, and groups of students (science/social science) you are teaching, brief education history.

I. As a teacher

1. Opening: Scale of private tutoring

I am really interested in the private tutoring received by students especially 12th graders.

- How many percent of 12th graders took and are taking private tutoring?
- What type of private tutoring is more popular?

2. Why students go for private tutoring?

- Do you why 12th graders invest in private tutoring?
- What can they receive from private tutoring that they may not get in school?
- How private tutoring improve students' learning? Can you explain me more with some examples if you can?

Who required private tutoring?

- What level of income families are most of them from, do you think?
- Are there differences between science and social science students?

3. Teaching attitude

- How do you think about students taking private tutoring of your subject?
- Does private tutoring change your way of teaching in school? More challenging or easier? How can it effect your teaching? Can you give some examples?
- How do students know that you are going to offer private tutoring? Including time and type?
- Can you tell me your teaching style that you frequently use during school hours?
What about in private tutoring class?

4. The impacts on students

- Does private tutoring work to increase students' achievement?
- Are students taking private tutoring still interested in classes during school hour?
- Have you observed any tensions in class during school hour because some of them are not taking private tutoring? Can you elaborate more on this?

- Are there any influences on relationship in school between students and students and teachers?
- Do you think private tutoring burden students' families?

5. Teachers as tutors

- Have you ever offered private tutoring to your students?
 - If so,
 - When did you offer private tutoring?
 - How did you feel about that experience?
 - If **NOT**,
 - Did your students ever make that request?
 - Did you ever think that you want to accept their request?
 - Do you remember why you did not accept their request?

6. At your school

- Has your school (vice-)principal ever encouraged teachers to offer private tutoring? If so, can you tell me why she/he does so? How did s/he encourage teachers?
- Has school (vice-)principal ever encouraged students to take private tutoring? If so, do you know why s/he encourage them? In what way/when did s/he encourage them?
- Do you think your school is different from or similar to other upper secondary school in term of private tutoring? Any examples?

7. Society

- Have you ever heard any reactions from community, parents or society in general?
- Do you think society should or should not encourage private tutoring? Why do you think so?
- Taking about the future, do you expect private tutoring to be regulated or changed its nature of service? If so, why?

II. As a student

8. Can you tell me about your private tutoring when you were a student?

- Did you take private tutoring when you were a student?
- Can you tell me when you first started to take private tutoring? On what subject?
- What happened at the time that made you feel you need to take private tutoring?
- Who suggested / recommended it? Can you give me some examples?

- What type(s) of private tutoring did you take – regular or special private tutoring, private school?
- Do you remember how it went?

9. Closing

- Do you have anything else about private tutoring that you think you can share more with me?

Thank you so much for your time participating in this study's interview process!

Appendix 8b: Interview protocol for students

1. Opening

- **Moderator**: Self-introduction, purpose of the study, and reasons that the informant was selected. Additionally, inform the informant all points stated in the consent form for interview with the informant to re-confirm their voluntary participation.
- **Informant**: Self-introduction including grade and class (e.g., G12A), learning track (science or social science), year of birth, and brief education history such as transfer from another school/province (if so, reasons for transferring).

Questions for interviewing students WITH private tutoring

2. Facts about private tutoring

1. I am really interested to understand more about private tutoring in Cambodia, particular of Grade 12 students at upper secondary school.

- When did you first started to take PT? On what subject and what type of private tutoring if you can remember?
- Whom did you take that/those private tutoring class(es) with?
- Why did you decide to take private tutoring at that time?
- Did you decide that by yourself, or did anyone recommend?
- Can you tell me how it was if you can remember?

2. Did you continue taking private tutoring since then?

- **If so...**
- Please tell me more about your experience in taking private tutoring, if you don't mind.
- When did you start to take more private tutoring [more subjects]?
- Why did you decide to invest in many private tutoring subjects at that time? Or How was your situation that you decided so?

3. How much do you pay for private tutoring?

- Why some tutoring classes charge more than other?
- Is this payment burdening your family's finance? why/why not?
- Did your parent(s) use to complain about the payment of your private tutoring?

4. Who are you taking private tutoring with? Of what subject(s)? Why are you taking that/those subject(s)?

- In case you are **NOT** taking private tutoring with your subject schoolteacher, ...

- Do you still get support from your own schoolteachers of same subject?
Does s/he know that you are taking private tutoring with another schoolteacher?
- Did you classmate know this too? Are there any changes in your relationship with them after they knew that?
- In case you are taking it with your own schoolteacher, ...
 - do you think you have more opportunities to approach them for help than others who are not taking private tutoring with her/him?
 - What do you get more from taking her/his tutoring classes that you did not get it from your class with her/him in school?

3. Learning

5. Is private tutoring useful to you? Does it help you learn better in class?

- Can you give me some specific examples?

6. What do you exactly learn at the private tutoring classes?

- Follow the school syllabus? If not, what does your private tutoring teachers teach you?
- Does s/he give you more homework/exercise to practice? How often?
 - If yes, does s/he check it in the next class?
- Do you feel better when taking private tutoring classes? More confident? In what ways? Why?

7. How does s/he teach in private tutoring classes different from during school?

- Can you tell me about her/his teaching during the school hours?
- Which her/his teaching styles do you prefer, at school or private tutoring classes? Why?

8. Can you tell me about your feeling during learning at school when you have learned same things at the private tutoring classes?

- Do you think you are still interested in class learning at school?
- Are you interested in private tutoring classes?
 - If YES, in what way? Please tell me more details
 - If **NO**, why are you taking it?
- Have you parent(s) ever blamed you when you are not doing well at school / when you are not taking private tutoring?
- Has you schoolteacher ever pressured you to take private tutoring with him/her?

9. What subjects are you taking private tutoring?

- This/these subject(s) are not required for the national examination of your track, why do you need to bother yourself with it/them?

4. Examinations

10. Is result of your Grade 12 important to you?

- Is your monthly rank important to you?
 - If YES, why are school-based assessment results so important?
 - If NO, why?

11. Due to the examination reform in 2014, school-based achievement is not added to your 12th grade national examination.

- Do you know this?
- Does it change the way you to choose your private tutoring class? If so, why or why not?

5. Educational aspiration and family situation

12. What do you want to do after your Grade 12 national examination?

- Are you going to university?
- What major do you want to take at university?
- Do you think your current private tutoring classes are preparing you for that plan?
 - If **NOT**, why are you taking them now?

13. Can you tell me about your parents?

- What are their jobs?
- Do they often talk with you about your school?
- Are there anyone in your family can give your academic support (homework)?

Questions for interviewing students WITHOUT private tutoring

6. Facts about private tutoring

1. I am really keen to learn more about private tutoring at upper secondary school. I know that you are not undertaking it this year. Have you experienced in taking private tutoring so far?

- If **YES**, can you tell me about that experiences? Subjects? With whom? At what grade(s)? why did you take those subjects or that private tutoring class?
- Why are you not taking it this year?

7. Learning

2. How do you feel about your learning at public school recently?
 - Do you have any tension at school when you are taking private tutoring?
 - Can you approach your schoolteachers for help if you cannot understand? What about your classmates?
3. Can you tell me about your schoolteachers' teaching style during school?
 - Do you think it is effective for you to prepare yourself for the coming examination? Why/why not?
 - Does your schoolteacher pressure you to take private tutoring? What about your parent(s), have they ever asked you to take private tutoring? Why/why not?

8. Examinations

4. Is result of your Grade 12 important to you?
 - Is your monthly rank important to you?
 - If YES, why are school-based assessment results so important?
 - If NO, why?
5. Due to the examination reform in 2014, school-based achievement is not added to your 12th grade national examination.
 - Do you know this?
 - Is it one of the causes you decided not to take private tutoring? Why?

9. Educational aspiration and family situation

6. What do you want to do after your Grade-12 national examination?
 - Are you going to university?
 - What major do you want to take at university?
7. Can you tell me about your parents?
 - What is their job?
 - Do they often talk with you about your school?
 - Are there anyone in your family can give your academic support (homework)?

10. Closing

- Are there anything else you would like to share with me about private tutoring?
- Do you have any comments or suggestions?

Thank you so much for your time participating in this study's interview process.

Appendix 8c: Interview protocol for parents

1. Opening

Moderator: Self-introduction, purpose of the study, and reasons that the informant was selected. Additionally, all points stated in the consent form for interview with the informant to re-confirm their voluntary participation.

Informant: Self-introduction including occupation, year of birth, and brief education history as well as place of origin (province and area)

2. Private tutoring Investment

*** For parents having a child WITH private tutoring**

1. I am curious to learn more about private tutoring in Cambodia, especially for Grade 12 students. I know that your son/daughter is now taking private tutoring of their academic subjects. Could you tell me why you decided to invest in your child's private tutoring for your?

- How do you feel when you afford her/his private tutoring?
- Do you think your child is able to succeed at school without taking private tutoring? In Grade 12 examination?
- How do you know about private tutoring? From your child, your friends or others?
- Do you discuss with others like your friends or neighbors before decided to invest in private tutoring for your child? If so, what did they say?
- What do you think about the learning quality at school? Can you give me some examples?
- Do you think your child can learn by herself/himself without support from private tutors? If so, why? / If not, why not? Can you give me an example?
- Are you very busy with work? What is your job or work?
- Do you think private tutoring is helpful for your child? If so, why? If not or partial, why do you invest in it?
- If you do not mind, can you tell me how much do you spend for your child's private tutoring in average per month?
- Is this payment burdensome to your family's living?

*** For parents having a child WITHOUT private tutoring**

1. I am curious to learn more about private tutoring in Cambodia, especially for Grade 12 students. I know that your son/daughter is **NOT** taking private tutoring of their academic subjects this year. Has s/he ever taken private tutoring so far?

- If **YES**, do you remember when, what subjects, with whom did s/he take? Why did you decided to invest in her/his private tutoring that time?
2. Could you tell me why you do not decide to invest on private tutoring for your child?
- Do you think your child is able to succeed at school without taking private tutoring? In Grade 12 examination?
 - What do you think about the learning quality at school? Can you give me some examples?
 - Do you think your child can learn by herself/himself without support from private tutors? If so, why? / If not, why not?
 - Do you have your own business? Do you need any support from your child? Like what?

*** For BOTH patents**

3. How much do you get engaged in your child's learning? Like what?

3. Educational aspiration for children

4. What do you want your child to be in the future?
- Are you going send them to university? If so, what major do you want s/he to take?
 - Do you know what learning track (science, social science) is your child following at school?
 - Do you know why did s/he follow that track? Did you talk with her/him when selecting that track?

4. Private tutoring experience

5. Have you experienced in taking private tutoring when you were a student?
- Did you (or your spouse) take private tutoring when s/he was a student?
 - When did you take? On what subject? Who did you take private tutoring with?
 - If you still remember, why did you take private tutoring at that time?
 - Were you asked/pressure to take by your schoolteachers?
 - Do you remember there are any differences between teaching and learning in school and private tutoring at that time?

*** Closing**

- Do you have anything else about private tutoring that you want to share more with me?

Thank you so much for your participation!

Appendix 8d: Interview protocol for (vice)school principals

➤ Opening

- Moderator: Self-introduction, purpose of the study, and reasons that the informant was selected. Additionally, all points stated in the consent form for interview with the informant to re-confirm their voluntary participation.
- Informant: Self-introduction including year of birth, year started her/his teaching profession, majoring subject, year in current position, and brief education history.

I. About your school

1. How many classes and students are there in your school by learning track?

Grade	Science track			Social science track			Total		
	Num. of classes	Num. of students	Female	Num. of classes	Num. of students	Female	Classes	Students	Female
12									

2. How many teachers are there?

- Total teaching staff (teachers): _____ (Female: _____)

II. About supplying private tutoring

I am really interested to understand more about private tutoring in Cambodia, particular of Grade 12 students at upper secondary school.

*As subject teacher

3. Did you supply private tutoring when you were a classroom teacher?

- If YES, ...
 - What grade(s) did you teach? What type(s) of private tutoring did you teach?
 - When in your career did you start teaching private tutoring?
 - What sorts of students did you serve?
 - How did they know you?
 - How did your students know that you were going to open the private tutoring classes? what private tutoring type and when?
 - What teaching styles did you frequently use during school hours, and during private tutoring hours?
 - Why did you decide to offer private tutoring at that time?
 - Who proposed for private tutoring at that time?

- How did you feel about that experience?
 - If **NO**,
 - Have students ever asked you to offer them private tutoring class?
 - Have you ever considered to accept their request?
 - Do you still remember why you declined their request at that time?
4. Can you tell me the scale of private tutoring?
- How many percent of 12th graders receive private tutoring?
 - What type of private tutoring is popular, *regular private tutoring, special private tutoring, private tutoring during school holiday, tutoring at private school, or online private tutoring?*

***As (vice)school principal**

5. Do you teach? If so, what subject? How many classes?

6. Do you supply private tutoring?

- If **YES**, ...
 - What type(s) of private tutoring do you teach?
 - What sort of students do you supply?

7. Reasons for private tutoring

- What do think why 12th graders consider take private tutoring?
- What extra do they get from the private tutoring they do not get from mainstream school?
- Are there differences between poor and well-off students?
- Are there differences between science and social science students?

8. Students and teachers' attitude

- Can private tutoring change the way your teachers' teaching at public school? Can you give some examples?
- How do your students know that their teachers will offer private tutoring classes?
- What teaching style do your teachers frequently use during school hours, and private tutoring hours?
- What do teachers feel about the instructional time for core examination subjects? What about you?
- Do students receive pressure from teachers?
- Have you received any complaints from students and/or parents related to private tutoring? Can you give me an example?

- If so, how did you do to respond to those complaints?

III. Private tutoring experience

9. Can you tell me about your private tutoring when you were a student?

- Did you take private tutoring when you were a student?
- Can you tell me when you first started to take private tutoring? On what subject?
- What happened at the time that made you feel you need to take private tutoring?
- Who suggested / recommended it? Can you give me some examples?
- What type(s) of private tutoring did you take – regular or special private tutoring, private school?
- Do you remember how it went?

➤ Closing

Do you have anything else about private tutoring that you think you can share more with me?

Thank you so much for your time facilitating and participating in this!

Appendix 8e: Interview protocol for (vice)director of POE and policy level

➤ **Opening**

- *Moderator*: Self-introduction, purpose of the study, and reasons that the informant was selected. Additionally, all points stated in the consent form for interview with the informant to re-confirm their voluntary participation.
- *Informant*: Self-introduction including year of birth, year started her/his teaching profession, year in current position, and brief education history.

1. Scale and nature

I am really interested to understand more about private tutoring in Cambodia, particular of Grade 12 students at upper secondary school.

1. Could you tell me about private tutoring situation in general at upper secondary schools in your province?
2. Do you have ever received any information/data about private tutors in each school?
 - If **YES**, how many percent of schoolteachers offer private tutoring?
 - If **NO**, do you think how many percent of schoolteachers offer private tutoring?

2. Private tutoring issues

3. Have you received any complaints from parents and/or students about the ways that schoolteachers oppressed students for private tutoring?
 - If **YES**, how many complaints in general?
 - What kind of complaints were about?
 - Can you share with how did you deal with those/that complaint in specific?
 - Have a schoolteacher/school principal ever been administratively punished due to private tutoring?
 - If so, why has s/he been punished? Are there any rule of law regarding the private tutoring?
4. When we are talking about private tutoring, schoolteachers and students as well as parents usually expressed their concern about the ‘shortage of instructional time to complete the syllabus’ at school, is it true?
 - If **NO**, why?
 - If **YES**, why can’t the 40-hour learning as stated in 2016 curriculum framework be used?

3. Perceptions of private tutoring

5. Throughout your experience in teaching profession and in this current position, should private tutoring be regulated?

- If **YES**, in what way?
- If **NO**, why?

➤ Closing

Do you have anything else about private tutoring that you think you can share more with me?

Thank you so much for your time facilitating and participating in this!

Appendix 9: Coefficient agreement of codings

Table 1: Coefficient agreement of schoolteacher-tutors

No.	Sample code	1 st coding				2 nd coding				Average Coefficient Agreement
		Total codes	Disagreement	Agreement	%	Total codes	Disagreement	Agreement	%	
1	TT01	17	0	17	100	20	3	17	85	92.50%
2	TT03	18	2	16	88.89	20	4	16	80	84.44%
3	TT04	9	1	8	88.89	10	2	8	80	84.44%
4	TT06	10	3	7	70	7	0	7	100	85%
5	TT08	11	2	9	81.82	10	1	9	90	85.91%
6	TT10	10	3	7	70	8	1	7	87.50	78.75%
7	TT11	9	0	9	100	13	4	9	69.23	84.62%
8	TT13	12	0	12	100	15	3	12	80	90%
9	TT14	11	2	9	81.82	9	0	9	100	90.91%
10	TT16	13	3	10	76.92	11	1	10	90.91	83.92%
11	TT18	10	1	9	90	10	1	9	90	90%
12	TT19	8	0	8	100	8	0	8	100	100%
13	TT21	9	0	9	100	10	1	9	90	95%
14	TT22	7	0	7	100	9	2	7	77.78	88.89%
15	TT23	7	2	5	71.43	5	0	5	100	85.71%
16	TT26	9	1	8	88.89	11	3	8	72.73	80.81%
17	TT28	5	0	5	100	6	1	5	83.33	91.67%
18	TT30	10	3	7	70	8	1	7	87.50	78.75%
19	TT31	7	0	7	100	8	1	7	87.50	93.75%
20	TT33	6	0	6	100	8	2	6	75	87.50%
21	TT34	5	1	4	80	5	1	4	80	80%
22	TT35	7	2	5	71.43	6	1	5	83	77.38%
<i>Percentage points of coefficient agreement =</i>										86.82%

Table 2: Coefficient agreement of schoolteacher as non-tutors

No.	Sample code	1 st coding				2 nd coding				Average Coefficient Agreement
		Total codes	Disagreement	Agreement	%	Total codes	Disagreement	Agreement	%	
1	NT02	4	0	4	100	5	1	4	80	90%
2	NT05	4	0	4	100	4	0	4	100	100%
3	NT07	3	0	3	100	3	0	3	100	100%
4	NT09	5	1	4	80	4	0	4	100	90%
5	NT12	5	1	4	80	5	1	4	80	80%
6	NT15	5	1	4	80	4	0	4	100	90%
7	NT17	4	0	4	100	4	0	4	100	100%
8	NT20	6	2	4	66.67	4	0	4	100	83.33%
9	NT24	3	0	3	100	3	0	3	100	100%
10	NT25	4	0	4	100	4	0	4	100	100%
11	NT27	5	1	4	80	4	0	4	100	90%
12	NT29	5	0	5	100	7	2	5	71.43	85.71%
13	NT32	4	1	3	75	4	1	3	75	75%
14	NT36	4	0	4	100	5	1	4	80	90%
15	NT37	5	0	5	100	6	1	5	83.33	91.67%
<i>Percentage points of coefficient agreement =</i>										91.05%

Table 3: Coefficient agreement of school principals

No.	Sample code	1 st coding				2 nd coding				Average Coefficient Agreement
		Total codes	Disagreement	Agreement	%	Total codes	Disagreement	Agreement	%	
1	SP01	4	2	2	50	3	1	2	66.67	58.33%
2	SP02	3	0	3	100	3	0	3	100	100%
3	SP03	4	1	3	75	5	2	3	60	67.50%
4	SP04	7	2	5	71.43	7	2	5	71.43	71.43%
5	SP05	5	0	5	100	5	0	5	100	100%
6	SP06	3	1	2	66.67	3	1	2	66.67	67%
7	SP07	7	2	5	71.43	5	0	5	100	85.71%
8	SP08	8	3	5	62.50	7	2	5	71.43	66.96%
<i>Percentage points of coefficient agreement =</i>										77.08%

Table 4: Coefficient agreement of POE (vice-)Directors

No.	Sample code	1 st coding				2 nd coding				Average Coefficient Agreement
		Total codes	Disagreement	Agreement	%	Total codes	Disagreement	Agreement	%	
1	POE01	4	0	4	100	5	1	4	80	90%
2	POE02	4	1	3	75	4	1	3	75	75%
3	POE03	4	0	4	100	4	1	4	80	90%
<i>Percentage points of coefficient agreement =</i>										85%

Table 5: Coefficient agreement of staff at policy level

No.	Sample code	1 st coding				2 nd coding				Average Coefficient Agreement
		Total codes	Disagreement	Agreement	%	Total codes	Disagreement	Agreement	%	
1	Policy01	4	0	4	100	5	1	4	80	90%
<i>Percentage points of coefficient agreement =</i>										90%

Table 6: Coefficient agreement of tutees

No.	Sample code	1 st coding				2 nd coding				Average Coefficient Agreement
		Total codes	Disagreement	Agreement	%	Total codes	Disagreement	Agreement	%	
1	TS01	9	0	9	100	12	3	9	75	87.50%
2	TS02	9	1	8	88.89	9	1	8	88.89	88.89%
3	TS03	9	1	8	88.89	10	2	8	80	84.44%
4	TS05	11	1	10	90.91	10	0	10	100	95.45%
5	TS07	9	1	8	88.89	11	3	8	72.73	80.81%
6	TS09	9	0	9	100	9	0	9	100	100%
7	TS11	7	0	7	100	7	0	7	100	100%
8	TS12	10	1	9	90	9	0	9	100	95%
9	TS14	10	2	8	80	8	0	8	100	90%
10	TS15	9	0	9	100	11	2	9	81.82	90.91%
11	TS17	11	1	10	90.91	10	0	10	100	95.45%
12	TS20	9	1	8	88.89	10	2	8	80	84.44%
<i>Percentage points of coefficient agreement =</i>										91.08%

Table 7: Coefficient agreement of non-tutees										
No.	Sample code	1st coding				2nd coding				Average Coefficient Agreement
		Total codes	Disagreement	Agreement	%	Total codes	Disagreement	Agreement	%	
1	NTS04	5	1	4	80	4	0	4	100	90%
2	NTS06	5	0	5	100	5	0	5	100	100%
3	NTS08	6	2	4	66.67	5	1	4	80	73.33%
4	NTS10	5	1	4	80	6	2	4	66.67	73.33%
5	NTS13	3	0	3	100	3	0	3	100	100%
6	NTS16	5	1	4	80	4	0	4	100	90%
7	NTS18	5	2	3	60	4	1	3	75	67.50%
8	NTS19	4	0	4	100	4	0	4	100	100%
9	NTS21	5	1	4	80	6	2	4	66.67	73.33%
<i>Percentage points of coefficient agreement =</i>										85.28%

Table 8: Coefficient agreement of parents of tutees										
No.	Sample code	1st coding				2nd coding				Average Coefficient Agreement
		Total codes	Disagreement	Agreement	%	Total codes	Disagreement	Agreement	%	
1	PTS01	9	1	8	88.89	8	0	8	100	94.44%
2	PTS02	7	1	6	85.71	7	1	6	85.71	85.71%
3	PTS03	5	0	5	100	5	0	5	100	100%
4	PTS05	6	1	5	83.33	7	2	5	71.43	77.38%
5	PTS07	9	0	9	100	11	2	9	81.82	90.91%
6	PTS09	8	1	7	87.50	9	2	7	77.78	82.64%
7	PTS11	13	3	10	76.92	11	1	10	90.91	83.92%
8	PTS12	9	0	9	100	9	0	9	100	100%
9	PTS15	9	1	8	88.89	9	1	8	88.89	88.89%
10	PTS17	5	0	5	100	5	0	5	100	100%
11	PTS18	11	2	9	81.82	10	1	9	90	85.91%
<i>Percentage points of coefficient agreement =</i>										89.98%

Table 9: Coefficient agreement of parents of non-tutees										
No.	Sample code	1st coding				2nd coding				Average Coefficient Agreement
		Total codes	Disagreement	Agreement	%	Total codes	Disagreement	Agreement	%	
1	PNT04	3	0	3	100	3	0	3	100	100%
2	PNT06	4	1	3	75	3	0	3	100	87.50%
3	PNT08	4	1	3	75	4	1	3	75	75%
4	PNT10	5	1	4	80	4	0	4	100	90%
5	PNT13	4	1	3	75	5	2	3	60	67.50%
6	PNT16	4	0	4	100	4	0	4	100	100%
7	PNT19	3	0	3	100	3	0	3	100	100%
8	PNT21	4	0	4	100	5	1	4	80	90%
<i>Percentage points of coefficient agreement =</i>										88.75%