GUIDELINES FOR STAKEHOLDERS' ACCOUNTABILITY IN CAMBODIAN STUDENTS' READING LITERACY: MSEM WITH DYADIC DATA

Mr. Nil Damnang

A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Education in Educational Research Methodology
Department of Educational Research and Psychology
FACULTY OF EDUCATION
Chulalongkorn University
Academic Year 2019

แนวทางสำหรับผู้มีส่วนได้ส่วนเสียในการรับผิดชอบการเรียนรู้ด้านการอ่านของนักเรียนกัมพูชา: การวิเคราะห์เอ็มเอสอีเอ็มด้วยข้อมูลแบบกลุ่มสัมพันธ์

นายนิพ ตำณาง

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาครุศาสตรมหาบัณฑิต
สาขาวิชาวิธีวิทยาการวิจัยการศึกษา ภาควิชาวิจัยและจิตวิทยาการศึกษา
คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ปีการศึกษา 2562

Thesis Title	GUIDELINES FOR STAKEHOLDERS' ACCOUNTABILITY IN CAMBODIAN STUDENTS' READING LITERACY: MSEM WITH DYADIC DATA
By	Mr. Nil Damnang
Field of Study	Educational Research Methodology
Thesis Advisor	CHAYUT PIROMSOMBAT, Ph.D.

Accepted by the FACULTY OF EDUCATION, Chulalongkorn University in Partial Fulfillment of the Requirement for the Master of Education

..... Dean of the FACULTY OF EDUCATION
(Associate Professor SIRIDEJ SUJIVA, Ph.D.)

THESIS COMMITTEE

..... Chairman
(Emeritus Professor Nonglak Wiratchai, Ph.D.)
..... Thesis Advisor
(CHAYUT PIROMSOMBAT, Ph.D.)
..... Examiner
(Professor SUWIMON WONGWANICH, Ph.D.)
..... External Examiner
(Emeritus Professor Nonglak Wiratchai, Ph.D.)

นิพ ตำณาง : แนวทางสำหรับผู้มีส่วนได้ส่วนเสียในการรับผิดชอบการเรียนรู้ด้านการอ่านของนักเรียนกัมพูชา: การวิเคราะห์เอ็มเอสอีเอ็มด้วยข้อมูลแบบกลุ่มสัมพันธ์. (GUIDELINES FOR STAKEHOLDERS' ACCOUNTABILITY IN CAMBODIAN STUDENTS' READING LITERACY: MSEM WITH DYADIC DATA) อ.ที่ปรึกษาหลัก : อ. ดร.ชยุตม์ ภิรมย์สมบัติ

การวิจัยในครั้งนี้มีวัตถุประสงค์หลักเพื่อเสนอแนวทางในการรับผิดชอบของผู้มีส่วนได้ส่วนเสียในการอ่านของนักเรียนกัมพูชา เครื่องมือวิจัยในครั้งนี้มี 2 ฉบับ ได้แก่ แบบสอบถามเกี่ยวกับการรับผิดชอบการเรียนรู้ด้านการอ่านของนักเรียนชนิดมาตรประเมินแบบค่าลิเคิร์ท 5 ระดับ และแบบวัดความสามารถในการอ่านสำหรับนักเรียน ตัวอย่างวิจัยประกอบด้วย ผู้บริหารโรงเรียนประถมศึกษา จำนวน 29 คน ครูผู้สอน จำนวน 41 คน พ่อแม่หรือผู้ปกครอง จำนวน 427 คน และนักเรียนระดับประถมศึกษาชั้นปีที่ 5 และชั้นปีที่ 6 จำนวน 427 คน เครื่องมือวิจัยทั้งหมดได้รับการแปลสองครั้งจากภาษาอังกฤษเป็นภาษาเขมร และนำไปทดลองกับตัวอย่างวิจัยจำนวน 212 คน พบว่าคุณภาพเครื่องมือมีความเหมาะสมด้านความตรงโครงสร้างจากการวิเคราะห์องค์ประกอบเชิงยืนยัน และมีค่าความเที่ยงสัมประสิทธิ์แอลฟาของครอนบาคตั้งแต่ .532 ถึง .850

ผลการวิจัยพบว่า ตัวแปรความรับผิดชอบของผู้มีส่วนได้ส่วนเสียจำนวนวน 24 ตัวแปร มีเพียง 9 ตัวแปรที่ส่งผลต่อการอ่านของนักเรียน อย่างไรก็ตามตัวแปรความรับผิดชอบของผู้มีส่วนได้ส่วนเสียทั้งสี่กลุ่มมีความสัมพันธ์ซึ่งกันและกัน ทั้งนี้ ผลการวิเคราะห์อิทธิพลเชิงสาเหตุของความสามารถในการอ่านของนักเรียนด้วยการวิเคราะห์เอสอีเอ็ม ชี้ให้เห็นว่าความรับผิดชอบของผู้บริหารโรงเรียนมีความสัมพันธ์ทางบวกกับความรับผิดชอบของครู แต่มีความสัมพันธ์ทางลบกับความรับผิดชอบของผู้ปกครอง ความรับผิดชอบของครูมีอิทธิพลทางลบต่อความรับผิดชอบของนักเรียน แต่มีอิทธิพลทางบวกต่อความสามารถในการอ่านทั้งทางตรงและทางอ้อมของนักเรียน ความรับผิดชอบของผู้ปกครองมีอิทธิพลทางตรงต่อความรับผิดชอบของนักเรียน ในขณะเดียวกัน ความรับผิดชอบของผู้ปกครองและความรับผิดชอบของครูมีความสัมพันธ์แต่ไม่มีนัยสำคัญทางสถิติ นอกจากนี้ ความรับผิดชอบของนักเรียนมีอิทธิพลทางตรงต่อความสามารถในการอ่านของนักเรียน

เพื่อพัฒนาและส่งเสริมความสามารถในการอ่านของนักเรียน ผู้มีส่วนได้ส่วนเสียควรใส่ใจต่อความสัมพันธ์กับนักเรียนให้มากขึ้น การวิจัยในอนาคตผู้ที่สนใจควรประยุกต์ใช้แบบทดสอบการอ่านแบบ PISA เพื่อการพัฒนาและควรเพิ่มแนวทางที่นำเสนอแนวทางการรับผิดชอบนักเรียนในระดับที่สูงขึ้น

สาขาวิชา วิธีวิทยาการวิจัยการศึกษา ลายมือชื่อนิสิต

.....

ปีการศึกษา 2562 ลายมือชื่อ อ.ที่ปรึกษาหลัก

.....

6183344327 : MAJOR EDUCATIONAL RESEARCH METHODOLOGY
KEYWORD: ACCOUNTABILITY, READING LITERACY, MSEM, DYADIC DATA
Nil Damnang : GUIDELINES FOR STAKEHOLDERS' ACCOUNTABILITY IN CAMBODIAN STUDENTS' READING LITERACY: MSEM WITH DYADIC DATA. Advisor: CHAYUT PIROMSOMBAT, Ph.D.

The main purpose of this study was to propose the guidelines for stakeholders' accountability in Cambodian students' reading literacy.

By using, two research instruments — face-to-face questionnaire with 5 liker-scale and reading task which accounted by students only— the total of 29 primary school principals, 41 school teachers, 427 parents/caregivers and 427 students who were studying at grade 5 and 6 were the sample size. After double translation from English to Khmer language, these instruments were used to pilot with 212 and indicated the extraction of communalities ranked from .257 to .936 and the Cronbach's alpha reliability coefficients estimated from .532 to .850.

The result show that among 24 stakeholders' accountabilities, only 9 variables significantly effected on the students' reading literacy; however, all four stakeholders have interaction relationship with each other. Also, SEM revealed that school principals' accountability was found to positively associate with teacher' accountability but negatively with parents' accountability. Teacher' accountability negatively affected students' accountability but positively on students' reading literacy both directly and indirectly. Parents' accountability directly affected on students' accountability which means that students whose parents value and show great accountability will tend to has a high level of accountability as well. Also, parents' accountability and teacher' accountability were found to have insignificant association with each other. Moreover, students' accountability directly affected on students' reading literacy, which indicated that the more level of accountability students have, the more they gain their reading literacy

To improve and strengthen students' reading literacy, all stakeholders need to take more actions on their relationship with children. The future researcher should adopt reading test from PISA for Development and the proposed guide should be added up higher level.

Field of Study:	Educational Research Methodology	Student's Signature .....
Academic Year:	2019	Advisor's Signature .....

ACKNOWLEDGEMENTS

First of all, I would like to express my deepest gratitude to HRH Princess Maha Chakri Sirindhorn for the immeasurable amount of the Royal Project Contribution in Education to the Kingdom of Cambodia.

I am grateful to the royal steering committee and Chulalongkorn University committee for their sponsorship through my stay on schooling.

I am greatly indebted to Professor Dr. Chayut Piromsombat, my dissertation advisor for his guidance, support and encouragement. He does not only inspire me to write this dissertation, spend his great amount of time reading my draft and providing feedback, but also provide me his personal budget to support for my data collection also. I learnt great deal from him both academic and professional through his enlightened teaching and mentoring.

I would like to show my appreciation to the chairperson and external committee, Professor Nonglak Wiratchai, Ph.D. and examiner, Professor Suwimon Wongwanich, Ph.D. for their constant supports, encouragement, feedback, and value time to read this dissertation carefully with insightful comments.

I also would like to express my deep thank to all of my friends who kindly support me during the process of this thesis, especially to Mr. Kasidis Kruthangka, who spends his effort and time even he is busy with his work.

I would like to thank for Ratanakmondol DoE director, school directors, teachers, students and their parents in Cambodia who had approved and spent their value time in providing accurate data.

Last of all, I thank to the staff in the Office of Academic Affairs at the Faculty of Education, the Office of International Affair, and other who have been involved with my study.

Nil Damnang

TABLE OF CONTENTS

Page

LIST OF TABLES

PAGE

LIST OF FIGURES

PAGE

CHAPTER I: INTRODUCTION

1.1-Background of the Study

Cambodian Education Law stated that "the state shall promote the quality of education to satisfy the basic education and professional needs for the careers of the learners to better improve their capacity and to enable the learners to efficiently participate in the development of the country" (MoEYS, 2007a). To respond with this, Royal Government of Cambodia (RGC) had reformed educational system to 12 years for general study—Primary school 6 years, lower secondary school 3 years and upper secondary school 3 years—improved the study curriculum and text books, used child-centered methodology for teaching and learning, applied school cluster policy, expended priority action program (PAP) and adopted child friendly school policy (CFS) (MoEYS, 2007b; Partnership, 2017).

Many years later, in order to provide the opportunity for girls and ethnic minorities in the rural area of country as well as all the children to access educational public service, RGC had provided free universal primary education through increasing rapidly the PAP which then was changed to Program-based Budge (PB) or budgeting in 2007 by Ministry of Economics and Finance from 10.8% in 2015 to 12.3% in 2017 for both national and provincial level (Children, 2017; Naron, 2017; Partnership, 2017).

In addition, Child Friendly School (CFS) had been adapted and piloted its actions through supporting from international and national Non-Government Organization (NGO)—United Nations Children's Fund (UNICEF), Save the Children Norway (SCN) and Kampuchean Action for Primary Education (KAPE) — by Ministry of Education Youth and Sports and Cambodia was among the other earliest

countries in the East Asia and Pacific region who implemented this framework with the general concept of assisting the achievement of children's basic right, mobilizing resource from various sectors for school development, strengthening cooperation between school and community people, and improving learning environment (MoEYS, 2007b; MoEYS & UNICEF, 2016).

Moreover, to implement the CFS policy at school level with efficiency, education authority, administration officer, pedagogy advisor, permanent education inspector, and community development agency are the role and responsibility of school directors while teachers are the key people to administer direct teaching service, manage classroom and provide counselling to all students for achieving their learning outcomes (MoEYS, 2002). Along with, parents or care givers do not only participate in one or more school associated activities, such as parent-teacher meetings, volunteering at school, support their children's accessibility to education, pertained information about their children's learning progress from teacher and helped children with their daily schooling work—homework, reading, writing and other literacy skills—but also take a role in communicating with their children with the aim of having a healthy relationship with them, so that the process of encouraging, mentoring, leading and inspiring may be genuine (Loeurt, 2016; Ntekane, 2018; Steven, 2007; Yun & Kusum, 2008).

Through reforming this system, the learning outcome of student had significantly increased while the total enrollment rate of female for the whole country was 49.3 % (rural area 49.3% female) and completion rate of primary school was absolutely 79.87%, lower secondary school at 42.57%, and 20.16% for upper secondary education (MoEYS, 2017).

Despite significant success in almost achieving the Education Strategy Plan 2014-2018 goals in terms of the priority of equitable access for high quality basic education services, various challenges still need to have priority consideration.

Firstly, proficiency in reading—"only 8% of student who aged under 15 years old achieved the minimum level (Level 2)" while Level 1 b characterized as the ability to comprehend just the least demanding content understanding assignments and just 41% of students in Cambodia are best capable at this level than other level. Meanwhile, about 35% of students can arrive at Level 1a in reading which alludes to students have the option to recover at least one independent pieces of data that are expressed, recognize the fundamental subject or the creator's expectation in a content about a well-known point or make a straightforward association by considering the connection between data in the content and regular ordinary information (MoEYS, 2018). In addition, repetition rate are still a concern for public and private educational sectors to take action immediately in comparing with neighborhood countries such as Vietnam (7%), Thailand (6%), Indonesia (16%) and ASEAN (13%) while Cambodia was at 19% due to student experienced equivalent one in primary, lower or upper secondary level (MoEYS, 2018). According to education statistics and indicators report showed that at rural area repetition rate was 3.1% and dropout rate was 17.5% while the whole country was 3.2% of repetition and 17.3 % of dropout rate for primary education (MoEYS, 2017).

Secondly, CFS policy stated that effective relationship and two-way participation between schools and community were a mechanism for resource mobilization and active management; however, based on case study which conducted by Jeffery and Bunly (2017) indicted that around 1500 parents who had participated in school grants and school performance in rural Cambodia study, there were only six percent provided the

information that they acknowledged of school grant program, while its planning and management process were influenced by school directors due to fairly input from school support committee. In addition, school and students' parents had fairly cooperation together to deal with the problem of drop out while 70 % of parents reported that they did not get any regular information about their children's study and 60% of them notified that school did not manage any action to confer with them about school reintegration for their children after they dropped out (Heng, Sok, & No, 2016) and Chuon Naron had recommended that to build up short rout of accountability in school management, community participation is inspired (Naron, 2017).

Even though various studies which concerned about education sector in Cambodia did not directly mention about parents' and students' accountability for learning outcome, but the role and responsibility of school support committee who are the community representative and have legal power to monitor school budget expend and provide recommendation precisely with school management team for the benefit of student (MoEYS, 2012b). The studied result indicted that the frequency actions that they attend were fund raising and school infrastructure repairing, while school development planning, prioritize concerning, school resource monitoring and managing, school enrollment enforcement, and monitoring of students' learning which were the main functions did fulfill implement(Cambodia, 2017; Fata & Kreng, 2015; Partnership, 2017).

Thirdly, the lack of annual operation planning and budgeting, policy implementation and strengthening, and capable technical officers in statistics, monitoring and evaluation at sub national especially school level limited the annual plan implementation of MoEYS with only 23.6% completed, 61.8% on going and 14.5% not yet take any action in academic year of 2015-2016 (MoEYS, 2017). In

addition, education management strategy should be taken more action especially on its implementation at school level in order to bring the reform programs and send a clear and consistent message to all stakeholders of this (Naron, 2017). At present, public education expenditure in Cambodia is 18.3% of total general disbursement and this equates to 2.7% of the nation's gross domestic product (GDP) (MoEYS, 2018).

Fourthly, state school teachers had conducted private supplementary tutoring—known as “shadow education” — in order to get additional income for supporting their livelihood due to low salaries, insufficient time to cover the curriculum, paying facilitation fees to their schools in order to receive their salary, and societal and cultural factors (Bray, 1999; Christopher, 2018; Walter, 2011) which caused students of lack of interest in school, increase absenteeism, create culture of dependency and evocative state of their lives (Christopher, 2018).

Fifth, the current model of capacity development for teachers is not made necessary for their capacity improvement (King, 2017), while teachers deployment to rural area is still challenge due to various reasons included teaching and learning materials, working office arrangement, school management and leadership, relationship between teachers and students’ parents or school support committees, accessibility of sport space, appropriate temporary staying room during working, security and safety in community, and other infrastructures—electricity, internet access, road condition, cleaning water, toilet—(Cham & Khim, 2020))

To respond with these challenges, related stakeholders in education sector—school principals, school teachers, students’ parents or caregivers and students themselves—should strengthen their role and responsibility to account for learning outcome of children. School should operate its system according to a set of principle,

and educators were accountable for adherence to standards of teaching (Anderson & Anne, 2005). Moreover, information was the key to promote accountability at school level such as building connection between school and community, school performance monitoring and increasing, mobilizing additional resources, effective use of school input, and education service delivery strengthening (Naron, 2017).

1.2 Research Questions

Research question is the navigator for achieving study objectives, without it, the process of investigation will be just a formula for gathering masses of information without a reasonable sense (Bray, 1999; Brayman, 2004). Therefore, to build connection between established theory and this study, three research questions below are proposed.

1. What is the level of stakeholders' accountability for students' reading literacy?

2. How are the relationships among stakeholders' accountability for students' reading literacy?

3. How are the guidelines for stakeholders' accountability for students' reading literacy?

1.3 Research Objectives

Creswell (2004) indicated that research objectives are the particular statement that researchers will accomplish in their examination. In order to summarize of what being achieved by this study, below three research objectives are come up with.

1. To measure the current practice level of stakeholders' accountability for students' reading literacy

2. To find out the relationship among stakeholders' accountability for students' reading literacy

3. To seek the guidelines for stakeholders' accountability for students' reading literacy

1.4 Definition of Terms

The key terms used in this study are specifically defined and contextualized only as follow:

1. Stakeholder is any person who takes account in educational system to product students' reading literacy especially in this study refers to primary school teachers and principals, parents and students who are currently studying at grade 5 and 6 in academic year of 2019-2020.

2. Teachers' accountability defines as leading teaching and learning activities, providing construction feedback to children and collaborating with all related stakeholders in order to provide students with a good learning result.

3. School Principals' accountability refers to monitoring teacher's and students' learning action, managing learning resource, and building relationship with all stakeholders which aimed for students to achieve academic outcome; and for teachers to receive job satisfaction.

4. Parents' accountability details as monitoring children's learning — participation in school improvement plan, implementing and monitoring school activities; collecting and enrolling children in school; generating revenue and mobilizing funds— mentoring children, and supporting children's moral.

5. Students' accountability determined as self-regulated which includes preparing themselves before school time, study at home and doing homework; and learning engagement.

6. Learning outcome illustrated as students' ability in reading at minimum level according to their study grade and age mainly capacity to understand, use, reflect on and engage with written text.

1.5 Research Framework

In this study, the researcher has explored the concepts and theories related to accountability of stakeholders such as primary school teachers and principals, parents and their children, and reading literacy as the main idea, and after that the following steps have been adopted to define the conceptual framework for this research. Firstly, researcher has studied the documentary and other related concepts. Secondly, researcher develops a draft conceptual framework according to document review. Thirdly, researcher brings draft conceptual framework to seek commend and advice from advisor. Fourthly, researcher presents first chapter of research proposal which includes this draft conceptual to lectures at Department of Educational Research in order to seek more additional feedback. Finally, researcher revises and defines the final conceptual framework for this study.

1.6 Scope of the study

This research study will be conducted at primary school level undertaken the supervision of Provincial Department of Education Youth and Sport, Battambang province, Kingdom of Cambodia and target villages which depend on those schools. According to National Institute of Statistics, the number of village in Battambang province was 799 while primary schools were 613, therefore, almost one primary school per village (MoEYS, 2018 -b; Statistics, 2008).

Then the proposed accountabilities for primary school principals' accountabilities will be limited as monitoring teacher's and students' learning action, managing learning resource, and building relationship with all stakeholders which aimed for students to achieve academic outcome; and for teachers to receive job satisfaction. In the meantime, primary school teachers are leading teaching and learning activities, providing construction feedback to children and collaborating with all related stakeholders in order to provide students with a good learning outcome.

In addition, parents' accountability scoped as monitoring children's learning — participation in school improvement plan, implementing and monitoring school activities; collecting and enrolling children in school; generating revenue and mobilizing funds— mentoring children, and supporting children's moral; while students' accountability will be focused on self-regulated which includes preparing themselves before school time, study at home and doing homework; learning engagement and supporting family work. In addition, learning outcome will be searched for the capacity of student in understanding, using, reflecting on and engaging with written text.

CHAPTER II: LITERATURE REVIEW

2.1 Introduction

Education in Cambodia is managed by Ministry of Education Youth and Sport (MoEYS) and segregated as three levels for general education which included primary level, secondary level and upper secondary level since 1979 until present time (MoEYS, 2007b). In 1996, to promote the quality of education, MoEYS had adjusted this system from eleven to twelve years such as 6 years for primary level, and 3 years for lower and upper secondary each (MoEYS, 2007a).

In order to manage system above with effectiveness and efficiency for the learning outcome of children, Royal Government of Cambodia had established the hierarchy of administration and management as four level which included national or central level, provincial or municipal level, district or Khan level and the educational institution level (MoEYS, 2007a). Ministry of Education Youth and Sport (MoEYS) is at national or central level, while Provincial Office of Education (PoE) is at provincial or municipal level to provide technical and operational support for District Office of Education (DoE) which is at district or Khan level; in addition, institution or school level is under direct supervising of DoE.

At institution or school level, to monitor daily operation which includes managing resource, decision-making on school development plan, problem-solving, relationship building and cooperation with other stakeholders, teaching technical support, school activities monitoring, and making report, each school need to have one school principal, one vice principal, one secretary and school support committee (SSC).

Based on the guidelines in 2012, school support committee is “a committee representing communities in coordinating and developing a school” and all members are expected to take part in core activities such as formulating or implementing and monitoring the school’s plan, collecting and enrolling children, monitoring students’ learning, generating revenue and mobilizing fund, involving in constructing, repairing and maintaining school, sharing of experiences and life skills, preventing irregularities from happening inside and outside the school, strengthening and expanding capacity and awareness on school development (MoEYS, 2012a).

In contrast to, NGO Education Partnership who conducted their study on school accountability reported that school support committee seem to be unaware of their role and responsibilities well due to their capacity, lack of training from school director, process of selection, less powerful people, and some members did not know how to read and write. One of SSC member said that “the work of school support committee is to follow the order of the school director” and one school principals responded that “all the school support committee members are never involved in teacher or school observation because they believe it is not their tasks and they have no expertise in the field” (Fata & Kreng, 2015).

Currently, the whole Kingdom of Cambodia has 13,113 public schools (public primary school: 7,189), 92,835 public teaching staff (public teaching staff for primary school: 46,157) and enrolls 3,143,252 students (enroll for primary school: 2,028,063 students). Independently, Battambang province has 1,112 public schools (public primary school: 637), 6,924 public teaching staff (public teaching staff for primary school: 3,700) and enrolls 247,650 students (enroll for primary school: 169,379) (MoEYS, 2018 -b). On the other hand, to provide the high quality standard of

education with various teaching and learning resources, proficiency of foreign language, modernized study room and Lap, and foreigner teachers, many private schools are established with the number of 1,076 (private primary school: 432), enrolled 203,084 students (private primary school: 111,798), and there were 1,773 foreigner teaching staff for the whole country. One at a time, Battambang province has 45 private schools (private primary school: 17) and enrolls 9,007 students (private primary school: 4,083) while foreigner teaching staffs are 37 (private primary school: 9) (MoEYS, 2018 -a).

Meanwhile, the total population of Cambodia in 2019 is 15,288,489 which excluded those who were at other countries, while female population is 7,869,912 (51.5%) and in comparing with 2008 Census (13,395,682), it has gained up by 14.1% during 11 years. For Battambang province, there are 987,400 (6.5%) of total population and it stands in the 5th rank among 25 provinces and cities at the meantime Phnom Penh which is the capital of Kingdom is 1st rank (13.9%), Kadal province is 2nd rank (7.8%), Prey Veng province is 3rd rank (6.9%), and Siem Reap is 4th rank (6.6%) (Statistics, 2019).

2.2 The General Concept of Accountability

API (2015) stated that social accountability refers to the wide extend of activities and mechanisms, past voting, that citizens can hold the state to account, as well as activities on government, civil society, media and other societal performing artists that advance or encourage these endeavors; while in education sector, the concept of school accountability firstly appeared in the 1960s (Benveniste, 1985), but its meanings are still investigated practically speaking and writing and in this way

there is no any single clear comprehension of the idea. In 2011, Loeb and Figlio defined that school accountability—the process of evaluating school performance on the basis of student performance measures—is increasingly prevalent around the world (Loeb & Figlio, 2011). In Cambodia, to make sure the smooth of operation, transparency, and effectiveness in education process, and promote advocacy norm, school accountability was included through child friendly school policy and school support committee establishment (MoEYS, 2007, 2012).

In 1999, Scheduler characterized that "A is accountable to B when A is obliged to inform B about A's (past or future) actions and decisions, to justify them, and to suffer punishment in the case of eventual misconduct" while in 2007, Perry and McWilliam explained that accountability implies implicitly or explicitly the notion of answerability and so is inextricably linked to questions of power, control and authority. In addition, a relationship in which one party has an obligation, contractual or otherwise, to account for their performance of certain actions to another are the meaning of accountability (Brundrett & Rhodes, 2011); but McGrath and Whitty (2018) referred it as liability for ensuring a task is satisfactorily done.

To improve the relationship between communities and government, public services like health care and education which impact the daily lives of children and their family, and influence policy, people need to be aware about public policy, participate in social action, build networks and coalitions, monitor service provision at the school or any public institutions, and conduct interface meeting with service providers (Vision, 2019).

Therefore, Accountability is a mechanisms of liability for ensuring the certain performance, action or consequential decision is satisfactory done with accepted standard and transparent result through using various information and engagement.

2.3 The Concept of School Accountability

The concept of school accountability firstly appeared in the 1960s (Benveniste, 1985). Its meanings are still investigated practically speaking and writing and in this way there is no any single clear comprehension of the idea. However, Loeb and Figlio defined that school accountability—the process of evaluating school performance on the basis of student performance measures—is increasingly prevalent around the world (2011). In Cambodia, to make sure the smooth of operation, transparency, and effectiveness in education process, and promote advocacy norm, school accountability was included through child friendly school policy and school support committee establishment (MoEYS, 2007b, 2012b).

In order to achieve the children's basic right and learning outcome, dimension five and six of Child Friendly School Policy had stated that families is a resource for school improve and assume a functioning job in the board through an active two-way communication between school and community, while educational service providers such as school principals and teachers will actively account in their role and responsibility to strengthen educational service quality (MoEYS, 2007b).

2.4 The Regulation and Concepts of School Principals' Accountability

The educational regulation of Cambodia stated that the general accountabilities of the educational personnel are "to respect the professional code of ethics, to fulfill other duties that are stipulated in valid law, and to undertake and develop their work with due high diligence and responsibility" (MoEYS, 2007a).

Specifically, to manage school with effectiveness and efficiency, school principals need to respond on three main specific components, firstly, administration task—refers to managing school activities following the guideline of MoEYS, responding for school environment, providing adequate educational service, leading staff meeting and producing report; secondly, pedagogical task —includes awareness and introduce new teaching and learning book and guideline to all teachers; monitor such as teaching and learning activity, teaching method, teaching subjects, teaching objectives; arrange schedule for each class; support refresher training and engage in teaching and learning action; spot check on teaching plan and teaching activity of each teachers and class administration; cooperate with all teachers in order to improve teaching quality for the benefit of students; conduct technical monthly meeting with all teachers; advise and encourage teachers to develop teaching and learning materials—and thirdly, relationship building task—specifies build cooperation with teachers, students and school management team and network with community people and related stakeholders (MoEYS, 2002).

In general, management component had covered all above important accountabilities which Drucker (2008) characterized that management is an arrangement of inter-related components which has two import parts, internal part, for example, condition, administrative abilities, the executive adequacy, individual aptitudes and assignments wile external part incorporates advancement, soul of execution, authoritative outcomes, serving basic great, social effects and condition (Drucker, 2008). Moreover, the sense of management should be included goal developing, implementation and resources organizing, and action process monitoring in order to improve the organization standards which all these stages caused manager to face with two concerns to achieve results and manage oriented relationship (Everard, Morris, & Wilson, 2004).

In addition, Guruge, *et al*. (1984) defined educational management as an art of guiding the activities of all educational stakeholder toward the achievement of a common goal which included five different functions such as planning, organizing, commanding, coordinating, and controlling. Within each stage, the management process consists of four basic elements: decision-making, problem-solving, human relations and communication (Guruge, Ananda, & Dieter, 1984). Moreover, an organized way of managing human resource which included students, educational service providers, stakeholders and service receivers; learning resources, facility and finance resource is educational management (Ibrahim & Mazin, 2017).

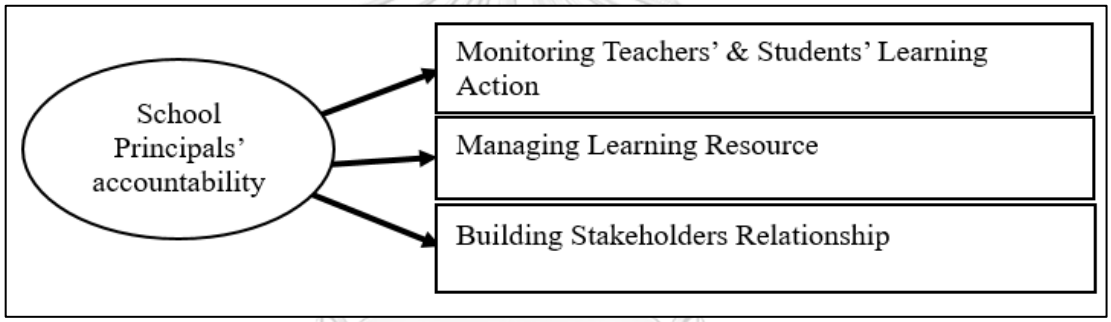
Furthermore, Hoy and Miskel indicated that schools are open social frameworks with five significant components: the structural, the individual, the cultural, the political, and the pedagogical and teaching-learning procedure is the fundamental basic of this system (Hoy & Miskel, 2008). School principals are

responsible for planning, organizing, directing and controlling the work of other teachers (Ibrahim & Mazin, 2017) which aimed to achieve three important outputs firstly, for students, academic achievement , creativity, self-confidence, aspirations, expectations and attendance, graduation and dropout rates; secondly for teachers, job satisfaction, absenteeism, and turnover; and thirdly, for school administrator, job satisfaction, budgets and commitment to schools (Hoy & Miskel, 2008).

The study about leadership development needs of Cambodian primary school principals and deputy principals indicated that connection and relation with students' parents and community, leading and managing teachers and staff are the constraints in carrying out daily task as a school principals or deputy principals due to lack of education and understanding of students' parents, and low salary/wage of teachers and staff. To respond for these challenges, school principals and deputy principals took many actions which included cooperation with local authority and community, following up and assisting teachers with their difficulties, communication with students' parents and supporting school children; while other accountabilities such as leadership and management duties, responsibility for overall school operation, and accountability for teaching and learning (Long, 2014). Additionally, administration skill, communication between school and community, and English language for communication with donors such as Non-government Organization (NGO) were the challenges for some school principals; in the meantime, other accountabilities of them also supporting technical tasks, cooperation with local authority, taking care of students' health and school environment (Kinal, 2013).

In summary, primary school principals' accountabilities are managing resource, decision-making on school development plan, problem-solving, relationship building, teaching technical support and school activities monitoring which aimed for students to achieve academic outcome; and for teachers to receive job satisfaction (Guruge et al., 1984; Hoy & Miskel, 2008; Ibrahim & Mazin, 2017; MoEYS, 2002). However, researcher concludes the measurement model of school principals' accountability for this study as figure 2.1 below.

Figure 2. 1 Measurement Model of School Principals' Accountability



2.5 The Regulation and Concepts of Teachers' Accountability

According Cambodia educational law, civil servants who are assigned as teacher in charge of teaching will respond for core duties including "provide actual and real teaching to students in class and by grade, and complete all relevant works for the class he/she is responsible" (MoEYS, 2007a). To create a good learning environment in classroom that has students from 40 to 50 per class, teacher is a core resource (MoEYS, 2002) and he or she need to manage his or her teaching including creation of a relaxed and enjoyable atmosphere, retention of control in the classroom, presentation of work in a way which interests and motivates students, providing conditions so that students understand the work, making clear what students are to do

and achieve, judging what can be expected of a student, helping students with difficulties, encouraging students to raise expectations of themselves, and development of personal and respectful relationships with students (Children, 2008).

In addition, to manage teaching and learning at primary school with outcome and follow the guideline of MoEYS, each classroom need to have one teacher who appointed by school principal to respond for general management including teaching all subjects, monitoring cleanliness and decorativeness of classroom; managing attendant list, learning action, morality, and teaching and learning documents and materials; leading students to join social activities directly; arranging monthly report for school principal (MoEYS, 2002).

Classroom management is one of the core elements and it refers to the set of approach governed by teachers in order to strengthen students' participation and cut down the students' disruptive behaviors and it keeps an appropriate learning environment (Britt, 2013). This involves the management of classroom space, time and activities, as well as the management of student behavior, taking into account teacher's characteristics, skills and competencies (Gordana & Snežana, 2011).

Moreover, a well-managed classroom elements are using time and classroom space efficiently, design teaching method which inspiring student to join actively rather than controlling them to follow, and making wise choices and effectively implementing instructional strategies (Joyce, Jan, & Ginny, 2003).

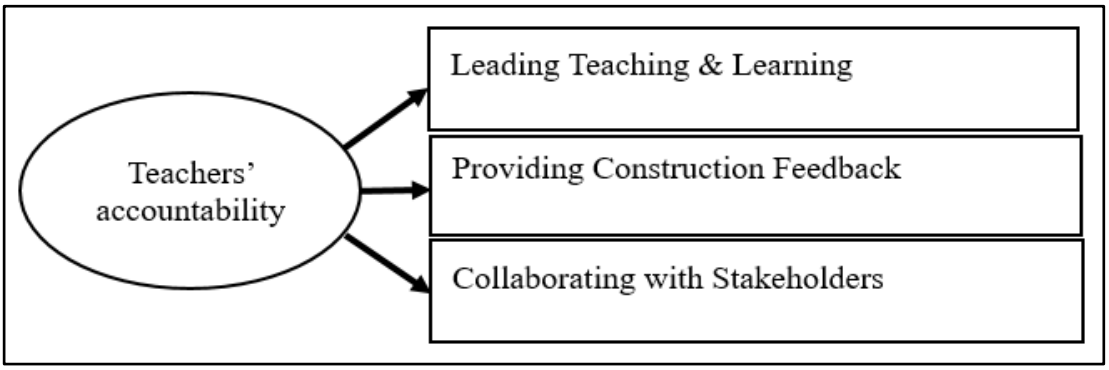
In Thailand, the core factors that can produce learning outcome of students are quality of teachers and school leaders. Teachers need to provide 18 hours for teaching directly to students, 10 hours working on teaching documents which includes lesson planning, and other 2 hours responding for other tasks which required by administrator

per week. However, they still have other responsibilities to govern such as fundraising, O-NET assessment, school compound cleaning, monitor attendant list, taking care students during lunch time, advising meditation, which all of these cause them to have not sufficient time to manage classroom(OECD & UNESCO, 2016). Also, 907 elementary and secondary students in Slovenia reported that teachers took more action on how to achieving educational goals rather than forming a suitable class climate (Jana, Cirila, Sonja, Puklek, & Valencic, 2017). The study of teacher's classroom management behavior and students' classroom misbehavior indicated that teacher's self-efficacy fully mediated with classroom management style (Lopes, Silva, Oliveria, & Sass, 2017).

For instant, the result of study about the role of teacher's authority in students' learning demonstrated that when the teachers' authority was in higher level, the learning of student increased too (Esmaeili, *et al.* 2015) —types of teachers' authorities: Legal authority, specialty authority, reference authority, reward authority, and punishment authority.

In general, primary school teachers have many accountabilities which include creating relaxed and enjoyable atmosphere, monitoring cleanliness and decorativeness of classroom, controlling learning action, maintaining teaching and learning materials, inspiring students to participate, and checking on attendant list (Children, 2008; Gordana & Snežana, 2011; Joyce et al., 2003; MoEYS, 2002). Nonetheless, researcher will limit these roles only four indicators for this study as shown in figure 2.2 below.

Figure 2. 2 Measurement Model of Teachers' Accountability



2.6 The Regulation and Concepts of Parents' Accountability

Child friendly school policy stated that to recognize and nurture the achievement of children's basic rights and schools become a community-supported resource center, the dynamic relationship between families and school should be enhanced because parents or guardians of minor children who are dependent have their obligations such as to take the children whose age is 6 years or at least 70 months, to enroll in grade 1 of the general education program at schools that have proper educational certificates, to try their best to support the studies of the learners, especially for their basic education, and to kept the relationship between school, family and community to participate in vocational education and reform the educational environment (MoEYS, 2007a, 2007b).

Moreover, students' parents will take more responsibility if they were a member of school support committee— is an organization to represent community members and parents in the schools (MoEYS, 2012b). Those parents need to involve in developing school improvement plan, implementing and monitoring school activities; collecting and enrolling children in school; monitoring students' learning; generating revenue and mobilizing funds. They also respond in school constructing or repairing, sharing experience and life skills, safeguarding properties inside and

outside school; strengthening and expanding the capacity and awareness of school development to community people (MoEYS, 2012b).

To strengthen the educational delivery service quality for children to get a better learning outcome, involvement of community and families/parents are the essential factor (Mitsue, 1999). Parental involvement refers to a situation where parents are directly involved in the education of their children, they involve themselves and are involved by the school and teachers in the learning process of their children, and they fulfil their duties as parents in making sure that the learner is assisted in the process of learning as much as they possibly can (Janet & Jonh, 2013). According to Center for Well-Being (2010), parents involvement in their children's learning not only improved a child's morale, attitude and academic achievement across all subject areas, but it also promotes better behavior and social adjustment. In addition, the involvement of parents means that parents participate in one or more school associated activities such as parent-teacher meetings, volunteering at school, stimulating their children with homework encouraging the child to upgrade achievement and so on (Kusum, 1995).

Similarly, Sheldon Shaeffer (1994) clarifies different degrees or levels of participation or involvement in seven possible terms (Sheldon, 1994), including involvement through the mere use of a service (such as enrolling children in school or using a primary health care facility); through the contribution (or extraction) of money, materials, and labor; through 'attendance' (e.g. at parents' meetings at school), implying passive acceptance of decisions made by others; through consultation on a particular issue; participation in the delivery of a service, often as a partner with other actors; participation as implementers of delegated powers; and

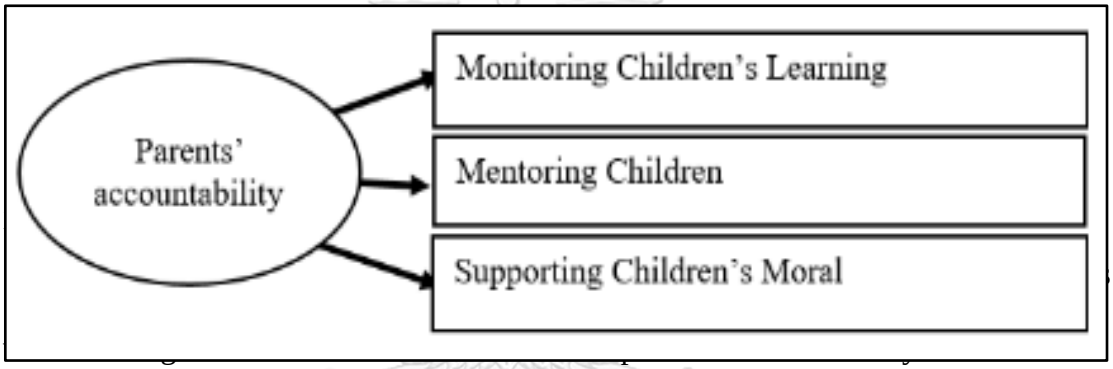
participation “in real decision making at every stage,” including identification of problems, the study of feasibility, planning, implementation, and evaluation.

Additionally, Kiral (2019) stated in her study that the responsibilities of parents regarding to their children were classified in four categories such as the responsibility of children’s physical, emotional, educational, entertainment and social life necessities. In detail of parents’ responsibility in educational necessities, they should follow up their children’s lesson and homework, make sure of children’s attendance to school, monitor them on what they had done at school, build close cooperation and relationship with teachers and school, support children to study at home, provide study materials, and attend the meeting at school (Kıral, 2019).

For instant, the study of household structure and child education in Cambodia indicated that among school aged children (age from 6 to 17 years old) who lived with one biological parent were enrolled at school lower than those resided with both at 34% (Heuveline & H, 2017). In addition, parents with low socioeconomic were less participation in their children’s learning. Managing school related activities at home by parents was strongly significant correlation with academic achievement and improve reading literacy (Thuon, 2013). Parents’ resource supporting for public school was significantly associated with students’ learning achievement due to it could enhance educational quality (Nguon, 2012).

Accordingly, students' parents will account for school involvement, contribution, and participation which includes developing school improvement plan, implementing and monitoring school activities; collecting and enrolling children in school; monitoring students' learning; generating revenue and mobilizing funds (Janet & Jonh, 2013; Kusum, 1995; MoEYS, 2007b, 2012b), notwithstanding for this study, parents' accountability can be concluded as measurement model in figure 2.3 below.

Figure 2. 3 Measurement model of Parents' Accountability



The educational law of Cambodia stated that learners shall have the following general obligations acting as respect regulations of the educational institutions, the gender equity values by exercising their rights with the spirit of responsibility and the respect for other persons' rights; and make their best efforts to learn in order to develop their knowledge skills capacity mentality and dignity (MoEYS, 2007a).

According to Bulloegh *et all*, self-study helps in inspecting and investigating the space between self and the training occupied with and reflection(Bullough, Robert, & Pinnegar, 2001). To encourage student for independence in learning is the best approach to be focused in an increasingly globalized work and incorporated learning from various sources (Sagitova, 2014).

The principle of student council for primary school in Cambodia intended to develop children to be “Good Child, Good Student and Good Friend”. Good children are the individuals who help their family with housework, considerate and humble to grown-ups, and look to satisfy their parents, while good students are industrious, set aside a few minutes to study outside of school, and worth learning. Furthermore, good friends help their peers, are seen by peers as kind and amenable, and their quality is wanted by companions(MoEYS, 2007b).

In Singapore to help young people develop the creative and thinking skills that were considered necessary, actively engage in the learning process, to take more prominent responsibility for learning, students were giving a more grater decision to meet their various advantages, and by enabling them to pick what and how they realize. In addition, two of the main general desired outcomes of education in Singapore are all students will become a “self-directed learner who takes responsibility for his own learning, who questions, reflects and perseveres in the pursuit of learning” and “a confident person who has a strong sense of right and wrong, is adaptable and resilient, knows himself, is discerning in judgment, thinks independently and critically, and communicates effectively” (Assessment, 2019).

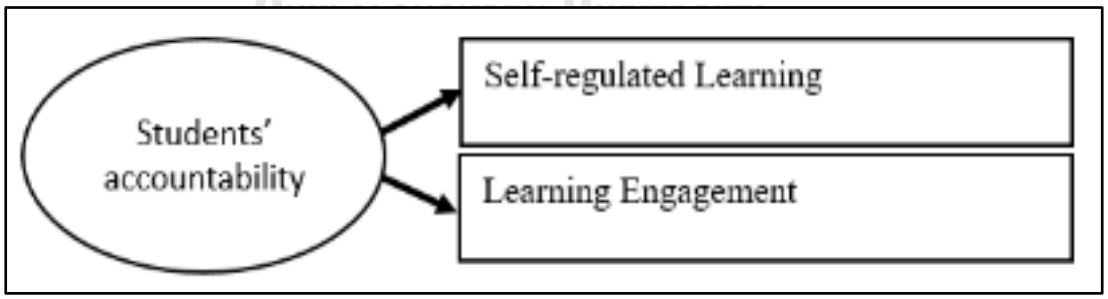
In opposition to what had been mentioned, Ken Shore stated that students will has significant negative effect on his or her daily life such as participation, dealing with problem, relationship with other, academic performance, ability to focus on studying, decision making, and believing in her or his self if they are not confident in themselves (Shore, 2019). He also advised that in order to deal with this problem, educators or teachers should take regularly action with this student including praise the student in a specific and genuine way, show the student tangible evidence of

progress, showcase her accomplishments, help the student feel important in class, engage the student in conversation about her interests, help the student deal with adversity, encourage a sense of belonging, and inform parents of their child's success.

Commonly, children will have their own accountability also such ability to think, to choose, to occupy the issue, to create change, and to respond in order to achieve learning outcome (Morris, 2015; Nathaniel, 1969, 1995; Todd & Carrie, 2003) in order create the learning outcomes which refers to students' ability in recall or remember facts, understand and interpret learned information facts, use learned materials in new situation, break down information into its components, put parts together and judge value of material for a given purpose (Bloom, 1956).

As the regulation and concept above, student need to account for their own study, actively participate with teaching and learning actions, and support their family work in order to improve learning outcome then figure 2.5 below will be illustrated the measurement model for this study.

Figure 2. 4 Measurement Model of Students' Accountability



2.8 The Regulation and Concepts of Reading Literacy

The education law of Cambodia stated that “learner can obtain a set of knowledge, skill capacities and values to become individual who are useful for themselves, their families, their communities, the nation and the world” is a result of education (MoEYS, 2007a).

To assess on what students had learned in school, program for international student assessment for development (PISA-D) had verified on three components which included proficiency in reading, mathematics and science and they defined the term of reading literacy as a person's ability to get, use, think about and engage with composed writings, so as to accomplish one's objectives, to build up one's learning and potential, and to take part in the public arena, while mathematics literacy refers to a person's ability to figure, utilize and translate arithmetic in an assortment of settings, meanwhile science literacy as the capacity to draw in with science-related issues, and with the thoughts of science, as an intelligent native (MoEYS, 2018).

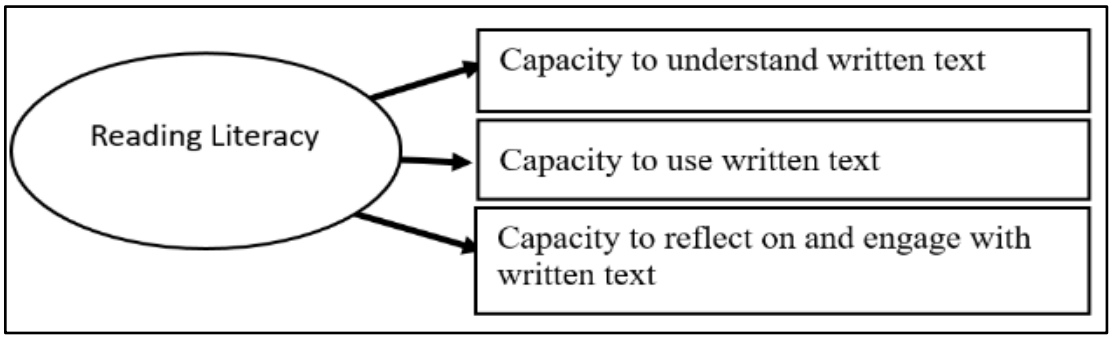
In Singapore, after completion of 12 years in formal education, students are expected to be a confident person, a self-directed learner, an active contributor, and a concerned citizen; while British Columbia developed their learning area based on Know-Do-Understand which students are expected to have knowledge for each subject at each grade level; developed skills, proficiency in numeracy, literacy across all subjects; and intended to endure beyond a single grade and contribute to future understanding. New Zealand built up their educational plan dependent on five key abilities including thinking, utilizing language, images and messages, overseeing self, identifying with other, which distinguished as continued learning and compelling interest in the public eye and that underline the accentuation on deep rooted learning.

At the meantime, Hong Kong had developed their learning outcome focused on learning through life and learning to learn in order to broaden the knowledge base and promote positive value and attitude (Assessment, 2019).

The sustainable development goals number 4 (SDG) indicated “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” while sub-goal of 4.1 specified on “by 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes” followed by indicator “proportion of children and young people in grade 2 or 3, at the end of primary and secondary education who achieve at least a minimum proficiency level in reading and mathematics by sex” (NATIONS, 2018; UNESCO, 2018).

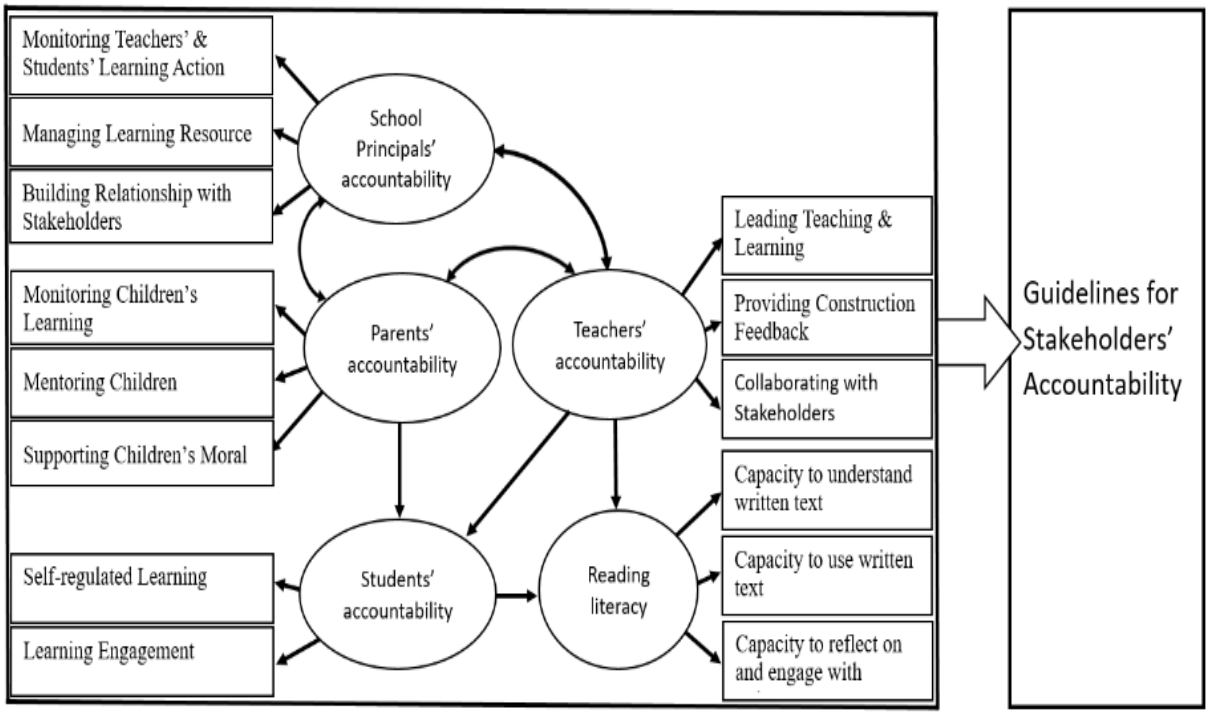
Therefore, the measurement model of reading literacy which has three observed variables as shown in figure 2.6 below will be used for this study.

Figure 2. 5 Measurement Model of Reading Literacy



In conclusion, school principals' accountability covered on Monitoring Teachers' and Students' learning, Managing Learning Resource, and Building Stakeholders Relationship. School teachers' accountability referred to Leading Teaching and Learning, Providing Construction Feedback, and Collaboration with Stakeholder. Parents' accountability specified on Monitoring Children's Learning, Mentoring Children, and Supporting Children's Moral. In the meantime, Students' accountability mentioned as Self-regulated Learning, and Learning Engagement. In this study, Reading Literacy was described as Capacity to understand written text, Capacity to use written text, and Capacity to reflect on and engage with written text.

Figure 2. 6 Conceptual framework



CHAPTER III: RESEARCH METHOD

This study will be searched for how the roles of related stakeholders interacts with students' reading literacy in Cambodia, then correlational research—looks at the degree to which contrasts in single or variable are related with differences in at least one or more other characteristics or variables (Paul & Ellis, 2013) — is used as a research methodology while dyadic multilevel structural equation modeling analysis can summarize this relationship.

The numerical data analysis using statistical technique will indicate 1) the effect of school principals' accountability on teachers' and parents' accountability 2) the effect of teachers' accountability on parents' and students' accountability and reading literacy 3) the effect of parents' and students' accountability and 4) the effect of students' accountability on reading literacy.

3.1 Research Design

The quantitative research about guidelines for stakeholders' accountability in Cambodian students' reading literacy: MSEM with dyadic data will initiate with literature review that one may verify the conceptual framework, develop research instruments, validate and accurate research instruments through item objective congruence (IOC) and reliability analysis with pilot data, actual data collection at field, data entry and analysis by using various analysis program and data interpretation.

3.1.1 Population

Battambang province located in the northwest of country and a western boundaries created an international border between Cambodia and Thailand, with a total population of 987,400 which was in a fifth rank among 25 provinces and cities. This province has 13 districts and 1 town, 96 communes and 799 villages with total primary schools of 637 (MoEYS, 2018 -b; Statistics, 2008, 2019).

This study will focus only at local level (primary schools) and then school principals, teachers, students and their parents will regard as a study population.

3.1.2 Participants

Participants are the actual representative number which is being selected through probability and non-probability technique by researcher from total study population in order to find out some specific data for answering the research questions (Hoyle, Harris, & Judd, 2002). For this study, in order to reduce sampling error and ensure the acute data, multistage random sampling technique had been used for primary school and representative interviewee selection.

Ratanak Mondol district is located around 40 Kilometer from town, represented the high and low developing areas, had the total number of 39 primary schools and stood in the 5th rank among 14 districts and town— Bovel district was 1st rank with 75 primary schools —in Battambang Privince, will be proposed as study target (MoEYS, 2015). According to first semester report from district of education office in 2018-2019, there were 78 classrooms, 156 teachers and 2317 students (F: 1145) of grade 5 and 6 while primary school principals was 39 (DoE, 2019).

As mentioned, this study will be conducted at local level and used MSEM with dyadic data for analyze, then school principals, teachers, students who are currently studying at grade 5 and 6, and their parents are the direct respondents with the process of sample size calculation as below:

Firstly, according to a priori sample size calculator for structural equation models which the anticipated effect size is 0.1, desired statistical power level is 0.8, probability level is 0.05, number of latent variables are 5, and number of observed variables are 14, then the minimum sample size for model structure is 232 students.

Secondly, this research will use the dyadic data for analysis, while the students and their parents are the two individuals linked, then the sample size of parents will be 232 to reply for parents' accountability section.

Thirdly, based on the guideline from Ministry of Education Youth and Sport (MoEYS), one class should have around 25 students, then the sample size of classroom is 10 (232/25=9.28) and means that grade 5 and 6 will be selected the same number is 5 classroom. Meantime, there are 10 teachers who respond for those classroom will be regarding as direct respondents for teachers' accountability section (MoEYS, 2002).

Finally, as reported by district of education office, each primary school in Ratanak Mondol district has grade 5 one classroom and grade 6 one classroom, so there are 5 primary schools will be selected as sample size through simple random sampling technique. In the meantime, researcher will invite 5 school directors to share the information about school principals' accountability (DoE, 2019).

Table 3. 1 Study sample size

N	Respondent	Sample size
1	Grade 5 and 6 student	232
2	Parents	232
3	Grade 5 and 6 teacher	10
4	School Principal	5
	Total	**479**

3.1.3 Research Instrument

In Cambodia, it is hard to use internet base or online data collection due to internet accessibility and participation norm, then the way that researcher can obtain information from individual regarding their views on this specific topic was face-to-face questionnaire and in-depth interview (Wilkinson & Birmingham, 2003).

After the finalized operational definition, the questionnaire for each section— interviewee demographic information, school principals' accountability, teachers' accountability, parents' and students' accountability, and reading literacy— will be used existing questionnaire with additional development which followed by 5 Liker-scale respond that 1 means "Never" 3 is "Sometime" and 5 is "Always". This face-to-face questionnaire will be used for interview four respondents such as school principals, school teachers, students and their parents according to each section.

The way to make opinions and views expressed by respondent straightforward (Denscombe, 2007), in-depth interview will be used as additional research instrument for data collection from various target sample.

When face-to-face questionnaire had been developed already, researcher will seek advice and comment from advisor about content validity, correctness of language used and consistency with study objectives and conceptual framework.

To check that variable groups are consistent with what to be measured (Joseph et al., 2010), Cronbach's Alpha coefficient will be used through various stages. Firstly, researcher will translate face-to face questionnaire that already verified by advisor into Khmer language and comparing its meaning with questionnaire in English through double back translation method. Secondly, researcher will pilot data collection with 10 school principals, 18 school teachers, 92 parents/caregivers and 92 students who will be excluded from research sample. Thirdly, the obtained data from face-to-face questionnaire try out will be calculated by SPSS program to check reliability. According to Cronbach's Alpha coefficient with general rule of thumb is that if Cronbach's alpha of 0.90 and above is best, 0.80 and above is better, and 0.70 and above is good, while 0.60 and below is questionable, poor or unacceptable. So, this study will accept Alpha Coefficient values 0.70 and above and then researcher will be able to proceed data collection by using this face-to-face questionnaire.

3.1.4 Data Collection Procedure

The data collection procedure will be conducted two times in order to get data for research tool reliability and research framework testing.

Firstly, when two research tools —in-depth interview and face-to-face questionnaire— have been developed based on definition of terms, while face-to-face questionnaire is divided in to four parts such as interviewee demographic information, school principals' accountability, teachers' accountability, parents' and students' accountability, then researcher will bring it to seek additional advice and comment from advisor about content validity, correctness of language used and consistency with study objectives and conceptual framework. Finally, researcher will use this instrument to pilot at field with 212 people who has characteristic similar with study target sample in order to collect the data for verifying the reliability of research tool.

In addition, to verify the outcome learning in reading literacy of students, the tool which had been used in Program for International Student Assessment for Development (PISA-D), reading literacy assessment part, will be adopted for this study after translation to Khmer language and verified by PISA-D committee.

Secondly, researcher had used multistage sampling techniques to select sample size from population for this study who were school principals, school teachers who are teaching at grade 5 and 6 during the data collection process, school students at grade 5 and 6 and their parents. While 29 primary schools had been recruited as a target study among 39 primary schools in Ratanak Mondol district. And then, researcher will recruit 8 collectors who are currently second and third year university students to support in data collection at each school. In-depth interview will be conducted additionally with school principals, while face-to-face questionnaire will be used with school teachers, students and their parents.

3.1.5 Data Analysis

To respond with first research question —what is the level of stakeholders' accountability for students' learning outcome? — the descriptive statistics (Mean and Standard Deviation) and Analysis of variance (ANOVA) will be used, while Peasant Correlation will be answer to "How are the relationships among stakeholders' accountability for students' reading literacy?" and then, multilevel structural equation modeling with dyadic data which analyzes about how several independent variables has relationship with dependent variable "reading literacy" (Joseph et al., 2010) will be adopted for "How are the guidelines for stakeholders' accountability for students' reading literacy?" and verify the first and second research question. Finally, the aggregated dyadic data from all stakeholders were analyzed using SEM to examine the factors' effect on students' reading literacy. It should be noted that the aggregated data were used with SEM instead of nested data with MSEM

because of the limitation of small population. However, the results of this analysis would hopefully reveal some pictures of the effects in the model and provide useful suggestions to improve stakeholders' accountability and students' reading literacy in the future.

3.2. Reliability and Content Validity of Questionnaire

The first instrument was face-to-face questionnaire with 5 liker-scale and it had 12 items for school principals, 13 items for school teachers, 12 items for parents or caregivers and only 9 items for students; while the second was reading task with 3 passages which accounted by students only.

3.2.1 Reliability and Content Validity of Questionnaire for School Principal

The whole internal consistency reliability coefficient was .657 while the KMO index was .683 and the significance of Bartlett's Test of Sphericity was .064 (Table 3.2). The extractions of communities show the extent to which the variance of each variable is explained. The extractions in the table range from .341 to .936, which denotes that all the extractions are big enough to stay in each of the individual factors.

Table 3. 2 Extractions of Communalities for questionnaire of school principal (PCA)

Items	Initial	Extraction
Monitoring Teacher 1	1.000	.341
Monitoring Teacher 2	1.000	.852
Monitoring Teacher 3	1.000	.535
Monitoring Teacher 4	1.000	.762
Managing Learning Resource 1	1.000	.862
Managing Learning Resource 2	1.000	.887
Managing Learning Resource 3	1.000	.936
Managing Learning Resource 4	1.000	.650
Building Relationship 1	1.000	.663
Building Relationship 2	1.000	.672
Building Relationship 3	1.000	.882
Building Relationship 4	1.000	.773

3.2.2 Reliability and Content Validity of Questionnaire for School Teacher

The result from reliability analysis indicated that Cronbach's Alpha coefficient was value at .788 for the questionnaire of school teacher, while in the present factor analysis, the KMO index was .532 and the significance of Bartlett's Test of Sphericity was.101 (Table 3.4); at the meantime, the extractions of communities range from .420 to .770 that means all the extractions are big enough to stay in each of the individual factors.

General speaking, when the Kaiser-Meyer-Olkin Measure of Sampling Adequacy is higher than 0.5, the size of the sample will be large enough to conduct the factor analysis. Meanwhile, the significance of Bartlett's Test of Sphericity should be lower than 0.05, which denotes that there is great possibility of meaningful relationship between different variables.

Table 3. 3 Extractions of Communalities for questionnaire of school teachers (PCA)

Items	Initial	Extraction
Leading Teaching 1	1.000	.618
Leading Teaching 2	1.000	.745
Leading Teaching 3	1.000	.771
Leading Teaching 4	1.000	.766
Providing Construction Feedback 1	1.000	.709
Providing Construction Feedback 2	1.000	.769
Providing Construction Feedback 3	1.000	.636
Providing Construction Feedback 4	1.000	.467
Collaborating with Stakeholders 1	1.000	.869
Collaborating with Stakeholders 2	1.000	.653
Collaborating with Stakeholders 3	1.000	.592
Collaborating with Stakeholders 4	1.000	.912
Collaborating with Stakeholders 5	1.000	.721

3.2.3 Reliability and Content Validity of Questionnaire for Parents

The pilot result with 92 parents/caregivers indicated that the value of Cronbach's Alpha coefficient was .877 which indicates a high level of internal consistency with this specific sample, while the result of validity analysis had KMO index at .862 with extraction of communalities ranked from .518 to .719.

Table 3. 4 Extractions of Communalities for questionnaire of parents (PCA)

Items	Initial	Extraction
Monitoring Children's Learning 1	1.000	.409
Monitoring Children's Learning 2	1.000	.541
Monitoring Children's Learning 3	1.000	.589
Monitoring Children's Learning 4	1.000	.371
Mentoring Children's Learning 1	1.000	.682
Mentoring Children's Learning 2	1.000	.564
Mentoring Children's Learning 3	1.000	.609
Mentoring Children's Learning 4	1.000	.551
Supporting Children's Moral 1	1.000	.466
Supporting Children's Moral 2	1.000	.817
Supporting Children's Moral 3	1.000	.502
Supporting Children's Moral 4	1.000	.544

3.2.4 Reliability and Content Validity of Questionnaire for Students

Art the mend, internal consistency reliability coefficient of questionnaire for students had value at .853 while the KMO index was .856 and extraction of communalities ranked from .257 to .762 according to the analysis result of pilot test with 92 students who are currently studying at grade 5 and 6 of selected primary schools.

Table 3. 5 Extractions of Communalities for questionnaire of students (PCA)

Items	Initial	Extraction
Self-regulated Learning 1	1.000	.655
Self-regulated Learning 2	1.000	.257
Self-regulated Learning 3	1.000	.691
Self-regulated Learning 4	1.000	.762
Learning Engagement 1	1.000	.477
Learning Engagement 2	1.000	.553
Learning Engagement 3	1.000	.682
Learning Engagement 4	1.000	.610
Learning Engagement 5	1.000	.704

CHAPTER IV: ANALYSIS RESULTS

4.1. Background Information of Respondents

After the first proposal was defined successfully, internal and external committee had advised that the sample size of this study need to be added up more in order to ensure the reliability and validity for this study, therefore the total of sample primary school was 29 followed by 41 school teachers while the number of parents/caregivers and students were maximized at 427 each.

Based on table 4.1 descriptive statistic of school principal below, 29 (F: 6) school principals had invited to attend with this study to provide perception about their responsibilities related with student's reading outcome. Among them, 48.3 percent aged from 31-40, and 51.7 percent aged 40 year-old and over, while the highest percent of their education was Bachelor degree (55.2%), Master degree was the third rank (17.2%), and no one is as a current PhD candidate nor graduated. Referring to their involvement with school board, 44.8 percent which was the most extreme level has been under 5 years while 24.1 percent was the basic level right now over 10 years.

Table 4. 1 Descriptive Statistic of school principal

Variable	Frequency	Percent
Sex		
Male	23	79.3
Female	6	20.7
Total	**29**	**100.0**
Age		
30-39 year	14	48.3
40 & Over	15	51.7
Total	**29**	**100.0**
Education		
High school	8	27.6
Bachelor	16	55.2
Master	5	17.2
Total	**29**	**100.0**
School management experience		
Under 5 year	13	44.8
5-10 year	9	31.1
Over 10 year	7	24.1
Total	**29**	**100.0**

In the meantime, 41 (F: 29) teachers who are presently teaching at grade 5 and 6 (Table 4.2) with teaching experience under 5 year was 58.5 percent which was the highest elevated rate while 5 to 10 years was 17.1 percent which was the smallest percentage had additionally joined in data collection process. Respond with the question “What is the highest degree of formal education including High school, Bachelor, Master degree and PhD, you have completed?” the greatest (51.2%) was Bachelor, and the minimum (2.4%) was Master while nobody is at PhD degree; on the other hand, most of them (51.2%) aged under 30 years old while 17.1 percent the least was Over 40 years old.

Table 4. 2 Descriptive Statistic of School Teacher

Variable	Frequency	Percent
Sex		
Male	12	29.3
Female	29	70.7
Total	**41**	**100.0**
Age		
< 30 year	21	51.2
30-40 year	13	31.7
Over 40 year	7	17.1
Total	**41**	**100.0**
Education		
High school	19	46.3
Bachelor	21	51.2
Master	1	2.5
Total	**41**	**100.0**
Teaching experience		
< 5 year	24	58.5
5-10 year	7	17.1
>10 year	10	24.4
Total	**41**	**100.0**

Furthermore, the number of 427 (F: 244) students who are currently studying at grade 5 and 6 (grade 6: 184 students) and aged from 11 to 12 years old (50.1%) which was the largest percentage and the smallest (2.6%) was under 10 had also participated with this study. With dyadic data, the number of parents/caregivers (F: 261) who agreed to share their perspective during data collection were the same as students and most of them aged under 40 years old (61.4%) while 40 or over (38.6%). The maximum number in each family was under 6 people (71.0%). In order to look for the information about education level of parents/caregivers, the question “What is the highest level of formal education you have completed?” had been asked and the high respond was under or high school level (95.1%) while only 4.9 percent was graduated bachelor or higher degree. According to the question of “What is your relationship with children?” 84.3 percent was parents and 52.2 percent of total family had under 3 children. The current main job of those families were farmer or worker (70.7%) and teacher or other only (29.3%).

Table 4. 3 Descriptive Statistic of parents/caregivers

Variable	Frequency	Percent
Sex		
Male	164	38.4
Female	263	61.6
Total	**427**	**100.0**
Age		
< 40 year	262	61.4
40 or over	165	38.6
Total	**427**	**100.0**
Member in family		
< 6 people	303	71.0
6 or over	124	29.0
Total	**427**	**100.0**
Education		
Under or high school	406	95.1
Bachelor or higher	21	4.9
High school	16	3.7
Total	**427**	**100.0**
Relationship with children		
Parent	360	84.3
Other	65	15.7
Total	**427**	**100.0**
Number of children		
< 3 children	223	52.2
3 or over	204	47.8
Total	**427**	**100.0**
Occupation		
Famer or Worker	302	70.7
Teacher or other	125	29.3
Total	**427**	**100.0**

Table 4. 4 Total study sample size

Sex	School Principal		Teacher		Student		Parent/Caregiver	
	N	%	N	%	N	%	N	%
Male	23	79.3	12	29.3	183	42.9	164	38.4
Female	6	20.7	29	70.7	244	57.1	263	61.6
Total	**29**	**100.0**	**41**	**100.0**	**427**	**100.0**	**427**	**100.0**

4.2. Level of accountability of each stakeholders and reading literacy

To measure the current practice level of stakeholders' accountability, a five-point Likert scale which range from (1) Strongly Disagree to (5) Strongly Agree of questionnaire were analyzed. According to Table 4.5 below illustrated that among three variables of school principals' responsibility, Monitor Teaching and Learning had highly positive level (M = 4.36, SD = .41) while the lowest was Manage Learning Resource (M = 3.82, SD = .49). School teacher's accountability had Collaboration (M =4.12, SD = .49) as a maximum level and Lead Teaching and Learning (M = 4.04, SD = .51) as smallest. Also, Mentoring Children (M = 4.10, SD = .42) as a variable of parents' accountability had decidedly level and Support Moral (M = 3.56, SD = .75) was little. However, two variables of students' accountability — Self-regulated ((M = 3.95, SD = .68), Learning Engagement (M = 3.88, SD = .68) — had slightly different level. In the meantime, Use Written Text (M = 1.59, SD = 1.07) had exceedingly level and followed by Reflect and Engage with Written Text (M = 1.55, SD = 1.41) while Understand Written Text (M = 1.19, SD = .99) was the lowest level and all of these were the items of Reading Literacy.

Table 4. 5 Descriptive Statistics of all stakeholders

Items	*M*	*SD*	*Sk*	*Ku*
School Principals' Accountability	**4.0790**	**.38564**	**-.288**	**-.958**
Monitor Teaching and Learning	4.3601	.41805	-.505	.217
Manage Learning Resource	3.8267	.49659	-.119	-1.123
Build Relationship	4.0504	.49716	-.671	.002
School Teachers' Accountability	**4.1047**	**.32717**	**-.034**	**-.665**
Lead Teaching and Learning	4.0433	.51263	-.330	-.531
Provide Feedback	4.0768	.40292	.400	-.577
Collaboration	4.1202	.49157	-.577	-.126
Parents' Accountability	**3.6559**	**.59372**	**-.750**	**1.220**
Monitor Learning	4.0433	.51263	-.330	-.531
Mentoring Children	4.1042	.42511	.230	-.540
Support Moral	3.5679	.75259	-.599	.360
Students' Accountability	**35.2155**	**5.59220**	**-.870**	**1.055**
Self-regulated	3.9502	.68925	-1.092	1.842
Learning Engagement	3.8829	.68667	-.697	.306
Reading Literacy	**4.35**	**2.467**	**.272**	**-.895**
Understand Written Text	1.1991	.99774	.889	1.950
Use Written Text	1.5972	1.07327	.227	-.720
Reflect and Engage with Written Text	1.5574	1.41533	.297	-1.243

4.3. Compare accountability of each stakeholders and their background

To investigate the background of school principals, school teachers, parents and students has main effects on their accountability neither nor, the analysis of variance (ANOVA) had been used for answering.

Table 4.6 below indicated that background variables — Sex (F (1, 22) = .510, *p*> .05); Education (F (2, 22) = .662, *p*> .05); Age (F (1, 22) = 1.038, *p*> .05); and Experience (F (2, 22) = 1.661, *p*> .05) of school principals had not significant effect on their accountability.

Table 4. 6 Tests of Between-Subjects Effects of School Principals' Accountability

Source	Type IV Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Sex	0.073	1	0.073	0.510	0.483	0.023
Education	0.191	2	0.095	0.662	0.526	0.057
Age	0.150	1	0.150	1.038	0.319	0.045
Experience	0.479	2	0.239	1.661	0.213	0.131
Error	3.169	22	0.144			
Total	487.111	29				
Corrected Total	4.257	28				

In the meantime, among background variables of school teachers which included Age (F (2, 420) = 4.061, *p*> .05), and Experience (F (2, 420) = 3.778, *p*> .05) were not statistically effect on their accountability, while Sex (F (1, 420) = 37.991, *p*< .05) and Education (F (1, 420) = 21.591, *p*> .05 were.

Table 4. 7 Tests of Between-Subjects Effects of School Teachers' Accountability

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Sex	3.644	1	3.644	37.991	.000	.083
Age	.779	2	.390	4.061	.018	.019
Education	2.071	1	2.071	21.591	.000	.049
Experience	.725	2	.362	3.778	.024	.018
Error	40.286	420	.096			
Total	7239.817	427				
Corrected Total	45.600	426				

Also, the background variables of parents, there was only Education (F (1, 362) = 6.670, $p < .05$) that was significant effect on their accountability, while Sex (F (1, 362) = .236, $p > .05$), Age (F (1, 362) = .111, $p > .05$), Member in Family (F (1, 362) = 5.565, $p > .05$), Relationship with Children (F (1, 362) = .004, $p > .05$), Number of Children (F (1, 362) = 4.677, $p > .05$) and Main Occupation (F (1, 362) = .035, $p > .05$) were not.

Table 4. 8 Tests of Between-Subjects Effects of Parents' Accountability

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Sex	.085	1	.085	.236	.627	.001
Age	.040	1	.040	.111	.739	.000
Education	2.393	1	2.393	6.670	.010	.018
Member in Family	1.997	1	1.997	5.565	.019	.015
Relationship with Child	.002	1	.002	.004	.948	.000
Number of Children	1.678	1	1.678	4.677	.031	.013
Main Occupation	.013	1	.013	.035	.851	.000
Error	129.894	362	.359			
Total	5096.375	370				
Corrected Total	137.807	369				

For this model, the background variables of students had only three which included Sex (F (1, 423) = 13.415, $p < .05$), and Grade (F (1, 423) = 6.742, $p < .05$) had significant effect, while Age (F (1, 423) = 2.686, $p > .05$) did not have on their accountability.

Table 4. 9 Tests of Between-Subjects Effects of Students' Accountability

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Sex	4.923	1	4.923	13.415	.000	.031
Age	.986	1	.986	2.686	.102	.006
Grade	2.474	1	2.474	6.742	.010	.016
Error	155.235	423	.367			
Total	6701.938	427				
Corrected Total	164.471	426				

4.4. Relationship between accountability of each stakeholders and reading literacy

In order to see the correlation and impact between accountability of each stakeholders and reading literacy, the correlation and regression analysis were used to verify this section.

Table 4.7 below indicated that among 11 accountability variables of all stakeholders — Monitoring Teaching and Learning, Manage Learning Resource, Build Relationship, Lead Teaching and Learning, Provide Feedback, Collaboration, Monitor Learning, Mentoring Children, Support Moral, Self-regulated, and Learning Engagement — Collaboration (r=.757, $p< .01$) was strongly significant correlation with Reading Literacy which means that the more collaboration between school teachers and related stakeholder, the achievement reading literacy of students was. In addition, the least correlation was Support Moral (r= -.138, $p< .01$) which indicated that when parents took less action on moral supporting to their children, the increase of students' reading literacy was. On the other hand, Leading Teaching and Learning (r=-.077, $p = .112$), Provide Feedback (r= -.058, $p = .232$), Monitoring Learning (r= -

.077, *p* = .112), Mentoring Children (r= .038, *p* = .428), Self-regulated (r= -.072, *p* = .140), and Learning Engagement (r= -.087, *p* = .071) were non-significant.

Moreover, this table also provided information about correlation and non-correlation among each variables. The highest correlation (r=1.00, *p*< .01) was between Monitor Learning and Lead Teaching and Learning; (r=.925, *p*< .01) between Collaboration and Build Relationship; and follow by (r=.909, *p*< .01) between Mentor Children and Provide Feedback; in the meantime, Support Moral and Monitor Teaching and Learning had the lowest correlation with each other (r= -.138, *p*< .01). In contract, some variables were not statistically significant correlation with each other such as Lead Teaching and Learning with Monitor Teaching and Learning (r= -.077, *p* = .112), and Manage Learning Resource (r= -.027, *p* = .579); Provide Feedback with Monitor Teaching and Learning (r= -.058, *p* = .232), and Build Relationship (r= -. 025, *p* = .603); Collaboration and Provide Feedback (r= -.002, *p* = .972); Monitor Learning with Monitor Teaching and Learning (r= -.077, *p* = .112), and Manage Learning Resource (r= -.027, *p* = .579); Mentoring Children with Monitor Teaching and Learning (r= .038, *p* = .428), Manage Learning Resource (r= .072, *p* = .138), and Collaboration (r= .042, *p* = .387); Support Moral and Provide Feedback (r= .067, *p* = .169); Self-regulated with Monitor Teaching and Learning (r= -.072, *p* = .140), Build Relationship (r= -.083, *p* = .085), Lead Teaching and Learning (r= .087, *p* = .074), Provide Feedback (r= .008, *p* = .871), Collaboration (r= -.001, *p* = .987), and Monitor Learning (r= .087, *p* = .074); and Learning Engagement with Monitor Teaching and Learning (r= -.087, *p* = .071), Build Relationship (r= -.072, *p* = .135), Provide Feedback (r= .037, *p* = .450), and Collaboration (r= -.032, *p* = .511).

Table 4. 10 Correlation matrix between accountability of each stakeholder and reading literacy

Items	1	2	3	4	5	6	7	8	9	10	11	12
1.Monitor teaching & learning	-											
2.Manage learning resource	.363**	-										
3.Build relationship	.679**	.479**	-									
4.Lead teaching & learning	-.077	-.027	-.180**	-								
5.Provide feedback	-.058	.105*	-.025	.197**	-							
6.Collaboration	.757**	.315**	.925**	-.202**	-.002	-						
7.Monitor learning	-.077	-.027	-.180**	1.00**	.197**	-.202**	-					
8.Mentoring children	.038	.072	-.014	.181**	.909**	.042	.181**	-				
9.Support moral	-.138**	-.164**	-.153**	.172**	.067	-.098*	.172**	.067	-			
10.Self-regulated	-.072	-.164**	-.083	.087	.008	-.001	.087	.015	.345**	-		
11.Learning engagement	-.087	-.180**	-.072	.120*	.037	-.032	.120*	.049	.360**	.628**	-	.
12.Reading Literacy	-.208**	-.166**	-.047	-.019	.145**	-.067	-.019	.094	.176**	.092	.251**	-
M	3.67	4.36	3.82	4.05	4.04	4.07	4.12	4.04	4.10	3.56	3.95	3.88
SD	2.31	.41	.49	.49	.51	.402	.491	.512	.425	.752	.689	.686

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

4.5. Hierarchical Stepwise Regression Analysis Result

According to table 4.12 Model summary below provided the result of Hierarchical Stepwise Regression Analysis that among 24 variables, there were only 9 including support moral, relationship with child, provide feedback, monitor teaching &

learning, build relationship, manage learning resource, school principal "experience", school principal "age", and school principal "education" which are the role and responsibility of students' parents/caregivers, school teacher and school principal significantly accounted for 2.14 percentage points of students' reading literacy.

Table 4. 11 Model summary

Model	Variable	*R*	R^2	Adjusted R^2	S.E.	*F*	*P*
1	Support moral, relationship with child, Provide feedback, Monintor teaching & learning, Build relationship , Manage learning resource, school principal "experience", school principal "age", school principal "education"	.463	.214	.197	2.211	12.615	.000

To anticipate the students' reading literacy, Hierarchical Stepwise Regression Analysis depended on variables such as support moral, relationship with child, provide feedback, monitor teaching & learning, build relationship, manage learning resource, school principal "experience", school principal "age", and school principal "education" to product a significant regression equation at (F (9, 417) = 8.817, p<.00) with an R^2 of .214, while all of variables predicted on students' reading literacy.

Moreover, *b* value that indicated about the relationship between students' reading literacy and other predictors provided the information that support moral (.311), provide feedback (1.063), build relationship (1.623), and school principal "experience" (.456) have positive affection which means that when those predictors increase the students' reading literacy will be followed also; meanwhile, relationship with child (-.264), monitor teaching and learning (-.834), manage learning resource (-1.205), school principal "age" (-1.119) and "education" (-1.042) have negative relation.

Among all predicted variables, Beta Coefficients of build relationship maximally reached at .327, while relationship with child presented a smallest Beta Coefficients value of -.091, however, for this model, provide feedback, $t(417) = 3.66$, $p < .05$, build relationship, $t(417) = 5.11$, $p < .05$, school principal "experience", $t(417) = 4.81$, $p < .05$, all other variables are significant predictors of students' reading literacy.

Table 4. 12 Regression Results of Student Reading Literacy

Variables	Unstandardized Coefficients		Standardized Coefficients	*t*	*P*
	B	***SE***	***Beta***		
(Constant)	5.819	1.975		2.946	.003
Support moral	.311	.148	.095	2.102	.036
relationship with child	-2.64	.128	-.091	-2.054	.041
Provide feedback	1.063	.290	.174	3.662	.000
Monitor teaching & learning	-.834	.406	-.141	-2.057	.040
Build relationship	1.623	.317	.327	5.116	.000
Manage learning resource,	-1.205	.262	-.242	-4.596	.000
school principal "experience"	.456	.095	.271	4.813	.000
school principal "age"	-1.119	.216	-.324	-5.176	.000
school principal "education"	-1.042	.237	-.270	-4.392	.000

According to table 4.5.3 excluded variables below illustrated that in case of other 13 variables such as parents “sex”, $t = .513$, $p > .05$, parents or caregiver “age” ”, $t = -1.72$, $p > .05$, number of member in family, $t = 1.81$, $p > .05$, number of children in family, $t = -1.32$, $p > .05$, monitor learning, $t = .232$, $p > .05$ and so on are entered into the model, they would not have a significant impact on the ability of model to predict students’ reading literacy.

Table 4. 13 Excluded Variables

Excluded Variables	*Beta*	*t*	*P*	Partial correlation	Tolerance
Parents “sex”	.023	.513	.608	.025	.971
Parents or caregiver “age”	-.077	-1.722	.086	-.084	.934
# member in family	.081	1.811	.071	.088	.934
# children in family	-.059	-1.325	.186	-.065	.950
Monitor learning	.011	.232	.817	.011	.849
Monitoring children	-.122	-1.063	.288	-.052	.142
School teacher “sex”	.008	.172	.864	.008	.919
School teacher “age”	.068	1.496	.135	.073	.902
School teacher “education”	-.038	-.797	.426	-.039	.834
School teacher “experience”	.001	.017	.987	.001	.833
Lead teaching & learning	.011	.232	.817	.011	.849
Collaboration	-.304	-1.942	.053	-.095	.076
School principal “sex”	-.037	-.776	.438	-.038	.824

4.6. Causal relationship model of students’ reading literacy

The analysis result of this part was to answer the second—To find out the relationship among stakeholders’ accountability for students’ reading literacy— and third objective —To seek the guidelines for stakeholders’ accountability for students’ reading literacy third objective of this research. A structural equation modeling (SEM) was performed to examine the effects and associations among the constructs proposed in the model.

The validation between the proposed model and the empirical data revealed that the proposed model did not fit the empirical data considering by the fit indices which were Chi-Square (62, N=427) = 2.430, p < .001; CFI = .868, TLI = .807,

RMSEA = .085, SRMR = .078. However, the analysis yielded interesting and useful results shown as follows.

4.6.1. Effects of variables in the model

Effects of variables were considered by coefficient prediction (R^2) of structural equation of the latent variables presented as outcome variables in the model which were students' reading literacy (READLIT) and students' accountability (ACCSTUD). The results indicated that students' reading literacy (R^2 = .088) was affected by students' accountability and teacher' accountability all together for 8.8 percent. For the students' accountability (R^2 = .510), it showed that parents' accountability and teacher' accountability together predicted 51 percent of the variable.

4.6.2. The results of causes and effect in the research model

The analysis was employed the structural equation modeling (SEM) to examine the direct, indirect, as well as the associations among the research variables. The model comprised of five latent variables which three were exogenous variables and two were endogenous variables. Among endogenous variables, students' accountability acted as mediator between parents' accountability and students' reading literacy, including teacher' accountability and students' reading literacy. The outcome variables in the model was students' reading literacy. The analysis showed two types of relationships among research variables; association and causal relationship, the results will be interpreted as follows.

4.6.2.1 The association

According to structural equation modeling results, school principals' accountability was found to positively associate with teacher' accountability with the

effect of .286, and negatively associate with parents' accountability with the effect of -.263. at the statistical significance level of .05. Moreover, parents' accountability and teacher' accountability were found to have insignificant association with each other with the effect of .137.

4.6.2.2 The causal relationship

1) Students' accountability

When considering the direct effect on students' accountability, the results showed that parents' accountability directly affected students' accountability at a statistically significance level of .05 with the effects equal to .720. This means that students whose parents value and show great accountability will tend to has a high level of accountability as well. However, teacher' accountability negatively affected students' accountability with the direct effects equal to -.068, in which the effect was statistically insignificant.

2) Students' reading literacy

When considering the direct on students' reading literacy, the results showed that students' accountability directly affected on students' reading literacy with a statistically significance at level of .05 with the effect equal to .279. Whereas, teacher' accountability, in which the effect was .093, did not show statistically significant effect on students' reading literacy.

Regarding the direct and indirect effect, parents' accountability indirectly affected students' reading literacy through students' accountability with the statistically significant effect equal to .201. This also indicated that students' accountability had a full mediation effect between parents' accountability and students' reading literacy. While, teachers' accountability's effects on students'

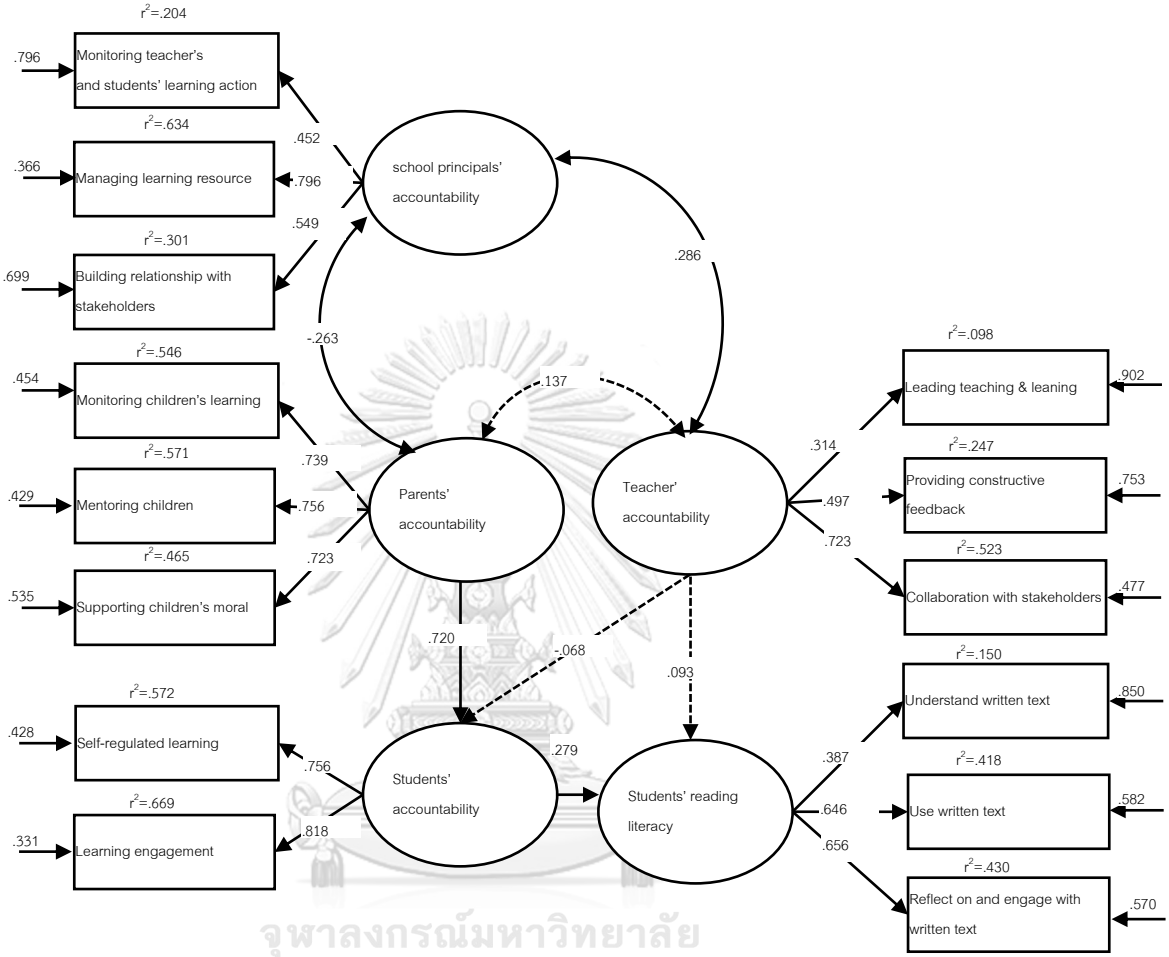
reading literacy both directly and indirectly through students' accountability had a total effect equal to .074, with direct and indirect effects equal to .093 and -.019 respectively. However, the effects of teachers' accountability on students' reading literacy were all not significant. This is indicating that the more level of accountability students have, the more they gain their reading literacy. Additionally, parents who are more accountable will be able to promote their children accountability which will subsequently lead to the improvement of the children's reading literacy. More detailed information was as below (see table 4.11 and figure 4.1).

Table 4. 14 Structural equation modeling statistics

IV / DV	ACCPRIN	ACCPARN	ACCTEAC	ACCSTUD			READLIT		
	Associate with	Associate with	Associate with	TE	IE	DE	TE	IE	DE
ACCPRIN	-	-.263*	.286*	-	-	-	-	-	-
	-	(.060)	(.096)	-	-	-	-	-	-
ACCPARN	-.263*	-	.137	.720*	-	.720*	.201*	.201*	-
	(.060)	-	(.102)	(.055)	-	(.055)	(.053)	(.053)	-
ACCTEAC	.286*	.137	-	-.068	-	-.068	.074	-.019	.093
	(.096)	(.102)	-	(.063)	-	(.063)	(0.107)	(.019)	(.088)
ACCSTUD	-	-	-	-	-	-	.279*	-	.279*
	-	-	-	-	-	-	(.070)	-	(.070)
READLIT	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-
Chi-Square (62, N=427) = 255.042, p < .001; CFI = .868, TLI = .807, RMSEA = .085, SRMR = .078									
Variables	**AC CPRIN**	**ACCPARN**	**ACCTEAC**	**ACCSTUD**			**READLIT**		
R^2	.036	.314	.026	.510			.088		

Note: Total effect (TE), Indirect effect (IE), Direct effect (DE), Value in parentheses is standard error, and
* means statistically significant at level of .05

Figure 4. 1 Causal model of Students' reading literacy



CHAPTER V: CONCLUSION, DISCUSSION AND RECOMMENDATION

5.1. Research Conclusion

The topic of this study was Guidelines for Stakeholders' Accountability in Cambodian Students' Reading Literacy: MSEM with Dyadic Data that occupies on three main objectives being 1) To measure the current practice level of stakeholders' accountability for students' reading literacy; 2) To find out the relationship among stakeholders' accountability for students' reading literacy; and 3) To seek the guidelines for stakeholders' accountability for students' reading literacy.

Through literature review, there were 11 main accountabilities for four stakeholders. School principals accounted on Monitoring Teachers' and Students' learning, Managing Learning Resource, and Building Stakeholders Relationship. School teachers' accountability referred to Leading Teaching and Learning, Providing Construction Feedback, and Collaboration with Stakeholder. Parents' accountability specified on Monitoring Children's Learning, Mentoring Children, and Supporting Children's Moral. In the meantime, Students' accountability mentioned as Self-regulated Learning, and Learning Engagement. Also, Reading Literacy was described as Capacity to understand written text, Capacity to use written text, and Capacity to reflect on and engage with written text.

After two research instruments —"Face to Face Questionnaire" which was responded by all stakeholders and "Reading Test" that accounted by students only— had been developed based on definition of terms used; verified about content validity, correctness of language used and consistency with study objectives and conceptual framework; and double translation from English to Khmer, researcher used it to pilot at

actual field with 212 people who has characteristic similar with study target sample. All instruments was made double translation from English to Khmer language. The results indicated that extraction of communalities ranked from .341 to .936 for instrument of school principals while the KMO index was .532 and extraction of communalities ranked from .527 to .770 for instrument of teacher. In addition, instrument for parents/caregivers had KMO index at .862 and extraction of communalities ranked from .518 to .719; at the meantime, KMO index was .856 and extraction of communalities ranked from .257 to .762 for instrument of student.

And then the actual data collection for this study was conducted with 29 (Female: 6) school principals, 41 (Female: 29) school teachers, 427 (Female: 263) parents and 427 (Female: 244) of their children who were studying at grade 5 and 6. In addition, to respond to research objectives, Descriptive Statistics, ANOVA, Correlation and Regression, MSEM analysis were used to interpreted the results.

According to Hierarchical Stepwise Regression Analysis Result indicated the information that among various accountabilities of all stakeholders, only 9 variables significantly accounted for 2.14 percentage points of students' reading literacy. However, all three stakeholders have interaction relationship with each other on the students' reading literacy due to in a group of 9 variables, supporting children's moral and relationship with children are responsible of parents; providing construction feedback is the accountability of school teacher; while school principals' accountability covered on other six variables.

In the meantime, MSEM result revealed that school principals' accountability was found to positively associate with teacher' accountability but negatively with parents' accountability. Teacher' accountability negatively affected students'

accountability but positively on students' reading literacy both directly and indirectly. Parents' accountability directly affected on students' accountability which means that students whose parents value and show great accountability will tend to has a high level of accountability as well. Also, parents' accountability and teacher' accountability were found to have insignificant association with each other. Moreover, students' accountability directly affected on students' reading literacy, which indicated that the more level of accountability students have, the more they gain their reading literacy

5.2. Guidelines for stakeholders' accountability in Cambodian students' reading literacy

Even though some variables of stakeholders' accountabilities which got from literature review did not have any impact on this study model but in actual situation and norm in Cambodia, more or less they should be. Nonetheless, in order to improve and strengthen students' reading literacy in general, the guidelines below should be proposed:

Firstly, parents/caregivers of students need to take more action on their relationship with children, provide adequate support on moral of children such as inspire children to love reading book during their free time through showing personal reading action; praise children to read prohibit information before acting such as keeping rubbish, using toilet, and joining social action; encourage children to read story or other documents relate to civic morality; stimulate spiritually to children through verbal to understand about useful of reading; and meet with children's teachers to talk about their behavior at school.

Secondly, school teacher should give construction feedback to students with appropriated manner in the class equally correct students' homework before starting new lesson; require students to read lesson for their classmates if they do not do homework; encourage students to re-read previous lesson to correct their reading issue; and inspire students to study more at home, especially reading books.

Thirdly, school principal ought to respond on monitoring teacher's and students' learning action— raise about reading issue of children in monthly meeting regularly with teachers and school management team; spot check directly to teaching and learning activity at each classroom every month; consult with all teachers about reading teaching technique and materials development every month; acknowledge on monthly report of students' learning result from all teachers every month; and report about students' reading result every month to district office of education—, building relationship with all stakeholders, and Managing learning resource.

Fourth, the policy guideline for school principal appointment or promoting should be focused more on teaching and management experience, appropriated age of working, and especially education background and level.

5.3 Discussion

The general aim of this study was to propose the guidelines for stakeholders' accountability in Cambodian students' reading literacy by using MSEM with Dyadic Data, therefore the discussion of reading tool development was employed.

To evaluate the reading literacy level of students for this study, the reading tool was separated into three parts while the first one was the two short reading passages, followed by other two graphs and students need to answer 2 locating and 3

understanding questions. The second part of this tool was a medium passage about "bee" which had six paragraphs and students must respond for 2 locating and 2 understanding questions after went through the text. These two parts were occupied from PISA released Items-Reading, 2016, while the last one was a complex reading text about "Why children dropout of school in Cambodia?" which copied from UNICEF Cambodia, 2020, and followed by 1 locating, 1 understanding and 2 reflecting questions that student need to provide the answers. Students were allowed to do this test with one hour after they complete the first face to face questionnaire.

Based on the general observation of researcher, most of students who were studying at grade 5 during data collection were not familiar with this kind of test, especially using graphs to answer the question; in the meantime, some students both grade 5 and 6 were not able to understand the reflecting question.

Moreover, the original test was developed in English language with a standard length of paragraph and appropriate time to complete it, but when it was translated to Khmer language, the text became longer and complex that cause some of students could not complete it during one hour.

In fact, Cambodia used to conduct this test in order to evaluate reading proficiency of students during 2018 for the whole country by using PISA for Development tool; however, the result was not good due to only 8% of student who aged under 15 years old achieved the minimum level (Level 2) while Level 1 b characterized as the ability to comprehend just the least demanding content understanding assignments and just 41% of students in Cambodia are best capable at this level than other level.

5.4 Research Recommendation

The result from this study indicated that the responsibilities of school teachers, parents/caregivers, and students are the predicted factors for students' reading literacy, however, in order to search other mediators or moderators the future study should take more action as below:

1. The sample size should include deputy school directors and school support committee in order to get adequate data at school leadership level (school principals' level for this study) for MSEM analysis.

2. This study does not include district office of education officers who supervise directly to school principals and other non-government organizations who are working in selected target schools to improve infract structure and strengthen students' reading literacy as respondents, so further studies should invited them also because all of them are at school or district level.

3. The selection targets for this study is just focused only one district which did not locate far away from town, while most of students' families have similar living standard and education background that effect to responded answers, therefore, next research should select at least two districts or one district and town in order to get more information.

4. The proposed guide that stated here just focus only at community level and not adequate to strengthen students' reading literacy because most of learning and teaching materials supporting need to have a decision from district, provincial or national level, thus, future study should review existing guideline and provide construction feedback for those levels.

REFERENCES

Anderson, & Anne, J. (2005). *Accountability in education*: International Institute for Educational Planning Paris.

Assessment, N. C. f. C. a. (2019). *Learning Outcomes: An International Perspective*

Benveniste, G. (1985). The Design of School Accountability Systems. *Educational Evaluation and Policy Analysis, 7*(3), 261-279. doi:10.3102/01623737007003261

Bloom, B. (1956). *Taxonomy of Educational Objectives: Book 1 Cognitive Domain* Addison-Wesley Longman Ltd; 2nd edition

Bray, T. M. (1999). *The shadow education system: Private tutoring and its implications for planners*: UNESCO International Institute for Educational Planning.

Brayman, A. (2004). *Social Research Methods*. Chennai: Newgen Imaging System (P) Ltd.

Britt, M. P. (2013). Classroom Management: What Does Research Tell Us? *European Educational Research Journal, 12*(3), 389-402. doi:10.2304/eerj.2013.12.3.389

Brundrett, M., & Rhodes, C. (2011). *Leadership for quality and accountability in education* 2 Park Square, Milton Park, Abingdo, Oxon, OX14 4 RN: Routtledge.

Bullough, J., Robert, V., & Pinnegar, S. (2001). Guidelines for quality in autobiographical forms of self-study research. *30*(3), 13-21.

Cambodia, T. l. (2017). *Enhancing collaboration between school management and district and provincial offices of education* Retrieved from Sangkat Svay Dangkum, SR, Cambodia: www.thislifecambodia.org

Cham, S. & Khim, P. (2020). Research report on the effectiveness and value of the use of supplementary allowances for STEM teachers teaching at high school in remote provinces. Ministry of Education Youth and Sport. Phnom Phen.

Children, S. t. (2008). *Effective Teaching and Classroom Management: One and the Same Pedagogical Approach*. Retrieved from Save the Children Sweden:

Children, S. t. (2017). *Education Budget Analysis-Policy Brief 2017*. Retrieved from Phnom Penh:

Christopher, H. (2018). *Corruption in the Classroom: The Dilema of Public School Teachers in Cambodia Providing Private Tutoring to Their Own Students*.

Creswell, J. W. (2004). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. London: Sage.

Denscombe, M. (2007). *The Good Research Guide for Small-scale Social Research Projects* Poland EU: OZGRAF S.A

DoE. (2019). *First semester report* Retrieved from Ratanak Mondol District, BB, Cambodia:

Drucker, P. F. (2008). *Management*. New York HarperCollins.

Esmaeili, Z., Mohamadrezai, H., & Mohamadrezai, A. (2015). The role of teacher's authority in students' learning. *The Journal of Education and Practice, 19 (6).*

Everard, K. B., Morris, G., & Wilson, I. (2004). *Effective School Management* Great Britain TJ international Ltd, .

Fata, N., & Kreng, H. (2015). *School Accountability: Community Participation in Performance of Primary and Lower Secondary Schools in Cambodia*. Retrieved from Phnom Penh

Gordana, D., & Snežana, S. (2011). *Classroom management styles, classroom climate and school achievement* (Vol. 29).

Guruge, Ananda, W. P., & Dieter, G. B. (1984). *An introduction to the Educational*

Planning Process Retrieved from Paris

Heng, K., Sok, S., & No, F. (2016). *School Dropout in Cambodia: A Case Study of Phnom Penh and Kompong Speu*.

Heuveline, P., & Hong, S. (2017). *Household Structure and Child Education in Cambodia*. *International Jounal of Population Studies, 3(2): 1-15. doi: 10.18063/ijps.v3i2.309.*

Hoy, W. K., & Miskel, C. G. (2008). *Educational Administration: Theory, Research, and Practice.*: McGraw-Hill Education.

Hoyle, H. R., Harris, J. M., & Judd, M. C. (2002). *Research Method in Social Relations*

Ibrahim, I., & Mazin, M. (2017). *Educational Management, Educational Administration and Educational Leadership: Definitions and General concepts*.

Jana, K., Cirila, P., Sonja, P., Puklek, L. M., & Valencic, Z. M. (2017). Elementary and Secondary School Students' Perceptions of Teachers' Classroom Management Competencies. *ERIC*.

Janet, C., & Jonh, H. (2013). New Zealand students' perceptions of parental involvement in learning and schooling. *Asia Pacific Journal of Education, 33*(3), 324-337. doi:10.1080/02188791.2013.786679

Jeffery, H. M., & Bunly, S. (2017). School grants and school performance in rural Cambodia. *Journal of Development Effectiveness, 9*(3), 305-328. doi:10.1080/19439342.2017.1338306

Joseph, F., Hair, Ronald, L., Tatham, Rolph, E., Anderson, & William, B. (2010). *Multivariate Data Ananalysis* London Pearson Education, Inc.

Joyce, M., Jan, F., & Ginny, H. (2003). *The key elements of classroom management:*

Managing time and space, student behavior, and instructional strategies: ASCD.

Kinal, P. (2013). *Role and Responsibilities of Primary School Principal Under Decentralized SChool Mnagement: Two Pulic Primary School Principals in Phnom Penh.* (Master degree of Education in Educational Planning and Management), Royal University of Phnom Penh.

King, E. F. (2017). Developing teacher capacity in Cambodia: An expanded model. *Asian Education and Development Studies, 1(7), 2-14. doi: 10.1108/AEDS-06-2017-0053.*

Kıral, B. (2019). The Rights and Responsibilities of Parents According to the Views of Teachers. *Asian Journal of Education and Training, 5,* 121-133. doi:10.20448/journal.522.2019.51.121.133

Kusum, S., et al. . (1995). The Effects of Four Components of parental Involvement on Eighth-Grade Student Achievement: Strucutral Analysis of NELS-88 Data. *ERIC*(EJ587377).

Loeurt, T. (2016). Community Participation in Education: A Case Study in the Four Remote Primary Schools in Samlot District, Battambang Province, Cambodia.

Long, N. (2014). *Leadership Development Needs of Cambodian Primary School Principals and Deputy Principlas.* (Master of Educational Leadership and Management), Unitec Institute of Technology

Lopes, J., Silva, E., Oliveria, C., & Sass, A. D. (2017). *Teacher's Classroom Management Behavior and Students' Classroom Misbehavior: A Study with 5th through 9th-Grade Students* (Vol. 15).

Mitsue, U. (1999). *Community Participation in Education: What do we know? .*

Retrieved from

MoEYS. (2002). *Administration Work Management*. Phnom Penh

MoEYS. (2007a). *Cambodia Education Law*. Phnom Penh

MoEYS. (2007b). *Child Friedly School Policy* Phnom Penh

MoEYS. (2012a). Guideline onthe Establishment and Functioning of Primary School Support Committee. Retrieved from http://www.moeys.gov.kh/images/moeys/ laws-and-regulations/289/prakas-30ayk-scn-2012-ssc-guideline-primary-school-en.pdf

MoEYS. (2012b). *School Support Committee Guidelines* Phnom Penh MoEYS.

MoEYS. (2015). *Education Statistics and Indicators: Battambang Province.* Retrieved from Phnom Penh

MoEYS. (2017). *Public Education Statistics and Indicators 2016-2017*. Phnom Penh.

MoEYS. (2017). *Education Congress Report*. Retrieved from Phnom Penh:

MoEYS. (2018). *Education in Cambodia: Findings from Cambodia's Experience in PISA for Development*. Phnom Penh.

MoEYS. (2018 -a). *Private Education Statistics & Indicators* Phnom Penh Department of Education Management Information System

MoEYS. (2018 -b). *Public Education Statistics and Indicators 2017-2018*. Retrieved from Phnom Penh

MoEYS, & UNICEF. (2016). *Joint Formative Evaluation of Child-Friendly School Policy Implementation in Cambodia*. Retrieved from Phnom Penh

Morris, R. (2015). *Society and the adolescent self-image*: Princeton university press.

Naron, H. C. (2017). *Education Management Reform Strategies for Enhancing the Quality Citizenship in Cambodia.* (Doctor), Chulalongkorn

Nathaniel, B. (1969). The psychology of self-esteem: A new concept of man's psychological nature.

Nathaniel, B. (1995). *The six pillars of self-esteem*: Bantam Doubleday Dell Publishing Group Incorporated.

NATIONS, U. (2018). *Transforming Our World: The 2030 Agenda for Sustainable Development*.

Nguon, S. (2012). Paretntal involvement and students' achievement in Cambodia: Focusing on parental resourceing of pulbic schooling. *International Journal of Educational Research, 53*, 213-224. doi: 10.1016/j.ijer.2012.03.011.

Ntekane, A. (2018). Parental Involvement in Education.

OECD, & UNESCO. (2016). *Education in Thailand: An OECD-UNESCO Perspective, Reviews of National Polices for Education*. Paris OECD Publishing

Partnership, N. E. (2017). *Primary School Budgets in Cambodia: A Public Expenditure Tracking Survey*. Retrieved from Phnom Penh

Paul, D. L., & Ellis, J. O. (2013). Practical Research: Planning and Design. 10th. In: New Jersey: Pearson Education Limited.

Sagitova, R. (2014). Students' Self-education: Learning to Learn Across the Lifespan. *Procedia - Social and Behavioral Sciences, 152*. doi:10.1016/j.sbspro.2014.09.194

Sheldon, S. (1994). *Partnerships and Participatin in Basic Education: A series of Training Modules and Case Study Abstract for Educational Planners and Managers*. Paris: UNESCO, International Institute for Educational Planning.

Shore, K. (2019). The Student with low self-esteem. Retrieved from https://www.educationworld.com/a_curr/shore/shore059.shtml

Statistics, N. (2008). *Cambodia General Population Census 2008* Phnom Penh National Institute of Statistics

Statistics, N. (2019). *General Population Census of the Kingdom of Cambodia 2019: Provisional Population Total.*

Stephen, S. (1998). *The Construct of Content Validity* (Vol. 45).

Steven, S. (2007). Improving student attendance with school, family, and community partnerships. *100*(5), 267-275.

Thuon, S. (2013). Parent's involvement in improving child in primary school education in Cambodia. Royal University of Phnom Penh.

Todd, F. H., & Carrie, L. W. (2003). Assessing self-esteem. 219-233.

UNESCO. (2018). *Data to Nurture Learning: SDG 4 Data Digest* Canda UNESCO institute of statistics

Vision, W. (2019). Citizen Voice and Action: Guidance for Development Programmes Retrieved from https://www.wvi.org/sites/default/files/Citizen_Voice_and_Action_PM.pdf

Walter, D. (2011). Supplementary education in Cambodia. 18-19.

Wilkinson, D., & Birmingham. (2003). *Using Research Instruments: A Guide for Researchers.*

Yun, M., & Kusum, S. (2008). Parents' relationships and involvement: Effects on students' school engagement and performance. *31*(10), 1-11.

APPENDICES

APPENDIX A: Questionnaire for School Principal

School ID		Class ID		Principal ID		Teacher ID	

Research Protocol: The objectives of this research are first to measure the current practice level of stakeholders' accountability; secondly, to find out the relationship among stakeholders' accountability, and thirdly, to seek the guidelines for stakeholders' accountability for students' reading literacy. When you respond to this question, please note the information below:

- Your name is not required
- All information will be used for statistical purposes and kept in secret
- Your response will be combined with those from other participants to produce summary statistics and reports
- You will spend approximately 15 minutes to complete this questionnaire
- I appreciate your time and effort and thank you for your cooperation and contribution.

Instruction: This questionnaire is part of the guidelines for stakeholders' accountability in Cambodian students' reading literacy research. In order to respond with all questions below, please be aware of instruction below:

- Each question need only one respond
- 1= Strongly disagree, 2= Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

We appreciate the time and effort that this takes and thank you for your cooperation and contribution.

I- **Demographic Information**

1-Are you female or male?

①-Male ②-Female

2-How old are you?

①-25 ②-26-30 ③-31-40 ④-41-50 ⑤-Under 60

3-What is the highest level of formal education you have completed?

①-High school ②-Bachelor ③-Master degree ④-PhD

4-By the end of this school year, how many years will you have been directing this school altogether?

①-Under 2 ②-2-5 ③-6-8 ④-9-11 ⑤-Over 12

II-School Principal

Statements	1	2	3	4	5
1. I raise about the reading problem of children in school meetings.					
2. I consult with teachers about reading teaching techniques.					
3. I sport check teaching and learning activities directly at classroom.					
4. I acknowledge a report of students' learning results.					
5. I include reading activity costs as a priority in budget plan.					
6. I manage school budget to buy equipment for creating reading materials.					
7. I conduct fundraising for support reading activity.					
8. I report about budget expending for reading activities during school meeting.					
9. I participate in school and community meeting to discuss about reading issues.					
10. I lead related stakeholders to make the school development plan.					
11. I advocate to integrate reading action in commune investment plan.					
12. I cooperate with related stakeholders to conduct internal reading evaluation.					

APPENDIX B: Questionnaire for Teacher

School ID		Class ID		Principal ID		Teacher ID	

Research Protocol: The objectives of this research are first to measure the current practice level of stakeholders' accountability; secondly, to find out the relationship among stakeholders' accountability, and thirdly, to seek the guidelines for stakeholders' accountability for students' reading literacy. When you respond to this question, please note the information below:

- Your name is not required
- All information will be used for statistical purposes and kept in secret
- Your response will be combined with those from other participants to produce summary statistics and reports
- You will spend approximately 15 minutes to complete this questionnaire
- I appreciate your time and effort and thank you for your cooperation and contribution.

Instruction: This questionnaire is part of the guidelines for stakeholders' accountability in Cambodian students' reading literacy research. In order to respond with all questions below, please be aware of instruction below:

- Each question need only one respond
- 1= Strongly disagree, 2= Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

We appreciate the time and effort that this takes and thank you for your cooperation and contribution.

I- **Demographic Information**

1-Are you female or male?

①-Male ②-Female

2-How old are you?

①-25 ②-26-30 ③-31-40 ④-41-50 ⑤-Under 60

3-What is the highest level of formal education you have completed?

①-High school ②-Bachelor ③-Master degree ④-PhD

4-By the end of this school year, how many years will you have been teaching altogether?

①-Under 2 ②-2-5 ③-6-8 ④-9-11 ⑤-Over 12

II-Teachers

Statements	1	2	3	4	5
1. I review the previous lesson for students before starting the new.					
2. I read the lesson as a sample for students before let them to do by themselves.					
3. I use teaching and learning materials to assist my students' reading activities.					
4. I let students to do group work or play reading game for understanding lessons.					
5. I correct my students' homework before starting lesson.					
6. I require students to read lesson if they do not do homework.					
7. I ask my students to re-read the previous lesson to correct their reading mistake.					
8. I regularly inspire my students to read books at home more.					
9. I send students' study results to their parents with a highlight of reading ability.					
10. I support reading activity integration in school development plan.					
11. I mostly attend with teacher-parental meeting.					
12. I cooperate with related stakeholders to buy or develop reading materials.					
13. I engage with related stakeholders to manage reading competition.					

APPENDIX C: Questionnaire for Parents/Caregivers

School ID		Class ID		Student ID			Parent ID				

Research Protocol: The objectives of this research are first to measure the current practice level of stakeholders' accountability; secondly, to find out the relationship among stakeholders' accountability, and thirdly, to seek the guidelines for stakeholders' accountability for students' reading literacy. When you respond to this question, please note the information below:

- Your name is not required
- All information will be used for statistical purposes and kept in secret
- Your response will be combined with those from other participants to produce summary statistics and reports
- You will spend approximately 15 minutes to complete this questionnaire
- I appreciate your time and effort and thank you for your cooperation and contribution.

Instruction: This questionnaire is part of the guidelines for stakeholders' accountability in Cambodian students' reading literacy research. In order to respond with all questions below, please be aware of instruction below:

- Each question need only one respond
- 1= Strongly disagree, 2= Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

We appreciate the time and effort that this takes and thank you for your cooperation and contribution.

I- **Demographic Information**

1- Are you female or male?

①-Male ②-Female

2-How old are you?

①-25 ②-26 to 30 ③-31 to 39 ④-40 to 49 ⑤-Under 60

3-How many member in your family?

①-Under 4 ②-4 to 6 ③-6 to 8 ④-8 to10 ⑤-Over 10

4-What is your relationship with children?

①-Parents ②-Grandparents ③-Aunt/uncle ④-Relative ⑤-Siblings

5-How many children do you have? (Skip if he/she does not a parent of children)

①-2 children ②-3 children ③-4 children ④-Over 5

6-What is your current main job? (Please select only one)

①-Famer ②-Worker ③-Teacher ④-Businessman ⑤-Other

7-What is the highest level of formal education you have completed?

①-Primary school ②-Secondary school ③-High school

④-Bachelor degree ⑤-Master degree

II-Parents

Statements	1	2	3	4	5
1. I provide an appropriate time for my children to read the books at home.					
2. I inspire and follow up my children to read book and do homework.					
3. I assist my children to read books or any documents such as news, story books.					
4. I respond to my children's query or look for related documents for them to read.					
5. I lead my children to do physical exercise or meditation.					
6. I buy reading books or other reading materials for my children.					
7. I value my children to share their idea when they have some issue after reading.					
8. I provide a gift to my children as an encouragement.					
9. I inspire my children to love reading book through showing my personal action.					
10. I praise my children to read public information before acting.					
11. I stimulate to my children through verbal to understand about useful of reading.					
12. I meet with my children's teachers to discuss about their behavior at school.					

APPENDIX D: Questionnaire for Student

School ID		**Class ID**		**Student ID**			**Parent ID**				

Research Protocol: The objectives of this research are first to measure the current practice level of stakeholders' accountability; secondly, to find out the relationship among stakeholders' accountability, and thirdly, to seek the guidelines for stakeholders' accountability for students' reading literacy. When you respond to this question, please note the information below:

- Your name is not required
- All information will be used for statistical purposes and kept in secret
- Your response will be combined with those from other participants to produce summary statistics and reports
- You will spend approximately 15 minutes to complete this questionnaire
- I appreciate your time and effort and thank you for your cooperation and contribution.

Instruction: This questionnaire is part of the guidelines for stakeholders' accountability in Cambodian students' reading literacy research. In order to respond with all questions below, please be aware of instruction below:

- Each question need only one respond
- 1= Strongly disagree, 2= Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

We appreciate the time and effort that this takes and thank you for your cooperation and contribution.

I- **Demographic Information**

1-Are you female or male?

①-Male ②-Female

2-How old are you?

①-Under 10 ②-10-11 ③-11-12 ④-Over 12

3-What grade are you studying?

①-5 ②-6

II-Students

Statements	1	2	3	4	5
1. I regulate to a home study schedule, especially reading books.					
2. I read the book at night before bed or in early morning.					
3. I practice exercise at home that my teachers give me.					
4. I submit homework to my teachers on time.					
5. I participate in group discussions in my class.					
6. I respond to my teachers' questions in the classroom.					
7. I volunteer for reading lesson when my teachers require.					
8. I used to assist my classmates to read a lesson or book.					
9. I join reading competitions at my school.					

APPENDIX E: READING TEST

Research Protocol: The objectives of this research are first to measure the current practice level of stakeholders' accountability; secondly, to find out the relationship among stakeholders' accountability, and thirdly, to seek the guidelines for stakeholders' accountability for students' reading literacy. When you respond to this question, please note the information below:

- Your name is not required
- All information will be used for statistical purposes and kept in secret
- Your response will be combined with those from other participants to produce summary statistics and reports
- You will spend approximately 30 minutes to complete this reading test
- I appreciate your time and effort and thank you for your cooperation and contribution.

Instruction: This questionnaire is part of the guidelines for stakeholders' accountability in Cambodian students' reading literacy research. In order to respond with all questions below, please be aware of instruction below:

- Read short paragraph and/or graph
- Circle or write down your answer for each question

I-<u>Reading 1: Lake Chad</u>

Figure 1 shows changing levels of Lake Chad, in Saharan North Africa. Lake Chad disappeared completely in about 20,000 BC, during the last Ice Age. In about 11,000 BC it reappeared. Today, its level is about the same as it was in AD 1000.

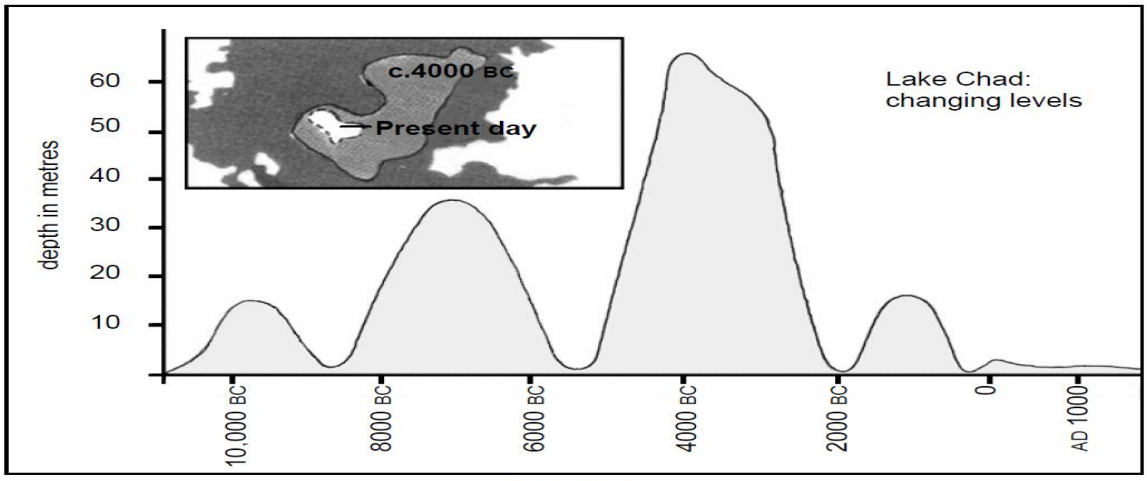


Figure 1

Figure 2 shows Saharan rock art (ancient drawings or paintings found on the walls of caves) and changing patterns of wildlife

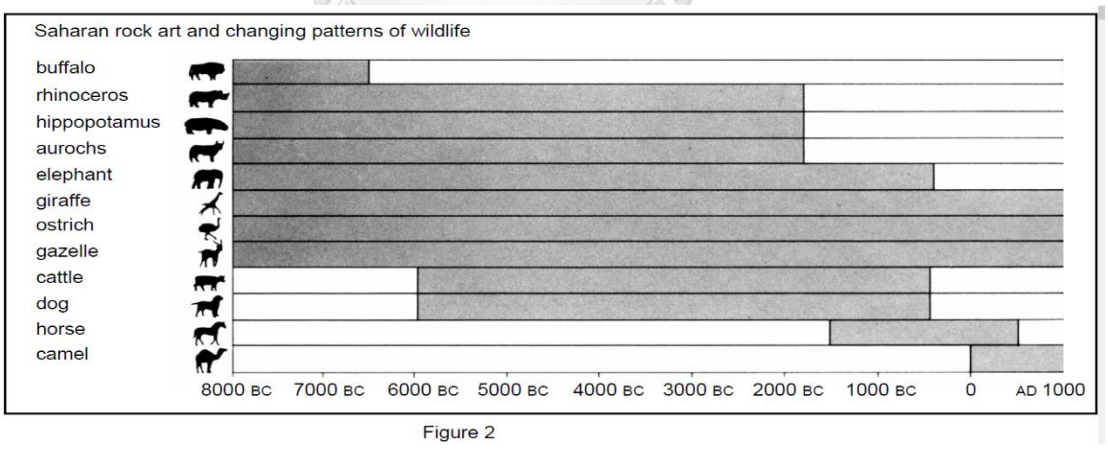


Figure 2

Question 1: LAKE CHAD (Locate & Access): What is the depth of Lake Chad today?

A. About two metres
B. About fifteen metres
C. About fifty metres
D. It has disappeared completely
E. The information is not provided

Question 2: LAKE CHAD (Understanding): In about which year does the graph in Figure 1 start?

……

Question 3: LAKE CHAD (Locate): Why has the author chosen to start the graph at this point?

……

Question 4: LAKE CHAD (Understanding): Figure 2 is based on the assumption that

A. the animals in the rock art were present in the area at the time they were drawn.
B. the artists who drew the animals were highly skilled.
C. the artists who drew the animals were able to travel widely.
D. there was no attempt to domesticate the animals which were depicted in the rock art.

Question 5: LAKE CHAD (Understanding)

For this question you need to draw together information from Figure 1 and Figure 2. The disappearance of the rhinoceros, hippopotamus and aurochs from Saharan rock art happened

A. at the beginning of the most recent Ice Age.

B. in the middle of the period when Lake Chad was at its highest level.

C. after the level of Lake Chad had been falling for over a thousand years.

D. at the beginning of an uninterrupted dry period.

II-<u>Reading 2: Bees</u>

Bees Text

The information on this page and the next page is from a booklet about bees. Refer to the information to answer the questions which follow it.

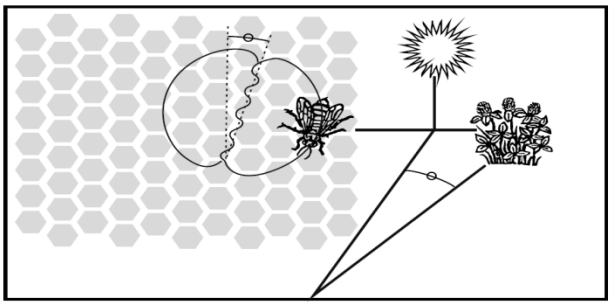
COLLECTING NECTAR

Bees make honey to survive. It is their only essential food. If there are 60,000 bees in a hive about one third of them will be involved in gathering nectar which is then made into honey by the house bees. A small number of bees work as foragers or searchers. They find a source of nectar, then return to the hive to tell the other bees where it is. Foragers let the other bees know where the source of the nectar is by performing a dance which gives information about the direction and the distance the bees will need to fly. During this dance the bee shakes her abdomen from side to side while running in circles in the shape of a figure 8. The dance follows the pattern shown on the following diagram.

The diagram shows a bee dancing inside the hive on the vertical face of the honeycomb. If the middle part of the figure 8 points straight up it means that bees can find the food if they fly straight towards the sun. If the middle part of the figure 8 points to the right, the food is to the right of the sun.

The distance of the food from the hive is indicated by the length of time that the bee shakes her abdomen. If the food is quite near the bee shakes her abdomen for a short time. If it is a long way away she shakes her abdomen for a long time

MAKING HONEY



When the bees arrive at the hive carrying nectar they give this to the house bees. The house bees move the nectar around with their mandibles, exposing it to the warm dry air of the hive. When it is first gathered the nectar contains sugar and minerals mixed with about 80% water. After ten to twenty minutes, when much of the excess water has evaporated, the house bees put the nectar in a cell in the honeycomb where evaporation continues. After three days, the honey in the cells contains about 20% water. At this stage, the bees cover the cells with lids which they make out of beeswax.

At any one time the bees in a hive usually gather nectar from the same type of blossom and from the same area. Some of the main sources of nectar are fruit trees, clover and flowering trees.

Glossary

House bee a worker bee which works inside the hive.

Mandible mouth-par

Question 1: Bees (Understanding): What is the purpose of the bees' dance?

A. To celebrate the successful production of honey.

B. To indicate the type of plant the foragers have found.

C. To celebrate the birth of a new Queen Bee.

D. To indicate where the foragers have found food.

Question 2: Bees (Locate): Write down three of the main sources of nectar.

1. ……

2. ……

3. ……

Question 3: Bees (Understanding): What is the main difference between nectar and honey?

A. The proportion of water in the substance.

B. The proportion of sugar to minerals in the substance.

C. The type of plant from which the substance is gathered.

D. The type of bee which processes the substance.

Question 4: Bees (Locate): In the dance, what does the bee do to show how far the food is from the hive?

……

……

III-Reading 3: Why children dropout of school in Cambodia[1]?

All children have the right to learn, whatever their circumstances. Adequate support to learning is crucial for them to develop to their full potential. However, in Cambodia many girls and boys are falling behind, particularly those who live in poor rural and urban areas.

Cambodia has made terrific progress in educating its children. Since 2007, the number of children enrolled in preschool programmes has more than doubled. The number of children enrolled in primary education has increased from 82 per cent in 1997 to over 97 per cent in school year 2017/18.

While progress is tangible, children in Cambodia are still failing to reach learning standards appropriate for their age. At the primary level, nearly 25 per cent of children in Grade 3 cannot write a single word in a dictation test. Only 27 per cent of 3- to 5-year-olds are developmentally on track in literacy and numeracy, and by the time they are 17 years old, 55 per cent of adolescents will have dropped out of school.

Cambodian children continue to fall behind in school for a number of reasons, including not being adequately prepared for school, experiencing poor quality teaching and learning, and attending school irregularly. This eventually leads to many of them dropping out altogether.

Inadequate learning in the early years of life, coupled with insufficient nutrition, leaves children developmentally behind. There are not enough qualified teachers, and the quality of learning environments is poor. There is a lack of basic infrastructure, such as water, sanitation and hygiene (WASH) facilities, which particularly impacts adolescent girls and children with disabilities. Violence is a problem in schools, with teachers using corporal punishment. Children with disabilities still experience discrimination. Many parents cannot understand the value of education and most cannot afford to send their children to school, particularly in rural and deprived areas.

---

[1] UNICEF Cambodia. Education Program, 2020, https://www.unicef.org/cambodia/education. Accessed 5 Jan.2020.

Question 1: (Locate): At the primary level, what percentage of children in grade 3 cannot write a single word?

A. Between 25 to 30 per cent cannot write a single word
B. Under 25 per cent cannot write a single word
C. Only 25 per cent cannot write a single word
D. Over 25 per cent cannot write a single word

Question 2: (Understanding): Why Cambodian children continue to fall behind in school?

A. Their families are poor and insufficient nutrition
B. Teachers are not enough qualification
C. Quality of learning environments is poor
D. Internal and external factor such as poor family, insufficient nutrition, learning environment, infrastructure, quality of teacher…etc.

Question 3: (Reflecting): How to prevent children from dropout of school?

……

Question 4: (Reflecting): What is the role of parents in preventing children from dropout of school?

……

End Test!

APPENDIX F: SEM Output

UNIVARIATE SAMPLE STATISTICS

UNIVARIATE HIGHER-ORDER MOMENT DESCRIPTIVE STATISTICS

Variable/ Sample Size	Mean/ Variance	Skewness/ Kurtosis	Minimum/ Maximum	% with Min/Max	Percentiles 20%/60%	40%/80%	Median
PMONIT	4.360	-0.504	3.250	3.51%	4.000	4.250	4.500
427.000	0.174	0.201	5.000	12.65%	4.500	4.750	
PMNLRES	3.827	-0.119	3.000	11.94%	3.500	3.750	3.750
427.000	0.246	-1.124	4.500	21.31%	4.000	4.500	
PRELSTAK	4.050	-0.669	3.000	11.24%	3.750	4.000	4.250
427.000	0.247	-0.012	5.000	3.04%	4.250	4.500	
TTEACH	4.043	-0.329	2.750	2.58%	3.500	4.000	4.000
427.000	0.262	-0.539	5.000	2.34%	4.250	4.500	
TFEED	4.104	0.229	3.250	2.58%	3.750	4.000	4.000
427.000	0.180	-0.548	5.000	5.15%	4.250	4.500	
TCOLAB	4.154	-0.371	3.000	2.58%	3.800	4.000	4.200
427.000	0.197	-0.082	5.000	2.58%	4.200	4.600	
PAMONI	3.828	-0.906	1.000	0.94%	3.250	3.750	4.000
427.000	0.578	1.057	5.000	5.15%	4.000	4.500	
PAMENT	3.572	-0.650	1.000	0.70%	3.000	3.500	3.750
427.000	0.405	1.094	5.000	0.70%	3.750	4.000	
PASUP	3.568	-0.597	1.000	0.70%	3.000	3.500	3.750
427.000	0.565	0.342	5.000	1.64%	3.750	4.250	
SSLFREG	3.950	-1.088	1.000	0.47%	3.500	4.000	4.000
427.000	0.474	1.806	5.000	4.92%	4.250	4.500	
SENGG	3.883	-0.695	1.400	0.23%	3.400	3.800	4.000
427.000	0.470	0.289	5.000	3.75%	4.200	4.400	
RUNDER	0.240	0.886	0.000	26.00%	0.000	0.200	0.200
427.000	0.040	1.913	1.400	0.23%	0.200	0.400	
RUSE	0.399	0.226	0.000	16.39%	0.250	0.250	0.500
427.000	0.072	-0.726	1.000	3.51%	0.500	0.750	

```
     RREFLCT               0.389       0.296       0.000   35.83%
0.000      0.250      0.500
             427.000       0.125      -1.242       1.250    0.23%
0.500      0.750


THE MODEL ESTIMATION TERMINATED NORMALLY



MODEL FIT INFORMATION

Number of Free Parameters                       57

Loglikelihood

          H0 Value                          -3367.000
          H0 Scaling Correction Factor          1.1839
            for MLR
          H1 Value                          -3249.804
          H1 Scaling Correction Factor          1.0459
            for MLR

Information Criteria

          Akaike (AIC)                       6848.000
          Bayesian (BIC)                     7079.236
          Sample-Size Adjusted BIC           6898.354
            (n* = (n + 2) / 24)

Chi-Square Test of Model Fit

          Value                            255.042*
          Degrees of Freedom                     62
          P-Value                            0.0000
          Scaling Correction Factor          0.9190
            for MLR

*   The chi-square value for MLM, MLMV, MLR, ULSMV, WLSM and WLSMV cannot be
used
    for chi-square difference testing in the regular way.  MLM, MLR and WLSM
    chi-square difference testing is described on the Mplus website.  MLMV,
WLSMV,
    and ULSMV difference testing is done using the DIFFTEST option.

RMSEA (Root Mean Square Error Of Approximation)

          Estimate                           0.085
          90 Percent C.I.                    0.075  0.096
          Probability RMSEA <= .05           0.000

CFI/TLI

          CFI                                0.868
          TLI                                0.807

Chi-Square Test of Model Fit for the Baseline Model

          Value                          1557.405
          Degrees of Freedom                   91
          P-Value                          0.0000

SRMR (Standardized Root Mean Square Residual)
```

Value 0.078

MODEL RESULTS

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
ACCPRIN BY				
PMONIT	1.000	0.000	999.000	999.000
PMNLRES	2.024	0.645	3.138	0.002
PRELSTAK	1.392	0.140	9.909	0.000
ACCTEAC BY				
TTEACH	1.000	0.000	999.000	999.000
TFEED	1.313	0.391	3.359	0.001
TCOLAB	1.993	0.780	2.554	0.011
ACCPARN BY				
PAMONI	1.000	0.000	999.000	999.000
PAMENT	0.857	0.084	10.214	0.000
PASUP	0.915	0.086	10.688	0.000
ACCSTUD BY				
SSLFREG	1.000	0.000	999.000	999.000
SENGG	1.082	0.100	10.865	0.000
READLIT BY				
RUNDER	1.000	0.000	999.000	999.000
RUSE	2.904	1.900	1.529	0.126
RREFLCT	3.913	2.727	1.435	0.151
READLIT ON				
ACCSTUD	0.032	0.023	1.408	0.159
ACCTEAC	0.034	0.036	0.948	0.343
ACCSTUD ON				
ACCPARN	0.666	0.076	8.791	0.000
ACCTEAC	-0.218	0.210	-1.037	0.300
ACCTEAC WITH				
ACCPARN	0.012	0.012	1.060	0.289
ACCPRIN	0.009	0.003	2.769	0.006
ACCPARN WITH				
ACCPRIN	-0.028	0.009	-2.990	0.003
READLIT WITH				
ACCPRIN	-0.003	0.002	-1.501	0.133
TCOLAB WITH				
PMONIT	-0.030	0.006	-5.054	0.000
RUNDER WITH				
PRELSTAK	0.012	0.003	4.373	0.000
PMNLRES	0.011	0.003	3.613	0.000
RREFLCT WITH				
PMNLRES	-0.021	0.009	-2.416	0.016
PRELSTAK WITH				
PMONIT	0.089	0.025	3.484	0.000
TTEACH	-0.033	0.008	-4.074	0.000

RUSE	0.016	0.005	3.293	0.001
SSLFREG WITH				
PAMONI	0.055	0.018	3.120	0.002
Intercepts				
PMONIT	4.360	0.020	215.767	0.000
PMNLRES	3.827	0.024	159.424	0.000
PRELSTAK	4.050	0.024	168.547	0.000
TTEACH	4.043	0.025	163.176	0.000
TFEED	4.104	0.021	199.732	0.000
TCOLAB	4.154	0.021	193.560	0.000
PAMONI	3.828	0.037	104.033	0.000
PAMENT	3.572	0.031	116.056	0.000
PASUP	3.568	0.036	98.080	0.000
SSLFREG	3.950	0.033	118.568	0.000
SENGG	3.883	0.033	116.986	0.000
RUNDER	0.240	0.010	24.863	0.000
RUSE	0.399	0.013	30.787	0.000
RREFLCT	0.389	0.017	22.765	0.000
Variances				
ACCPRIN	0.036	0.014	2.533	0.011
ACCTEAC	0.026	0.015	1.720	0.086
ACCPARN	0.314	0.050	6.330	0.000
Residual Variances				
PMONIT	0.142	0.023	6.161	0.000
PMNLRES	0.086	0.042	2.029	0.042
PRELSTAK	0.163	0.028	5.856	0.000
TTEACH	0.236	0.020	11.607	0.000
TFEED	0.136	0.018	7.437	0.000
TCOLAB	0.093	0.025	3.714	0.000
PAMONI	0.261	0.029	9.120	0.000
PAMENT	0.173	0.019	9.318	0.000
PASUP	0.302	0.032	9.462	0.000
SSLFREG	0.201	0.030	6.689	0.000
SENGG	0.156	0.028	5.611	0.000
RUNDER	0.020	0.000	999.000	999.000
RUSE	0.041	0.007	5.780	0.000
RREFLCT	0.071	0.015	4.628	0.000
ACCSTUD	0.132	0.024	5.502	0.000
READLIT	0.003	0.004	0.895	0.371

STANDARDIZED MODEL RESULTS

STDYX Standardization

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
ACCPRIN BY				
PMONIT	0.452	0.097	4.653	0.000
PMNLRES	0.796	0.111	7.167	0.000
PRELSTAK	0.549	0.093	5.929	0.000
ACCTEAC BY				
TTEACH	0.314	0.091	3.457	0.001
TFEED	0.497	0.092	5.403	0.000
TCOLAB	0.723	0.090	7.997	0.000
ACCPARN BY				

PAMONI	0.739	0.037	20.155	0.000
PAMENT	0.756	0.036	21.099	0.000
PASUP	0.682	0.039	17.375	0.000
ACCSTUD BY				
SSLFREG	0.756	0.042	17.803	0.000
SENGG	0.818	0.035	23.097	0.000
READLIT BY				
RUNDER	0.387	0.186	2.086	0.037
RUSE	0.646	0.076	8.495	0.000
RREFLCT	0.656	0.094	6.958	0.000
READLIT ON				
ACCSTUD	0.279	0.070	3.979	0.000
ACCTEAC	0.093	0.088	1.059	0.289
ACCSTUD ON				
ACCPARN	0.720	0.055	12.984	0.000
ACCTEAC	-0.068	0.063	-1.068	0.285
ACCTEAC WITH				
ACCPARN	0.137	0.102	1.347	0.178
ACCPRIN	0.286	0.096	2.971	0.003
ACCPARN WITH				
ACCPRIN	-0.263	0.060	-4.377	0.000
READLIT WITH				
ACCPRIN	-0.274	0.146	-1.872	0.061
TCOLAB WITH				
PMONIT	-0.264	0.068	-3.912	0.000
RUNDER WITH				
PRELSTAK	0.212	0.051	4.137	0.000
PMNLRES	0.260	0.095	2.749	0.006
RREFLCT WITH				
PMNLRES	-0.272	0.131	-2.077	0.038
PRELSTAK WITH				
PMONIT	0.583	0.075	7.821	0.000
TTEACH	-0.169	0.045	-3.786	0.000
RUSE	0.190	0.058	3.264	0.001
SSLFREG WITH				
PAMONI	0.241	0.070	3.437	0.001
Intercepts				
PMONIT	10.332	0.399	25.910	0.000
PMNLRES	7.897	0.207	38.205	0.000
PRELSTAK	8.378	0.322	26.009	0.000
TTEACH	7.897	0.250	31.630	0.000
TFEED	9.666	0.277	34.921	0.000
TCOLAB	9.389	0.323	29.113	0.000
PAMONI	5.045	0.243	20.735	0.000
PAMENT	5.616	0.261	21.531	0.000
PASUP	4.746	0.200	23.771	0.000
SSLFREG	5.763	0.305	18.914	0.000
SENGG	5.661	0.233	24.249	0.000
RUNDER	1.563	0.133	11.755	0.000
RUSE	1.496	0.057	26.308	0.000
RREFLCT	1.099	0.046	23.791	0.000

Variances				
ACCPRIN	1.000	0.000	999.000	999.000
ACCTEAC	1.000	0.000	999.000	999.000
ACCPARN	1.000	0.000	999.000	999.000
Residual Variances				
PMONIT	0.796	0.088	9.074	0.000
PMNLRES	0.366	0.177	2.066	0.039
PRELSTAK	0.699	0.102	6.876	0.000
TTEACH	0.902	0.057	15.849	0.000
TFEED	0.753	0.091	8.250	0.000
TCOLAB	0.477	0.131	3.645	0.000
PAMONI	0.454	0.054	8.376	0.000
PAMENT	0.429	0.054	7.918	0.000
PASUP	0.535	0.054	9.981	0.000
SSLFREG	0.428	0.064	6.667	0.000
SENGG	0.331	0.058	5.708	0.000
RUNDER	0.850	0.144	5.914	0.000
RUSE	0.582	0.098	5.918	0.000
RREFLCT	0.570	0.124	4.605	0.000
ACCSTUD	0.490	0.078	6.321	0.000
READLIT	0.912	0.042	21.917	0.000

R-SQUARE

Observed Variable	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
PMONIT	0.204	0.088	2.327	0.020
PMNLRES	0.634	0.177	3.583	0.000
PRELSTAK	0.301	0.102	2.965	0.003
TTEACH	0.098	0.057	1.729	0.084
TFEED	0.247	0.091	2.702	0.007
TCOLAB	0.523	0.131	3.998	0.000
PAMONI	0.546	0.054	10.077	0.000
PAMENT	0.571	0.054	10.549	0.000
PASUP	0.465	0.054	8.687	0.000
SSLFREG	0.572	0.064	8.901	0.000
SENGG	0.669	0.058	11.549	0.000
RUNDER	0.150	0.144	1.043	0.297
RUSE	0.418	0.098	4.247	0.000
RREFLCT	0.430	0.124	3.479	0.001

Latent Variable	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
ACCSTUD	0.510	0.078	6.568	0.000
READLIT	0.088	0.042	2.113	0.035

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix 0.175E-06
(ratio of smallest to largest eigenvalue)

TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value

Effects from ACCPARN to READLIT

Indirect	0.021	0.015	1.454	0.146

Effects from ACCTEAC to READLIT

Indirect	-0.007	0.008	-0.832	0.405

STANDARDIZED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS

STDYX Standardization

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
Effects from ACCPARN to READLIT				
Indirect	0.201	0.053	3.767	0.000
Effects from ACCTEAC to READLIT				
Indirect	-0.019	0.019	-1.004	0.316

MODEL MODIFICATION INDICES

NOTE: Modification indices for direct effects of observed dependent variables
regressed on covariates may not be included. To include these, request MODINDICES (ALL).

Minimum M.I. value for printing the modification index 10.000

		M.I.	E.P.C.	Std E.P.C.	StdYX E.P.C.
BY Statements					
ACCPRIN	BY TTEACH	10.045	-0.503	-0.096	-0.187
ACCPARN	BY TTEACH	20.055	0.207	0.116	0.227
ACCPARN	BY TCOLAB	10.120	-0.170	-0.095	-0.215
ACCPARN	BY SENGG	17.010	-1.186	-0.665	-0.969
ACCSTUD	BY TTEACH	10.999	0.163	0.085	0.165
READLIT	BY SSLFREG	13.659	-2.084	-0.124	-0.181
WITH Statements					
RUSE	WITH RUNDER	37.082	-0.015	-0.015	-0.524
RREFLCT	WITH RUNDER	88.759	-0.031	-0.031	-0.829
RREFLCT	WITH RUSE	94.336	0.119	0.119	2.191
Variances/Residual Variances					
RUNDER		183.120	0.020	0.020	0.844

DIAGRAM INFORMATION

Use View Diagram under the Diagram menu in the Mplus Editor to view the diagram.
If running Mplus from the Mplus Diagrammer, the diagram opens automatically.

```
     Beginning Time:  14:40:47
        Ending Time:  14:40:47
       Elapsed Time:  00:00:00


MUTHEN & MUTHEN
3463 Stoner Ave.
Los Angeles, CA  90066

Tel: (310) 391-9971
Fax: (310) 391-8971
Web: www.StatModel.com
Support: Support@StatModel.com

Copyright (c) 1998-2019 Muthen & Muthen
```

VITA

NAME	Nil Damnang
DATE OF BIRTH	03 March 1980
PLACE OF BIRTH	Battambang Province, Cambodia
INSTITUTIONS ATTENDED	Chulalongkorn University
HOME ADDRESS	Battambang Province