



A COMPARATIVE STUDY OF GRADE 11 STUDENTS' AND TEACHERS'
ATTITUDES TOWARDS COOPERATIVE LEARNING IN TWO INTERNATIONAL
SCHOOLS IN PHNOM PENH

NOU HANRITH

A Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF EDUCATION
in Curriculum and Instruction
Graduate School of Human Sciences
ASSUMPTION UNIVERSITY OF THAILAND

2016

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By: NOU HANRITH

Field of Study: CURRICULUM AND INSTRUCTION

Thesis Advisor: ASST. PROF.DR. RICHARD LYNCH

Accepted by the Graduate School of Human Sciences, Assumption University in
Partial Fulfillment of the Requirements for the Master Degree in Education

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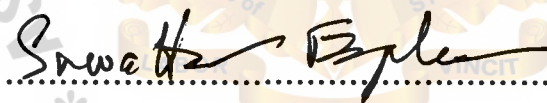
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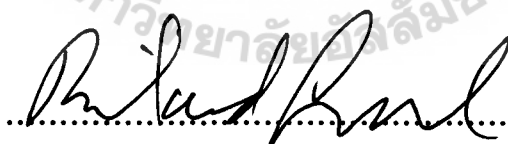
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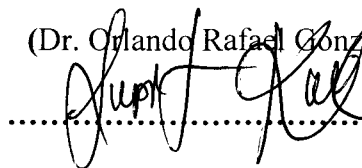
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ABSTRACT

I.D. No.: 5629496

Key Words: ATTITUDES, COOPERATIVE LEARNING, INTERNATIONAL SCHOOLS,
PHNOM PENH

Name: NOU HANRITH

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The main purpose of this study was to compare Grade 11 students' and teachers' attitudes towards cooperative learning at two international schools in Phnom Penh in academic year 2016. There were 337 students and 51 teachers involved in the study. The objectives were to identify students' and teachers' attitudes towards cooperative learning by teachers and student and to determine if there was a significant difference between students' and teachers' attitudes towards cooperative learning. The study was conducted using a survey questionnaire. All collected data were analyzed by utilizing percentage, mean and standard deviation, and the independent samples t-test. For objective one, the researcher found that the ABC model of the students' attitudes ranked from the highest to the lowest was cognition, affect, and behavior. For objective two the teachers' attitudes ranked from the highest to the lowest were affect, cognition, and behavior. For objective three the study found there was no significant difference in the use of cooperative learning between the two groups. Future studies should determine students' and teachers' attitudes and preferences in other places in a variety of schools-both public and private and grade levels in different regions in Cambodia,

to include pre service and in service, education leaders, principals, and all relevant departments. Furthermore, would like to recommend to employ mixed research designs. A questionnaire could be used to collect quantitative data to measure attitude levels, correlations. Qualitative methods, such as interviews, document analysis and observations should be utilized to ensure a greater richness and depth of data collection regarding teachers’ and students’ attitudes and preferences toward cooperative learning methods in all subjects as well as across grade levels. In addition, experimental approaches could be utilized to assess the effectiveness of implementing particular cooperative learning strategies for various subject areas within the Cambodian context. Based on the research findings, recommendations are provided for administrators, teachers and future researchers.



Field of Study: Curriculum and Instruction

Student’s signature.....

Graduate School of Human Sciences

Advisor’s signature

Academic Year 2016

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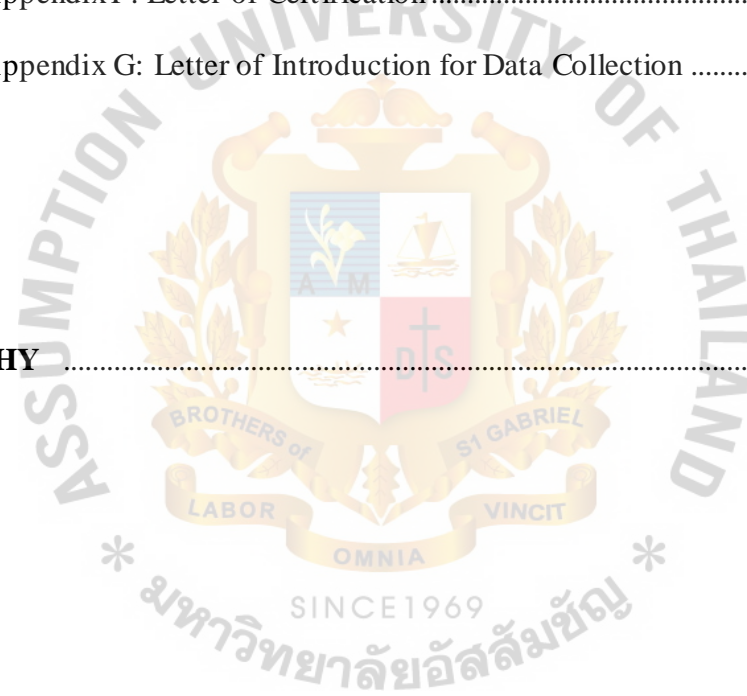
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The logo of Assumption University of Thailand is a circular emblem. It features a central shield with a blue top section containing a white lily and the letters 'A M', a white middle section with a gold star, and a red bottom section with a white cross. The shield is flanked by golden laurel branches. Above the shield is a golden crown. Below the shield is a golden banner with the Latin motto 'LABOR OMNIA VINCIT'. The outer ring of the emblem contains the text 'ASSUMPTION UNIVERSITY OF THAILAND' at the top and 'มหาวิทยาลัยอัสสัมชัญ' at the bottom, with 'SINCE 1969' in the center of the bottom arc. The entire logo is rendered in a light, semi-transparent grey color as a watermark.

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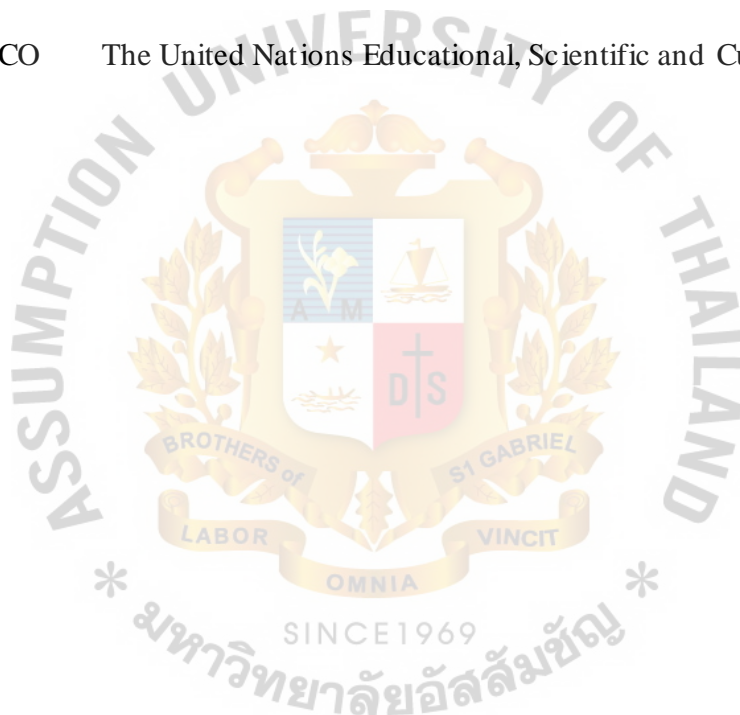
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LIST OF ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
BELTEI	Business, Economics, Law, Tourism, English, and Information Technology
CL	Cooperative Learning
MoEYS	The Ministry of Education, Youth and Sport
UNESCO	The United Nations Educational, Scientific and Cultural Organization



CHAPTER I

INTRODUCTION

This chapter presents the background of study, statement of the problem, research questions, research objectives and research hypothesis, the theoretical and conceptual frameworks, scope of the study, definitions of items, and significance of the study.

Background of the Study

According to educational philosopher John Dewey, “If we teach today as we taught yesterday, we rob our children of tomorrow” (cited in Turkment, 2006, p.1). This researcher believes that what Dewey was trying to say is that if teachers keep teaching new generations the same way teachers taught kids 50 years ago, knowledge will never expand or never grow so our teaching and learning must adapt and change. Thus, there are efforts around the world to move away from instruction in which students are passive recipients of knowledge to the teaching and learning models which students actively engage learners in discovering and constructing new knowledge through cooperative learning (as cited in Nith Bunlay, Wayne E. Wright, Hor Sophea, Kurt Bredenburg, and Mini Singh, 2010, p.1).

The Ministry of Education, Youth and Sport (MoEYS) has a long-term mission to ensure that all Cambodian children and youth have an equal opportunity to access quality education. The inauguration of the ASEAN Economic Community in 2016 led Cambodia to prepare for improving the quality of education, according to Article 67 of the effective constitution of the Kingdom of Cambodia, 2003, which stated that, “The state shall also adopt an educational program according to the principles of modern pedagogy, including technology and foreign languages, as well as public and private Schools and classrooms at all

levels” (cited in contribution of UNESCO to compilation UN information, 2010). This researcher believes it is time to adopt a different strategy to address students’ learning problems such as indicated by high dropout rates and decrease in student achievement. Teachers and educational leaders must also recognize that cooperative learning can help students enhance learning. In addition, research provides evidence that traditional teaching, i.e., the teacher-center approach is less effective than learner-centered instruction (Wink, 2000).

The model of teaching and learning in which students actively engage in discovering and constructing new knowledge through small group projects and activities, participate in cooperative work with their teachers, fellow students, and the community is the instructional model best suited to enhancing learning achievement for all students. Johnson and Johnson, (2008) pointed out that cooperative learning therefore, is a students work together in group to attain the learning objective. Active learning a technique for learner to work in groups to meet a set goal are framed by current education reform policies in Cambodia, and professional development activities are organized to promote them, and assist teachers in implementing them this study will provides a case study of progress in Cambodia towards the promotion of cooperative learning methodology and active-learning pedagogies within the context of national education reform.

According to the Confucius (551 BC-479 BC) “When I have pointed out one corner of a square to anyone and he does not come back with the other three, I will not point it out to him a second time.” (cited in Lun, 2008) what Confucius said mean every truth has four corners: as a teacher I give you one corner, and it is for you to find the other three.” This means that the teacher provides the conditions for learning but the students must learn by doing by exploring, by discovering, because knowledge from teachers and textbooks alone is not enough. These findings agree with the previous study Almala (2005) cooperative learning

under the learner-centered learning method ties outcomes with the constructivist learning theory where learners construct their own meaning in active way.

Statement of the Problem

The Ministry of Education, Youth and Sport (MoEYS) had an initiative to set up a program focused on basic education from the year 2008 to 2013. Since then the MoEYS also began introducing cooperative learning approach at High Schools as a new initiative in teaching and learning. That learning approach was introduced in the academic year 2015-2016. Thus far, no formal research has been conducted assessing this new cooperative learning approach. Beginning with the notion that no instructional approach can be successfully implemented unless the prime actors, students and teachers, buy into it, this study will begin that research program by assessing students and teachers attitudes towards cooperative learning. Therefore, the first time the study was conducted to Grade 11 students' and teachers' attitudes towards and preferences for cooperative learning at two international schools in Phnom Penh. The researcher selected these Schools because there had never been a previous research on students' and teachers' attitudes towards cooperative learning, and more importantly, the researcher would like to benefit the school, administrators, teachers, and students in this study.

Therefore, a comparative study of Grade 11 students' and teachers' attitudes towards cooperative learning at two international schools. The results of the comparison were based on ABC model theory (2015), and the theory has provided a key point for understanding students' and teachers' attitudes. The need of students' and teachers' attitudes which from a low level to a high positive had illustrated what teachers' need was when they were working at the school to what extent teachers are satisfied with the working conditions and it affects their decision to keep on working in the current school.

Research Questions

The following research questions, objectives, and hypothesis have been developed to guide this study.

1. What are the Grade 11 students' attitudes towards cooperative learning at two international schools in Phnom Penh?
2. What are the Grade 11 teachers' attitudes towards cooperative learning at two international schools in Phnom Penh?
3. Is there a significant difference between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning at two international schools in Phnom Penh?

Research Objectives

1. To determine the Grade 11 students' attitudes towards cooperative learning at two international schools in Phnom Penh.
2. To determine the Grade 11 teachers' attitudes towards cooperative learning at two international schools in Phnom Penh.
3. To determine if there is a significant difference between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning at two international schools in Phnom Penh.

Research Hypothesis

There is a significant difference between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning at .05 level at two international schools in Phnom Penh.

Theoretical Framework

In this study, four main theories will guide and support the research objectives, as follows.

- 1. The ABC model of attitude formation.
- 2. Bandura’s reciprocal determinism.
- 3. Bruner’s constructivism and discovery learning.
- 4. Vygotsky’s social constructivism embodied in his theory of the zone of proximal development.

The ABC model of attitude formation (henceforth, the ABC model) posits that A represents affect, B behavior, and C cognition (Sinha, 2015). Figure 1 shows the relationship of these components of attitude formation.

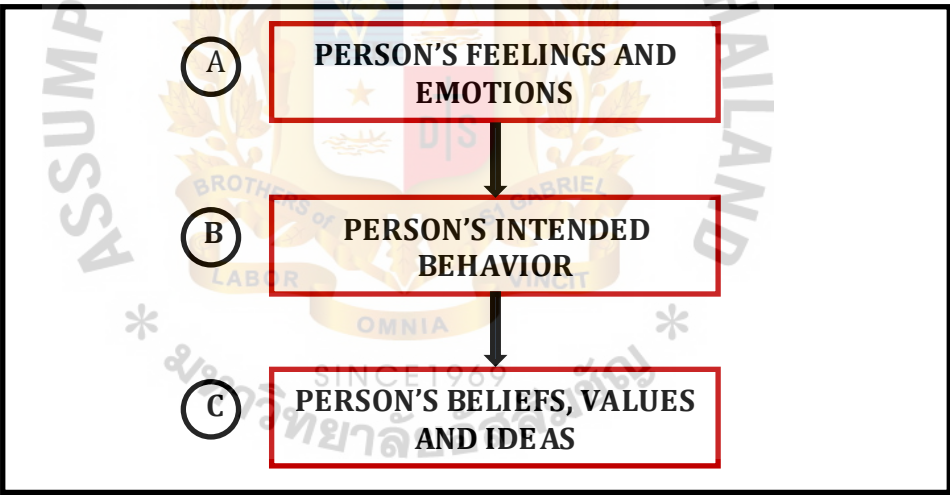


Figure 1. Relationships of attitudes, behavior and cognition as components of attitude Formation (from Sinha, 2015).

Thus, every attitude is comprised of three components: feeling, doing and thinking. Bandura’s reciprocal determinism is also a triadic theory wherein (a) personal factors in the form of cognition, affect, and biological events, (b) behavior, and (c)

environmental factors together determine how learners feel, behave, and think (Pajares, 2002). Reciprocal determinism is illustrated in Figure 2.

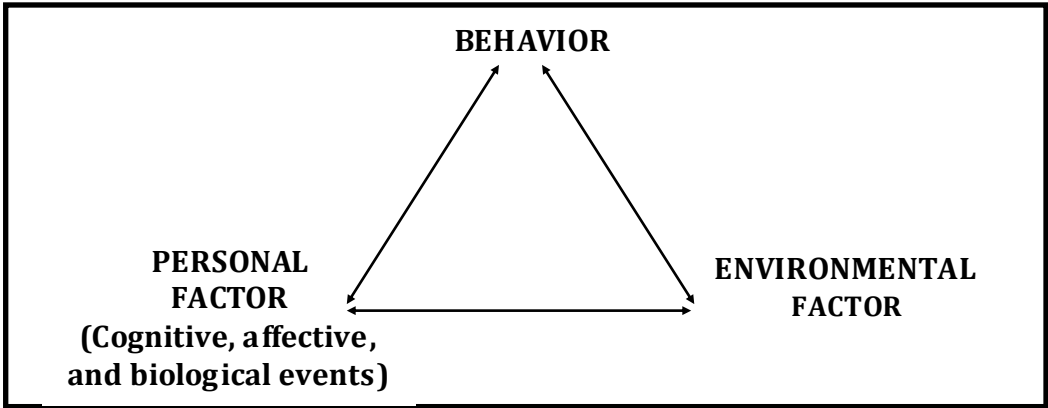


Figure 2. Reciprocal determinism (from Pajares, 2002).

Bruner’s (1978) constructivism & discovery learning theory embodies cooperative learning whereby through active, cooperative participation in the learning process students discover and integrate new knowledge and skills.

Finally, Vygotsky’s zone of proximal development (ZPD) is a model of cooperative learning in action whereby learners are assisted by more knowledgeable others (MKOs), who may be parents, teachers, or more advanced students, in scaffolding up the knowledge and skill curve (McLeod, 2012).

Figure 3 is a graphic representation of the ZPD.

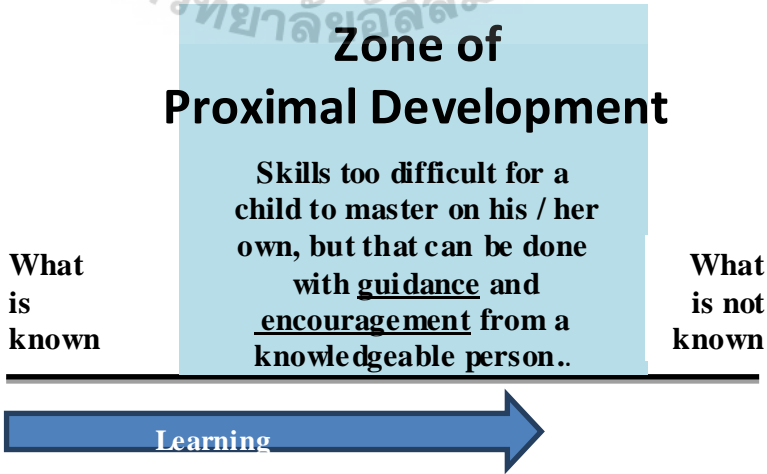


Figure 3. Vygotsky’s zone of proximal development (from McLeod, 2012).

The purpose of this study mainly focuses on the students' and teachers' attitudes which affect the cooperative learning. Thus, every attitude is comprised of three components: feeling, doing, and thinking. Therefore, the need attitudes should be concerned with every attitude issues, Based on Bandura' reciprocal determinism proposed a triadic theory wherein (a) personal factors in the form of cognition, affect, and biological events, (b) behavior, and (c) environmental factors together determine how learners feel, behave, and think (Pajares, 2002).

Attitude is a positive or negative evaluation which reaction towards an object, situation, and general environment (Tessor & Shaffer, 1990, as cited in Passer & Smith, 2007). Of course, attitudes come from the internal states influencing what students are likely to do. This internal state is the degree of positive/negative or prefer or not prefer reaction state an object, situation, group of objects, and general environment. Therefore, educators are interested in the importance of attitudes for the need to promote students' attitudes is direct relationship between attitudes and achievement (Fenneman, 1973; Greenwald, 1965; Lamb, 1987; Levy, 1973; Perry & Kopperman, 1965; Simonson, 1977). In addition, the importance of teachers' attitudes that most would agree is important and teachers routinely teach that attitude. Bandura (1986) stressed that the development of personality results from continuous reciprocal interaction among all three components: environment, behavior, and psychological processes, which include attitudes toward learning and learning activities. Next the powerful relationship between students' attitudes and achievement which links to the reason students do well or poorly. If students can do what they like, it shows the attitudes of theirs and their learning enjoyment which enhance them to pursue their school life.

Bruner's constructivism and discovery learning theory is at the heart of cooperative learning. Bruner was one of the founders of constructivist learning theory which

is based on learners constructing new knowledge and skills through participating actively in the teaching and learning process.

Thus, the clearly perception of the four theories summarized above together form an approach to understanding cooperative learning. These theories would be beneficial for produce cooperative learning to understand cooperative learning what is a form of social group teaching and learning process where students work in a social setting to solve problems according to five key elements of cooperative learning: positive interdependence, face-to-face interaction, individual accountability, small group & interpersonal skills and group self-evaluation (Slavin 1991),

Conceptual Framework

The research mainly focused on the students’ and teachers’ attitudes toward cooperative learning which on the part of both Grade 11 students and teachers in two international schools in Phnom Penh. The study will also compare the students’ and teachers’ attitudes towards use of cooperative learning activities generally. Based on the theoretical frame work, the major theory- ABC model of attitude formation was used to determine the difference the students’ and teachers’ attitudes towards use of cooperative learning. Figure 4 presents the conceptual framework of the study.

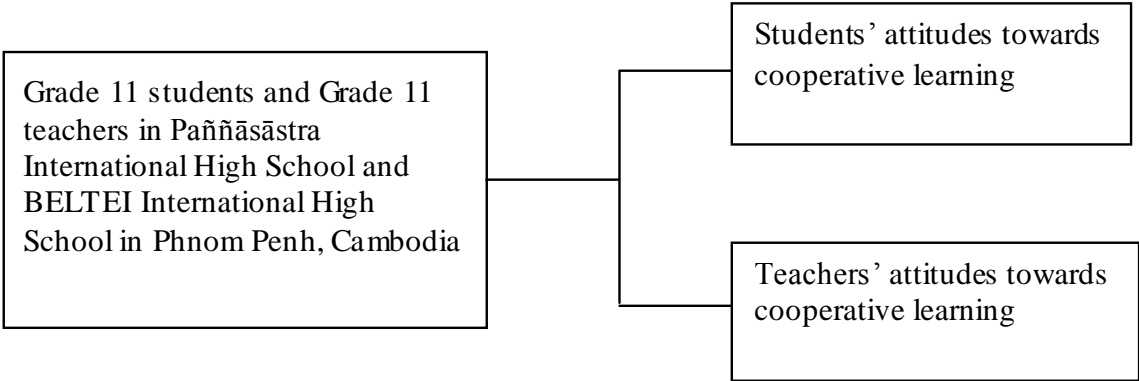


Figure 4. The Conceptual framework of the Study.

Scope of the Study

This study was conducted with Grade 11 students and teachers at two international schools in Phnom Penh, Cambodia during the academic year 2016-2017. Therefore, this research had limited population and resources. Moreover, this research had limited time because the researcher conducted this research during 2016 academic year in the private international high schools. The two international schools are considered as models for other private high schools because they are equipped with enough electricity, human resources, materials, and equipment, both had a large number of part-time teachers that could be represented in the research. This scope and limitation of this study were as follows.

The study focused only on the participants’ attitudes to cooperative learning within the selected schools. The ABC model needs based on (Sinha, 2015) discussed in order of affect, behavior, and cognition factors. As well, the theoretical framework was limited to those theories enumerated above.

The study described students’ attitudes about students’ affect, students’ behavior, and students’ cognition. For that reason, its findings may not be generalized for others schools.

This study described teachers’ attitudes about teachers’ affect, teachers’ behavior, and teachers’ cognition. For that reason, the findings may not be generalized for others schools.

Definitions of Terms

To help the reader get a clear understanding of this study, the following key terms are specifically defined below.

Active learning refers to a model of instruction that focuses on the responsibility of learning being on the learner; it is a process where students engage in activities such as discussion or problem solving that promote analysis, synthesis, and evaluation.

Attitudes in this study refer to a favorable or unfavorable evaluation reaction toward cooperative learning approach indicated in one's ideas, feelings, beliefs or way of thinking that affects a person's behavior.

Grade 11 students' attitudes are their feelings, behavior and thoughts toward the cooperative learning at two international schools process.

Grade 11 students' affect: students' feelings and emotions

Grade 11 students' behavior: students' intended behavior positive.

Grade 11 students' cognition: students' beliefs, values and ideas.

They measured by means and standard deviations of the 15 items, in section II of the students' questionnaire.

Grade 11 Teachers' attitudes are their feelings, behavior and thoughts toward cooperative learning teaching-learning process at two International School.

Grade 11 teachers' affect: students' feelings and emotions

Grade 11 teachers' behavior: students' intended behavior positive.

Grade 11 teachers' cognition: students' beliefs, values and ideas.

Measured means and standard deviations of the 16 items in section III of the teachers' questionnaire.

BELTEI International High School in Phnom Penh is School that does not get money from the government and that are none-governmental educational institutions run by a group of private individuals. They are funded by tuitions as well as donations. At the present, the school included 13 branches, 1231 has full-time students and 130 part-time instructors and in the academic year 2016-2017.

Cooperative learning is a learning approach which groups students together as teams to achieve specific learning targets or objectives.

Learner-centered instruction is an instructional approach in which students influence the content, activities, materials, and pace of learning. This learning model places the student in the center of the learning process. This is an umbrella term that covers a wide variety of learning approaches and activities, including active learning and cooperative learning.

Paññāsāstra International High School in Phnom Penh does not get money from the government and is none- a governmental educational institution run by a group of private individuals. It is funded by tuitions as well as donations. The school has 170 full-time students and 25 part-time instructors and in the academic year 2016-2017.

Significance of the Study

This is the first study being conducted investigating both students' and teachers' attitudes towards cooperative learning at any high schools Cambodia. It will benefit both students and teachers and will help the MoEYS to make decisions about mandating specific teaching and learning processes such as cooperative learning in the country's schools. The researcher believes that the national curriculum could be adapted according to the findings of this study to strengthen cooperative learning methodologies for both significant stakeholders – students and teachers.

Finally, the findings of the research will be compiled and shared among teachers, Schools, and Ministry and other interested educational practitioners so that the research results can be used to make education decisions to improve the existing teaching practice, to promote students' learning achievement of other school subjects. The results of this study may also be used by future researchers interested in applications of cooperative learning methodologies in Cambodia specifically and the ASEAN region generally.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter reviewed the literature relating to cooperative learning under the following headings.

The ABC Model of Attitudes Formation

The purpose of this study mainly focuses on the students' and teachers' attitudes which affect the cooperative learning; hence, the researcher explained the elements made up attitude formation. The ABC model of attitude formation (Henceforth, the ABC model) was developed by Sinha pointed out that people's attitudes are more likely to be formed by three important elements that are represented in what is called the ABC model of attitude formation's theory – A for affect, B for behavior, and C for cognition (Sinha, 2015). The affect element refers to the individual's feeling or emotional reaction toward an attitude object. It explains the feeling or emotion which a person feels toward and objects of an activity. An Affect component consists of the emotion or feeling which is related to an object or an activity or a person (e.g., good or bad feelings, likes, comfort, and an anxiety). If a student likes math or art, this attitude falls within the affect component. The behavior element comprises a person's behavior response, or reaction, to an object or activity. Another component is the Cognition one which is an evaluative belief (such as thinking something is valuable, useful, worthless, etc.).

Attitudes Defined

Jung (1921/1971, as cited in Feist & Feist, 2009) defined an attitude as a predisposition to act or react in a characteristic direction. Haladyna (2002) defined attitude as an emotional tendency for or against an object.

Attitude is a positive or negative evaluation which reacts towards a stimulus, such as a person, action, object, or concept (Tesser & Shaffer, 1990, as cited in Passer & Smith, 2007). Of course, attitudes come from the internal states influencing what students are likely to do. This internal state is the degree of positive/negative or favorable/unfavorable reaction toward an object, situation, and person, group of objects, general environment, or group of persons. According to Lilienfeld et al. (2010), attitude is a belief with an emotional component. It reflects on how one feels about an issue or a person. Moreover, McMillan (2011) defined attitude as predisposition to respond favorably or unfavorably to specified situations, concepts, objects, institutions, or persons.

Attitude has also been conceptualized as a mental state of readiness, organized through experience, exerting a directive or dynamic influence upon an individual's response to all objects (Thomas & Znaniecki, 1918). Educators have been interested in this component of attitude because it can influence learning behavior to achieve learning outcomes.

The researcher synthesized the above definitions and defines attitudes as the physical reactions and mental feeling—liking or disliking towards the teaching-learning processes and the subject contents.

Attitude Formation

The environmental factor becomes a major contributor directly influencing human's behavior and the formation of attitudes. Behaviorism expresses that internal states that form attitudes are the result of observable actions and a change in attitude is the result of learning behavior directly through action and reinforcement. However, social-learning theory

explains that learning through behaviors, direct action and reinforcement is not the most important. Thus, indirect learning through observing a model and receiving verbal instruction has a powerful impact on behavior and attitude formation (Zimbardo & Leippe, 1991).

Importance of Attitudes

Educators are interested in the importance of attitudes that can promote and enhance students' achievement. The most important objective of the instructional activities is for the achievement of every individual student. Therefore, the need for formatting attitudes and planning activities to facilitate students' achievement is necessary.

The most powerful reason for the need to promote students' attitudes is a direct relationship between attitudes and achievement. Much research has linked positive student attitudes to learning achievement (Fenneman, 1973; Greenwald, 1965; Lamb, 1987; Levy, 1973; Perry & Kopperman, 1965, 1966; Simonson, 1977). Most importantly, educators agree that attitude is vital because it influences student learning and achievement for they develop an attitude towards the efficacy of the teaching approach. The importance of teachers' attitudes that most would agree is important and teachers routinely teach that attitude. Next is the powerful relationship between students' attitudes and achievement which links to the reason students do well or poorly. If students can do what they like, it shows the attitudes of theirs and their learning enjoyment which enhance them to pursue their school life and the subject contents. Therefore, Schools must provide significant subject choices and advice for every individual. If a student likes chemistry, he or she is more likely to select the course. Thus, students tend to do what they like and stay after class to work on experiments and further search for the knowledge of chemistry though the class is over. Finally, educators should reorganize techniques that influence students' attitudes when the learners are not willing to participate; for instance, the gender biases.

In summary, attitudes discussed and studied for decades among social scientists and educators are beginning to be recognized as related to learning process and achievement.

Social Learning Theory (Bandura)

Bandura (1977) indicated that learning occurs by observing, modeling and imitating. One of his contributions was that people can learn new things and behavior by watching other people. According to Schunk (2007), the important concept of social learning theory is that learners can improve their knowledge and retention by observing and modeling the behaviors, attitudes and reactions of others, and that human thinking process are central to understanding personality. Bandura is one of its main contributors along with the constructivist Jerome Bruner (Bruner, 1978). Three key concepts have been defined as the social learning theory: 1) people can learn through observation, modeling and imitating model, 2) mental states are important in learning, and 3) learning does not always lead to a change of behavior (Schunk 2007).

The social learning theory also aligns with the cognition learning theory introduced by Bandura (1971). The cognition learning theory focuses on the central role of social learning by indicating on how imitable behaviors are affected by cognition constructs: attention, retention, production and motivation.

Social cognition theory

This theory argues that individuals are the agents that proactively engage in their own development and can make things happen through their actions. The key idea is that among personal factors, individuals possess self-beliefs that enable them to practice in controlling thoughts, feelings, and actions. Bandura's primary point was that "what people think, believe, and feel affects how they behave" (Bandura, 1986). Bandura provided a view

of human behavior in which beliefs are critical elements in the exercise of control and personal agency. Thus, individuals are considered as both the products and producers of their own environments and of their social systems. Due to the fact that people are not supposed to live in isolation, Bandura expanded the conception of human agency to include collective agency. People work together on shared beliefs about their capabilities and common aspirations. This conception of theory makes changes in society and human adaptation and individuals. Environment and social system influence human behaviors through psychological mechanisms of the self-efficacy system. Hence, social cognition theory suggests that factors including economic conditions, socioeconomic status, and educational and family structures do not directly affect human behavior. Instead, they affect people's aspirations, self-efficacy, personal standards, emotional states and other self-regulatory influences.

Reciprocal determinism

This theory tends to explain human attitudes through the reciprocity among cognition, behavior, and environmental influences. According to Bandura, (1986) personality is shaped by three factors: the environment, behavior, and psychological processes. The view of (a) personal factors in terms of cognition, affect and (b) behavior and (c) environmental influences that create interactions resulting in a triadic reciprocity is the foundation of Bandura's conception of reciprocal determinism (Pajares, 2002). According to social learning theory, most learning happens in a social environment, where learners acquire knowledge, rules, skills, strategies, beliefs, and attitudes by observing others (Schunk, 2007). This theory places human behavior within a framework of three reciprocal interactions: person, behavior, and environment (Schunk, 2007). By this framework, teachers help improve their students' emotional states and correct faulty self-beliefs and habits of thinking (personal factors), improve their academic skills and self-regulatory practices (behavior), and change the school

and classroom structures enhancing student success (environmental factors). Bandura's social cognition theory places more concern on the role of environmental factors in the development of human behavior and learning.

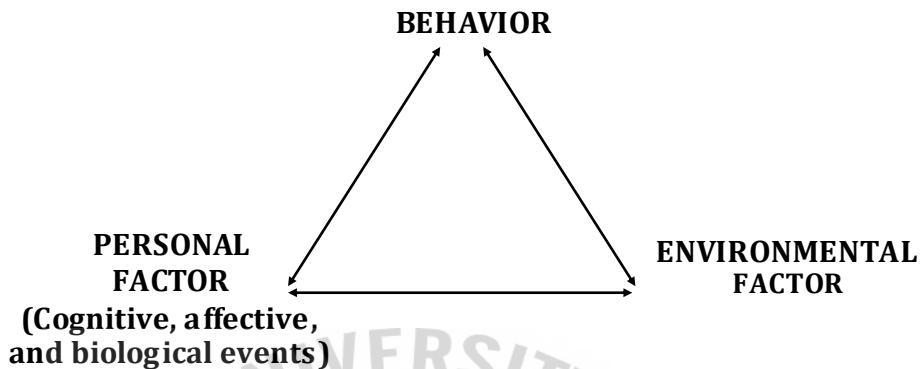


Figure 5. Reciprocal Determinism (from Pajares, 2002).

Bandura (1986) noted that environment and behavior reciprocally interact. He stressed that the development of the personality results from continuous reciprocal interaction among all three components: environment, behavior, and psychological processes, which include attitudes to learning and learning activities.

Self-efficacy beliefs

Self-efficacy provides a great impact on students' learning because this belief may push learners to persist in pursuing their goals in spite of facing failure and setbacks (Bandura, 1997). Based on the reciprocal determinism model, students' self-efficacy or belief in their own abilities affects their learning achievement and the teacher who encourages students that they can succeed (environment) will impact their learning outcomes (behavior) (Johnson, Daigle, Rustamov, 2010).

Self-efficacy beliefs play a fundamental role in human motivation, well-being and personal accomplishment. Evidence supports the notion that self-efficacy beliefs drive human accomplishment and the choice of students' courses and self-efficacy beliefs also help to determine the effort that students will expend on an activity, and the length of time they

will persevere when confronting obstacles. Moreover, students tend to have greater intrinsic motivation and deeper engagement in activities the higher their sense of personal efficacy.

Constructivism Learning Theory

Bruner's constructivism & discovery learning theory

This theory is at the heart of cooperative learning. Bruner was one of the founders of constructivist learning theory which is based on learners constructing new knowledge and skills through discovery learning in an active process. Based on Bruner's theoretical framework, learners construct new knowledge through participating actively in the teaching and learning process. Students' interaction with their peers, teachers and the influence of their parents on cooperative learning are caused by motivation, cultural and personal factors. Bruner believed learning and problem solving through teacher facilitated exploration is a vital part of a teachers' role.

Cooperative learning under the student-centered learning method ties outcomes with the constructivist learning theory where learners construct their own meaning in an active way (Almala, 2005). Constructivist theory is a significant contributor to the learner-centered approach (Lueddeke, 1999; Yager, 1991). Dewey (1972) said that education as a process of restructuring knowledge by reflecting thoughts through the growth of current knowledge of learners. He believed that through interacting with their environment, students learn to create new knowledge. Moreover, learning is a social process where learners construct their knowledge in a social context (as cited in Brooks & Brooks, 1999).

Constructivist proponents argue that "learners are active organisms seeking meaning" (Driscoll, 2000), p.376 Moreover, the perception of constructivists views learning as the process where learners construct actively their knowledge (Huang, 2006). When they

are in the process of learning, students actively develop and enlarge their knowledge through observation, reflection, experimentation, discovery and social interaction (Brooks & Brooks, 1999). In this constructivist learning environment, students are active, social and creative persons (Phillips, 1995) for they are the constructors of knowledge (Glaserfeld, 1989).

Vygotsky’ zone of proximal development (social constructivism)

Vygotsky’s zone of proximal development offers insight into understanding cooperative learning. Vygotsky’s notion of the zone of proximal development (ZPD) learning exists through interaction between students. Vygotsky defines the ZPD as: the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky, 1978, p.86).

This theoretical framework by Vygotsky’s zone of proximal development comprises five basic components: positive interdependence, face-to-face interaction, individual accountability, small group and interpersonal skills, and group self-monitoring. Each components of cooperative learning theory is based on the theory of Vygotsky’s Zone of proximal development (1896-1934, as cited in Doolittle, 1995). (See Table1)

Table 1
The Relationship between the Essential Concepts of Cooperative Learning and the Theoretical Constructs of Vygotsky's Socio Genetic Theory (from Doolittle, 1995)

Cooperative Learning Concept	Vygotskian Sociogenetic Construct
Positive Interdependence	Developmental Interdependence
Face-To-Face Interaction	Social Mediation and Enculturation
individual Accountability	Individual Development
Small Group Social Skills	Culturally Based Signs and Tools
Group Self-Evaluation	Monitoring Growth and Development

Positive Interdependence. Learners are dependent on every other group member in achieving individual and group goals. According to Vygotsky's social constructivism, child development is dependent on the interaction with other children and adults. Moreover, each child's development depends upon involvement in society through presenting activities that stimulate the child within their zone of proximal development and then other members of society provide the resources necessary for the child to gain success and development.

Face-to-Face Interaction. Group members work to support, assist, influence, motivate, trust, and challenge other group members to facilitate the achievement of the group's goals. According to Vygotskian system, It is a social mediation and enculturation. The acquisition of knowledge and skills happen through social interaction with other children and adults (Leontiev and Luria 1968, p 342) peers of Vygotsky, stated that social mediation is the "main means of mastering psychological processes that have a decisive influence on the formation of man's psychological activity".

Individual and Group Accountability. According to the framework of Vygotsky's theory, the group members are responsible for developing within their own zone of proximal development. Providing resources and the means for individuals is the instructional goal of teachers to progress beyond the task to be learned, and each group member's zone of proximal development must move in the direction of instruction and beyond the task at hand. Vygotsky believed that each member should grow and develop through engaging collaborative in the group- the members should be able to do today, what they could only do in collaboration yesterday.

Interpersonal and Social Skill (social skills). The social skills are directly taught in cooperative learning environment. Vygotsky believed that the acquisition of social skills occurs when humans use socio-cultural signs and tools to mediate and navigate their interactions with others. Signs and tools are not the same. Signs refer to internal processes

that affect the thinker's state of thought. such as language, mathematics, and reasoning skills, while tools are mechanisms for altering one's environment, such as computers, automobiles, and telephones (Vygotsky, 1978, p 28).

Group Self-Evaluation. It refers to a group's efforts in order to evaluate and monitor their own group progress and the processes which are not effective in the pursuit of the group's and the individual's goals. Vygotsky believed that frequent monitoring on student's progress within their zone of proximal development is part of the instruction. Thus, teachers and students are actively engaged in the learning process.

Cooperative Learning

Social anthropologist Ashley Montagu (1965, as cited in Johnson, 1999) noted that members of society can survive through cooperative learning among themselves, which means cooperative learning is quite important. Cooperative learning is now accepted as an instructional strategy in Schools and university in Cambodia in every subject area, and with every age student. Students' learning goals may be structured to promote cooperative, competitive, or individualistic efforts. In every classroom, instructional activities are aimed at accomplishing goals. The major goal of learning is for students to demonstrate their competence or mastery in the subject contents being studied. Students are supposed to interact with their classmates as well as their teacher. They learn to work cooperatively with others and compete for fun and autonomously work on their own (Johnson & Johnson, 1989, 1999).

Johnson and Johnson (1994) showed three general theoretical perspectives in guided research on cooperative learning. These perspectives included social interdependence, cognition-developmental, and behavior.

Definition of cooperative learning

Researchers have defined Cooperative Learning in different ways. Johnson & Johnson (1990c) defined it as the instructional use of small groups in class in such a way as to maximize all of the members' participation and mutual support. Sharan (1994) considered it as "a group-centred and student-centered approach to classroom teaching and learning," while Slavin (2011) regarded it as "an instructional method in which teachers organize students into small groups that work together to help one another learn academic content." Cooperative Learning therefore, is a "set of methods where students work together in group to achieve the learning objective" (Johnson & Johnson, 2008). Students are actively constructing knowledge in the learning process (Liang, 2002). Cooperative learning is an instructional method applied where students are organized to work in group or share a common problem or task interdependently but individuals are accountable for their contributions and efforts (Brody & Davidson, 1998).

A cooperative learning group is a heterogeneous group that can be composed of two to four students who work together as a team. Each member of the group has an important role to play. Moreover, the teacher has to assign strategically so that everyone is balanced in terms of ability level, learning styles, and or intelligence (Chapman & King, 2008)

In conclusion, cooperative learning is a set of methods that organizes learners to work together in small groups so that they can solve a problem or complete a task and maximize their own and the group's achievement.

Basic Elements of Cooperative learning

Gillies (2003) said that cooperative learning does not refer to the arrangement of students to sit next to each other and do their tasks. According to Johnson & Johnson (1989, 2005) engaging all group members, placing them in a room, letting them sit together, telling

them to work in groups does not mean they will effectively cooperate.. In order to encourage full cooperativeness among the team members, five important elements will need to be carefully structured: positive interdependence, Individual and Group accountability, Promote Interaction, Appropriate Use of Social Skills, and Group Processing.

Positive interdependence. It is the primary element enhancing cooperative learning. Therefore, teachers must provide a precise task and goal for the group so that students will be able to think together and learn in the group learning activities (Johnson & Johnson, 2008). Positive interdependence happens when group members believe that they are dependent on one another in order to get success. The situations considered as cooperative ones unless students are arranged to work in group with positive interdependence (Johnson & Johnson, 2009). The efforts of each group member contribute to the benefits of both herself and the members. positive interdependence is the heart of cooperative learning and it encourages commitment for the success of oneself and others' (Jensen, Moore & Hatch, 2002; Yager, 2000). Learners need to be responsible for their own learning and for the success of other group members' learning (Slavin, 2011). However, if group members do not depend on each other including sharing the interest in working together, the achievement will not be greatly obtained (Ballantine & Larres, 2007). Moreover, if one is failed, the other members will suffer due to poor performance. Therefore, the group's achievement is dependent on each member's cooperation (Kose, Sahin, Ergun, & Gezer, 2010). According to Jensen et al, (2002), each group member must be cooperative in the learning activities and they are all responsible for the achievement of the group. Positive interdependence is needed in cooperative learning encourages students to work and learn together.

Thomas (1957) said that Positive Interdependence could be structured through the assignment of complementary roles (Thomas, 1957). Moreover, many studies show the achievement from the positive interdependence. It is believed that the positive

interdependence produces better achievement and productivity (Hwong, Caswell, Johnson & Johnson, 1993; Johnson & Johnson, 2008). Furthermore, the performance of one particular group will affect the other group in terms of success (Mesch, Johnson & Johnson, 1988). It is expected that everyone would gain better achievement by using positive interdependence (Johnson & Johnson, 2005).

Individual and group accountability. Students are responsible in completing own tasks as well as supporting other group members' work. They have to share their ideas, ask for help, work their best, learn as much as possible, focus seriously on their tasks, assist other group and care for one another (Johnson, 2009). Every member has to be responsible for his or her own task. Individual accountability refers to the degree of which the group achievement is dependent on the individual learning. Through the accountability of all the members, everyone shares the job. No one will be doing everything for the group alone. Group achievement is dependent on the members' learning; thus, the members are motivated in mastering the materials being studied (Slavin, 1996). In case the group members cannot complete their assigned tasks, the other members can help (Kagan, 1985). Student learning through cooperative learning according Hooper, Ward, Hannafin & Clark (1989) result higher if individual accountability was structured. If there is a lack of individual accountability, a sense of personal responsibility will be decreased.

Individual accountability could work well according to the size of the group (Johnson, Johnson & Holubec, 1994). If the group is smaller, members can frequently communicate. Thus, better decisions are made due to more information in place (Gerard, Wilhelmy & Conolley, 1965, Messick & Brewer, 1983). Cooperative learning tends to enhance members performance as individuals

Face-to-face interaction. It is to promote interactions among the members to share ideas and resources and support and encourage one another to achieve the group goals.

Individuals are encouraged to support one another's effort for the success of the group. Under the cooperative learning context, group members must show support, assistance, motivation and challenge other group members in an attempt to achieve planned goals. Interaction verbally among the learners on the assigned tasks is compulsory (Johnson & Johnson, 2008) and students must exchange opinions, explain things, teach others and present their understanding (Ballantine & Larres, 2007)

Johnson and Johnson (1991) characterized Face-to-Face Interaction as the following:

- (a) It provides efficient and effective assistance to everyone;
- (b) It helps the group members to be able to exchange information as well as materials and process the information more effectively;
- (c) It provides feedback to individuals so that their performance would be enhanced;
- (d) It offers some challenging ideas on decision making and problem solving;
- (e) It advocates efforts to the goals;
- (f) It influences everyone's effort in achieving the group goals;
- (g) It acts in worthy manners;
- (h) It motivates the group to strive for mutual benefits; and
- (i) It helps the members to feel less anxiety and stress (Sharan, 1990).

However, the size of the group and the frequency of students' cooperation contribute to the quality of interaction (Johnson & Johnson, 1989). Therefore, assigned group should be small enough that students can interact and learn cooperatively with one another. Knowing the members' ability provides great assistance to one another that they can interact, provide feedback and learn from each other. Moreover, the learning environment also contributes to the quality of interaction. A positive learning environment offers great opportunity for students to cooperate and work well together (Slavin, 2011). Further, many

research studies have indicated the positive effects of face-to-face interaction in cooperative classrooms. These effects offer the group members effective assistance (Johnson & Johnson 1981, Webb & Cullian, 1983),

Interpersonal and social skills. Students are not supposed to learn only the academic subject matter but also should be equipped with interpersonal and social skills. They can work effectively if socially skilled students are arranged into one group (Johnson & Johnson, 2006). If they do not learn the basic skills of cooperative interaction, they cannot work together effectively in order to achieve the goals (Sharan, 1990). Cooperative learning is complicated due to the fact that students have to engage in learning tasks and work together (Johnson & Johnson, 1990b; Ballantine & Larres, 2007). Therefore, students are required to learn social and interpersonal skills, such as listening, attentively, questioning and negotiating respectfully. So these skills need be taught, to help students' cooperate effectively in the group (Killen, 2007). In addition, each group member should know how to manage the group, how to make decisions and how to solve conflicts that arise among group members. If these skills are not taught, cooperative learning activities are rarely successful (Slavin, 1996).

Interpersonal and social skills are for students so that they can work cooperatively among the team. Johnson & Johnson (2009) stated that in order to coordinate efforts to achieve mutual goals, participants must (a) get to know and trust each other; (b) communicate accurately and unambiguously; (c) accept and support each other; and (d) resolve conflicts constructively.

Group processing. It happens when group members are trying to find out their achievement goals and maintaining effective working relationships. That means group members' contributions to discussion on the group's session of what actions are useful and make decisions about what behaviors to continue or change (Johnson et al., 1994). According to Yamarik (2007) group processing encourages the members to put more shared efforts to

achieve the group's goals through the reflection on the learning process. Furthermore, the purpose of the group processing is to clarify and improve the effectiveness of the members in contributing to the achievement of the group's goals. Small-group and whole class are the two levels of small-group processing. In the small group processing, teachers divide time that each member can work together as group process: (1) enables the group in maintaining relationships among group members; (2) equips each member's cooperative skills; (3) checks the group's tasks and provides feedback on their participation; (4) checks students' knowledge on their learning progress and (5) celebrates the group, and reinforces group achievement, and reinforces group members' positive behaviors (Johnson et al, 1994). Some research studies indicated that group processing has many positive effects in (a) cooperative learning with group processing, (b) cooperative learning without any group processing, and (c) individualistic learning. Yager, Johnson, & Snider (1986) showed that the members obtain higher academic achievement in cooperative groups.

In whole-class processing, teachers observe the groups, provide feedback to each group, and sharing observed results in the class through a whole-class processing at the end of the class period (Johnson et al., 1994).

Types of Cooperative Learning

There are three main type of cooperative learning groups namely, formal, informal, and cooperative based groups (Johnson & Johnson, 2008).

Formal cooperative learning. Students work together to achieve shared learning goals (Johnson, Johnson, & Hulubec, 1994). Teachers play important roles as follows.

1. Making pre-instructional decisions: (a) set academic and social skills objectives, (b) set up the size of groups, (c) choose a method for assigning students to groups, (d) decide which roles to assign group members, (e) arrange the room, and (f) arrange the materials students need to complete the assignment.

2. Explaining the instructional task and cooperative structure: (a) explain the academic assignment, (b) explain the criteria for success, (c) structure positive interdependence, (d) structure individual accountability, (e) explain the behaviors (i.e., social skills) for students, and (f) emphasize intergroup cooperation

3. Monitoring students' learning and providing assistance: (a) complete the task successfully or (b) use the targeted interpersonal and group skills effectively.

Teacher monitors each learning group and intervenes when needed in order to create individual accountability. Each member can be constructive members when the teacher observes the group.

4. Assessing students' learning and helping students process how well their groups functioned. (a) bring closure to the lesson, (b) assess and evaluate the quality and quantity of student achievement, (c) ensure students carefully discuss how effectively they worked together, (d) have students make a plan for improvement, and (e) have students celebrate the hard work of group members.

Informal cooperative learning. Students work together to achieve a joint learning goal in temporary, ad-hoc groups for a few minutes to one class period (Johnson, Johnson, & Holubec, 1994). Using demonstration, or film, informal cooperative learning that students pay attention to the materials to be learned, set high expectations as to what will be covered. Teacher has to ensure that students process and practice the material being taught, and summarize what was learned. Their role is to keep students engaged actively in discussions before and after the lesson. Informal cooperative learning groups derive from two important aspects: (a) make the task and the instructions explicit and precise and (b) require the groups to produce a specific product. The procedure is as follows.

1. Introductory Focused Discussion: Students are assigned to work in pairs and the teachers explain (a) the task of answering the questions in a four to five

minute time period and (b) the positive goal interdependence of reaching consensus. The aim is to promote advance organizing of what the students know about the topic to be presented and set expectations of what will be covered. Everyone is responsible for their tasks assigned and eliciting oral rehearsal, higher-level reasoning and consensus building are the interaction patterns.

2. Intermittent Focused Discussions: Teachers produce a lecture of 10 to 15 minute which is appropriate for adult students can concentrate on information presented. After each segment, students can work cooperatively with a person next to them to answer the question. The procedure is as follows:

- a. Each student formulates his or her answer
- b. Students share their answer with their partner
- c. Students listen carefully to their partner's answer.
- d. The pairs create a new answer.

The question may require students to:

- a. Summarize the material just presented.
- b. Give a reaction to the theory, concepts, or information presented.
- c. Predict what is going to be presented next, hypothesize.
- d. Solve a problem
- e. Relate material to past learning and integrate it into conceptual frameworks.

3. Teacher should ensure that students are seeking to reach an agreement on the answers to the questions (i.e., ensure positive goal interdependence is established), not just share their ideas with each other. Randomly choose two or three students to give 30 second summaries of their discussions. Such

individual accountability ensures that the pairs take the tasks seriously and check each other to ensure that both are prepared to answer. Periodically, the teacher should structure a discussion of how effectively the pairs are working together (i.e., group processing). Group celebrations add reward interdependence to the pairs.

4. **Closure Focused Discussion:** Students discuss task for four to five minutes and they are required to summarize what they have learned from the lecture and integrate it into existing conceptual frameworks. Moreover, the task also refers what the homework will be covered or what will be presented in the next class session.

Informal Cooperative Learning ensures that students are actively involved in understanding the information presented. Moreover, teachers also have some time to move around the class checking what students are working. Teacher can understand the situation through listening to student discussions and know exactly what students understanding the concepts and material being presented as well as encourage individual accountability to participate actively in the discussions.

Cooperative learning base group. Cooperative base group are long-term, heterogeneous cooperative learning groups with stable membership (Johnson, Johnson, & Holubec, 2008). Members' primary responsibilities are to (a) ensure all members are making good academic progress (i.e., positive goal interdependence) (b) hold each other accountable for striving to learn (i.e., individual accountability), and (c) provide each other with support, encouragement, and assistance in completing assignments (i.e., promotive interaction). In order to ensure the base groups function effectively, periodically teachers should teach needed social skills and have the groups process how effectively they are

functioning. Typically, cooperative base groups are heterogeneous in membership (especially in terms of achievement motivation and task orientation), meet regularly (for example, daily or biweekly), and last for the duration of the class (a semester or year) or preferably for several years. The agenda of the base group can include academic support tasks (such as ensuring all members have completed their homework and understand it or editing each other's essays), personal support tasks (such as getting to know each other and helping each other solve nonacademic problems), routine tasks (such as taking attendance), and assessment tasks (such as checking each other's understanding of the answers to test questions when the test is first taken individually and then retaken in the base group).

The teacher's role in using cooperative base groups is to (a) form heterogeneous groups of four (or three), (b) schedule a time when they will regularly meet (such as beginning and end of each class session or the beginning and end of each week), (c) create specific agendas with concrete tasks that provide a routine for base groups to follow when they meet, (d) ensure the five basic elements of effective cooperative groups are implemented, and (e) have students periodically process the effectiveness of their base groups.

Previous Research Study

McLeish (2009) studied the attitudes of students towards cooperative learning with 100 students at Knox Community College in Jamaica. One of the purposes of the study was to find out the attitudes of students towards cooperative learning. The results showed that 78.9% of the respondents claimed that they preferred to work on their own while only 21.1% said that they liked working in groups. The reason was the idea that students could learn better by themselves and accomplish more. Moreover, they could work on things at their own

pace. Another finding in regard of group activities assigned by teachers was that only 64.4% said that they felt comfortable to working with cooperative learning because they could get more information, receive greater learning in more efficient way. However, 35.6% of the respondents said they would not feel comfortable engaging in cooperative learning methods because they thought that group work spoils their learning style and they can produce excellent results if they work on their own. Another reason was that if they worked in group, the group may fail. McLeish also interviewed teachers in order to get more understanding on students' attitudes. The teachers said that whenever group activity was assigned for the students, some students were not interested to participate. One method to encourage participation was to let them choose their own group members and the teachers had to set criteria that all the members must participate.

Orprayoon (2014) studied the effects of cooperative learning on learning achievement and group working behavior of junior students in a modern French literature course with 12 junior students in the second semester of 2010 at Rangsit University in Bangkok. One of the purposes of the study was to find out the effects of cooperative learning on working behavior of junior students. The results also indicated that, according to the teacher's assessment, the students gained group working skills at a high level while they self-evaluated their group working skills from a high to the highest level. Regarding their perception of cooperative learning, the overall satisfaction with learning together technique was positive, ranking from a high level to the highest level.

Phiwpong and Dennis (2016) investigated students' opinions towards English reading comprehension through using cooperative learning methods with 25 grade five students at Bannonnnoi school, Ubon Ratchathani, Thailand. Two instruments were used to collect the data: lesson plans and a questionnaire for checking students' opinions towards cooperative learning. The results showed that cooperative learning activities helped to

improve student reading skills and motivate reading comprehension. The results indicated that students tended to have positive attitudes towards cooperative learning and helped teachers to teach more effectively through cooperative learning strategies, promoted reading comprehension, encouraged and supported students in reading English.

Wichadee (2005) studied the Effects of Cooperative Learning on English Reading Skills and Attitudes of the First-Year Students at Bangkok University. Two of the three purposes were to figure out the students' attitudes towards cooperative learning methods in the English lesson and to examine their cooperative learning behaviors. Forty first-year students in the School of Communication Arts at Bangkok University were selected for the study. Five types of instruments were used: the pre-test and post-test, the questionnaire, the cooperative learning behavior assessment form, the individual quiz and the interview. The results showed that students had a moderately positive opinion on cooperative learning methods. Moreover, the assessment showed that students used effective cooperative learning behaviors in their tasks.

Akhtar, Perveen, Kiran, Rashid and Satti (2012) conducted a study on Student's Attitudes towards Cooperative Learning method with graduating students of the Departments of Statistics and Economics of Arid Agriculture University Rawalpindi. The researchers used semi-standardized instrument to measure the attitudes on a three point Likert scale for the data collection. The findings showed that students had different attitudes towards cooperative learning method. Most of the students said that cooperative learning is an effective method. The two groups of students were committed for the success of the group, were responsible to push for the success of each member. Moreover, teachers monitored their groups and the groups were structured to work and learn. Time was sufficient for them to complete the tasks and every member was responsible for the success of the groups. Students were satisfied with

cooperative learning, especially the planning and monitoring process used. Moreover, they believed that groups could help them to have clearer concepts than individual learning.

Reda (2015) investigated the attitudes of students towards Cooperative Learning Method at Wolaita Sodo University, Psychology Department in Ethiopia, Second Year Students. Reda chose 48 participants (30 females and 18 males) for the sample and used semi structured questionnaires as the data collection method. The findings showed that students had positive attitudes toward cooperative learning. However, female students tended to have a more positive attitude than the male students.

Abu & Flowers (1997) investigated the effects of cooperative learning methods on achievement, retention and attitude of home economic students in North Carolina. The design of the study was quasi-experimental conducted with 91 students in the cooperative learning (STAD) group and 106 students in the non-cooperative learning group. The findings found that there was also significant difference in student attitudes toward the teaching methods. The literature suggests there may be additional reasons to use cooperative learning. For instance, the ability to work with others within a group and to develop interpersonal skills may be justification for using cooperative learning strategies.

Farzaneh & Nejadansari (2014) investigated students' attitude towards using cooperative learning for teaching reading comprehension. The study was conducted with 52 intermediate EFL learners (16 male and 36 female) who were attending Gouyesh Language School at Gachsaran in 2013 in Iran. A survey questionnaire developed by McLeish (2009) with 12 items was used to collect the data. The results showed that most of the students willingly participated in the learning activities and this method helped students to socialize more, and enhanced class participation.

Li, Chu, Ki, and Woo, (2011) studied on Students and Teacher's Attitudes and Perceptions toward a Wiki-based Collaborative Process Writing Pedagogy in a Primary Five

Chinese Classroom. Fifty nine students and their Chinese language teacher were chosen to participate in the study. A questionnaire and interview were used to collect the data. The findings indicated cooperative learning known as WCPWP (Wiki-based Collaborative Process Writing Pedagogy) was helpful to improve students' writing. Students became interested in writing after using the method and thought that collaborative learning motivated them to write, and encouraged group interactions. Moreover, the wiki-based learning environment was easy to be used, and had more technology advantages. Furthermore, the findings showed four positive themes: learning benefits, group interaction, technology advantages and audience, and three negative themes: collaboration problem, time issue, and technology disadvantages.

Bronet (2008) investigated the student attitudes towards cooperative learning or team based active learning in education at Université De SherBrook in French. The results indicated that cooperative learning activities would bring benefits to them. The experimental group exposed to this method experienced more positive attitudes than those who were taught in a lecture-based classroom. They thought that the method helped them to get assistance immediately from the group members and enhance their critical thinking skills as well as the ability to apply knowledge to solve chemical problems.

Zhang (2015) examined the Chinese students' perception of cooperative learning in Finland. The participants were 10 Chinese students and interview was used to collect the data. The results showed that nearly all students had positive perception towards the cooperative learning practices in Finland because they were given more freedom and respect. All ten students considered cooperative learning beneficial and valuable because it could broaden their minds, promote their motivation in learning, deepen their understanding and promote socialization.

Adamseged (2015) studied teachers' and students' attitudes towards cooperative learning in selected primary Schools in bole sub city, Addis Ababa. The major purpose of the study was to investigate teachers' and students' perceptions towards cooperative learning. The study was conducted with 146 respondents (66 teachers and 80 students). They were all from grade eight. A questionnaire was the instrument used to collect the data. The results showed that teachers had positive perceptions on cooperative learning. They said that the method offered benefits to students with special needs. However, students strongly disagreed with using cooperative learning method since they thought that it was a waste of time. This was because they were not motivated enough to participate; thus the teachers should motivate them to use it.

Mohammed (2016) conducted a study on the English Language Teachers' Attitudes towards Cooperative Learning at North Shoa Zone Preparatory Schools in Ethiopia. The study was to explore teachers' perceptions of cooperative learning in English classrooms. Forty English language teachers from eight preparatory Schools were selected for the study. Questionnaire, Interview and Focused Group Discussion were used to collect data. The findings indicated that most teachers (62.5%) had a positive attitude towards cooperative learning because they believe that through this method, students' interdependence and accountability were enhanced while 22.5% disagreed that students willingly participated in the method applied. However, teachers expressed that cooperative learning method was time consuming and created idleness in some students, and demanded more control. Teachers should receive sufficient training on cooperative learning method.

Kirby (2007) conducted an action research of cooperative learning in an accounting class at a high school in rural Jamaica. The study was a descriptive design with a sample size of thirty (30) students. Kirby (2007) collected the data through formal questionnaires, learning journals and focus group interview. The researcher discovered that

based on the attitude questionnaire only 28% of students thought that accounting class was interesting implementation of cooperative learning strategies. Overall, students believe that cooperative learning positively impacted on their learning experience (Kirby 2007 p. 76). The following includes the specific conclusions from Kirby's study:

- There was an improvement in the minimum and maximum scores of students. Students believed that cooperative learning allowed for a more relaxing environment where they exhibited better understanding
- Students' self-esteem was enhanced, they stated that they felt more comfortable in answering questions. Students were more accepting of the help received from peers and they did not feel inferior to any other students as they all helped one another.

Erdem (2009) conducted a study with Pre-service Teachers in Turkey in order to examine their attitudes towards Cooperative Learning in mathematics course. To collect the data, a questionnaire and interview were used. The results of the study showed that teachers tended to have positive attitudes towards cooperative learning applied in a mathematics course. Teachers also supported that the use of cooperative learning helped students to achieve higher, raise positive relationship, mutual concern among students, student self-esteem, and other positive outcomes. The learning styles and processes and communication indicated that cooperative learning helped teachers to have better communication with students. The major findings were that cooperative learning contributed to the tasks within the group, helped the group members to interact for problem solving by discussing and negotiating and using time effectively.

Background of the Schools

In this study, the research conducted in two international schools. Paññāsāstra International School is a private high school established in 1997, and opened in 2000 located in Phnom Penh, Cambodia and is accredited by the Royal Government of Cambodia's Ministry of Education, Youth and Sport. The school has 170 full-time students and 25 part-time instructors and in the academic year 2016-2017. BELTEI International School is an acronym consisting of six major subjects: Business, Economics, Law, Tourism, English, and Information Technology. BELTEI, a private school founded in January 2002 in Phnom Penh city and it was the first BELTEI International School. At the present, the school included 13 branches, 1231 has full-time students and 130 part-time instructors and in the academic year 2016-2017. BELTEI International School (Bely School Cambodia) which has the high quality of education in accordance with the national and international standards, the most well-known institute in Cambodia and it will be worldwide recognized. Students who graduated from BELTEI International School have enough abilities in mental ability, general knowledge in accordance with BELTEI's slogan: "BELTEI, the Best Quality of Education in Cambodia." Subject has been taught (5 Main Subjects):

1. Khmer General Education: (Grade one to grade twelve) BELTEI's curriculums are in accordance with MoEYS curriculums.
2. English as a Second Language (ESL): (Level one to Level 12) it is an American-standard course, taught by both qualified Khmer and foreign teachers.

CHAPTER III

RESEARCH METHODOLOGY

In this chapter, the methodology and procedures of the study are described.

Research Design

The purpose of this study determined Grade 11 students' and teachers' attitudes towards cooperative learning at two international schools in Phnom Penh.

The research was utilized a descriptive and comparative design for this study to describe students' and teachers' attitudes towards cooperative learning and determined whether there was a difference between such students and teachers' attitudes.

Population

The target population of the research is Grade 11 students and teachers at two international schools in Phnom Penh. The first is Paññāsāstra International School which is a private high school accredited by the Royal Government of Cambodia's Ministry of Education, Youth and Sport or (MOEYS). At the present, the school 168 full-time students and has 24 part-time instructors and in the academic year 2016-2017. The other school is BELTEI International School; the school has 1231 full-time students and 130 part-time instructors and among the 13 branches in Phnom Penh in the academic year 2016-2017. The researcher will select one branch, BELTEI # 09, at the present, the school 169 full-time students and has 27 part-time instructors selected. Therefore, there are 337 students and 51 teachers in total in both of the Schools that was used as the population for this study.

Sample

Table 2 gives a summary of how the researcher determined the sample for this study. The researcher utilized convenience sampling method to choose all 168 Grade 11 students in Paññāsāstra International School. All 24 Grade 11 teachers who taught in Paññāsāstra International High School selected for the study. From BELTEI International School the researcher selected all 169 students in Grade 11 at BELTEI International School # 09 among the 13 branches in Phnom Penh. The first reason was, it convenience near my home live and the second reason because all BEITEI Schools follow the same structure of teaching, policy and management system. Therefore, is in order to increase the accuracy of the study design and avoid coverage error, all 27 current Grade 11 teachers will be selected from BELTEI International School # 09 are included in the population as shown in Table 2.

Table 2

Number of Grade 11 Students in Paññāsāstra and BELTEI Schools and Sample in the Academic Year 2016-2017

School	Sample
Paññāsāstra International School	168
BELTEI International School # 09	169
Total	337

Table 3

Number of Grade 11 Teachers in Paññāsāstra and BELTEI Schools and Sample in the Academic Year 2016-2017

School	Sample
Paññāsāstra International School	24
BELTEI International School # 09	27
Total	51

Research Instrument

Two research instruments employed in this study: a student questionnaire and a teacher questionnaire.

Both instruments were drawn from the same instrument from the previous study by McLeish (2009).

Student Questionnaire

This instrument consists of 17 items on cooperative learning (CL) for students’ questionnaire which are a combination of closed ended items. There are two sections: section I, demographic information, and it consists of 2 items asks about their ages, gender; section II, 15 items measuring attitudes toward cooperative learning and this questionnaire is based on a 5-point Likert and Likert-type scale ÷ (see Appendix A).

These details are summarized in Tables 4

Table 4
Breakdown of Students’ Questionnaires

Sections	# Questions/ Items
Section I: Demographic information	2
Section II: Attitudes toward cooperative learning	15

Teacher Questionnaire

This instrument consists of 24 items on cooperative learning (CL) for teachers’ questionnaire which are a combination of closed and ended items. There are three sections: section I, demographic information, and it consists of 4 items ask about their ages, gender, subject, years of teaching experience; section II, 4 items assessing; group involvement asks about group activities involvement included: presents teachers’ familiarity with cooperative

learning techniques, presents teachers’ views on the appropriateness of cooperative learning for their subjects, presents teachers’ view on their experiences using cooperative learning in class, and presents the typical size of student’ groups ; section III, 16 items measuring attitudes toward cooperative learning and this questionnaire is based on a 5-point Likert and Likert-type scale ÷ (see Appendix B).

These details are summarized in Tables 5.

Table 5

Breakdown of Teachers’ Questionnaires

Teachers	# Questions/ Items
Section I: Demographic information	4
Section II: Assessing; Group Involvement	4
Section III: Attitudes toward cooperative learning	16

The section III of teacher questionnaire attitudinal and section II is student questionnaire attitude in both questionnaires ranges from 1 to 5 with 1 representing strongly disagree, 2 representing disagree, 3 representing neutral, 4 representing agree, and 5 representing strong agree. Table illustrates the corresponding values for the Likert and Likert-type scales, interpretation for students’ and teachers’ attitudes.

Table 6

Criteria for Interpreting the Students’ and Teachers’ Attitude Scales

Interpretation for students’ and teachers’ attitudes	Scores	Range
Very high positive	5	4.51 – 5.00
High positive	4	3.51 – 4.50
Neutral	3	2.51 – 3.50
Low positive	2	1.51 – 2.50
Very low positive	1	1.00 – 1.50

Validity and Reliability of the Instrument

The research questionnaire has been adapted from that of McLeish (2009). Since the questionnaire has been adapted the researcher has conducted a validity check with the help of two professors from Assumption University and one expert from the Ministry of Education in Phnom Penh as well as the researcher will establish both content validity and construct validity (see Appendix C).

To test the reliability of the students’ questionnaire, the researcher did pilot with 30 students at BELTEI International School # 13 excluding those selected for the research sample for the main study. However, for teachers’ questionnaire, researcher distributed the questionnaire to 30 teachers at BELTEI International School # 13 for the pilot test. The value of the alpha signified the reliability of the questionnaire was in a high level. Meanwhile, this study also found that the Cronbach’s Alpha for the students’ attitudes reached .92, and the Cronbach’s Alpha for the teachers’ attitudes reached .88; therefore, the reliability of this instrument was confirmed by this study also.

Table 7

Internal Consistency Reliability Coefficients of the Students and Teachers Attitudes Toward Cooperative Learning Subscales of the Questionnaires

Subscale	Cronbach’s alpha	Main Study
Students’ attitudes	.92	Acceptable
Teachers’ attitudes	.88	Acceptable

Translation of the Instrument

A certified translation agency in Phnom Penh made the official in translation from English into Khmer to both the students’ and teachers’ questionnaire. The details are in evidences from this agency were in Appendix F.

Collection of Data

First, the researcher was contact the director of the two international schools one is Paññāsāstra international high school and other one BELTEI international high school in Phnom Penh to request permission with an official letter from the Dean of the Assumption University of Thailand Graduate School of Human Sciences, Dr. Sangob Laksana, (Appendix G).

After securing permission to conduct the research in the target Schools from the school directors the researcher made an appointment to discuss the research purposes and then arrange to distribute the questionnaire to the school leaders on late August, 2016.

Table 8

Date of Data Collection Process in Two international High Schools

Tentative Dates	Data Collection Process
29 May, 2016	Request permission from the director of two international schools in Phnom Penh.
13 September, 2016	Proposal defense
26 September,2016	Pilot the questionnaires
24 October, 2016	Distributed Questionnaires
14 November, 2016	Data collection ended

Data Analysis

Based on the research objectives, the following statistical methods applied to carry out the data analysis:

1. To determine the Grade 11 students' attitudes towards cooperative learning at two international schools in Phnom Penh.

Means and standard deviations used to show the level of students' attitudes towards cooperative learning at two international schools in Phnom Penh.

2. To identify the Grade 11 teachers' attitudes towards cooperative learning at two international schools in Phnom Penh.

Means and standard deviations used to show the level of teachers' attitudes towards cooperative learning in two international schools in Phnom Penh.

3. To determine if there is a significant difference between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning at two international schools in Phnom Penh.

The independent samples t-test used to determine whether there is a significant difference between students' and teachers' attitudes towards cooperative learning at two international schools in Phnom Penh.

The study employed four data analysis techniques include percentages, means, standard deviation and the independent samples t-test. Percentages, analysis were applied to the demographic factors of the respondents. Means and standard deviations were identified for students' and teachers' attitudes. The independent samples t-test used to determine if there is significant difference between students' and teachers' attitudes towards cooperative learning at two international schools in Phnom Penh.

Summary of the Research Process

Table 9

Summary of the Research Process

Research objective	Source of Data or Sample	Data Collection Method or Research Instrument	Method of Data Analysis
1. To determine the Grade 11 students' attitudes towards cooperative learning at two international schools in Phnom Penh	337 students who are learning at two international schools in Phnom Penh, Cambodia. The study will be conducted in the academic year 2016-2017.	- CLA for students' questionnaire 15 items - 5- point Likert and Likert-type	Mean, Standard Deviation
2. To determine Grade 11 teachers' attitudes towards cooperative learning at two International Schools in Phnom Penh.	51 teachers who are teaching at two international schools in Phnom Penh, Cambodia.	- CLA for teachers' questionnaire 16 items - 5- point Likert and Likert-type	Mean, Standard Deviation
3. To determine if there is a significant difference between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning at two International Schools in Phnom Penh.			Independent samples t-test (2-tailed)

CHAPTER IV

RESEARCH FINDINGS

This chapter analyzes the findings of the study. Specifically, there are details of the findings of two separate questionnaire surveys that involved a final sample of 337 students and 51 teachers at two international schools in Phnom Penh. The results of the questionnaire surveys are presented utilizing descriptive and inferential statistics.

According to the research objectives of this study, the analysis of data and research findings are presented under headings which correspond to the five research objectives of the study.

1. To determine the Grade 11 students' attitudes towards cooperative learning at two international schools in Phnom Penh.
2. To determine the Grade 11 teachers' attitudes towards cooperative learning at two international schools Phnom Penh.
3. To determine if there is a significant difference between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning at two international schools in Phnom Penh

Demographic information

Students' Questionnaire

Section 1

This section presents the students' demographic information, which consisted of two questions related to their age and gender. The results are presented in the following Tables 10 and Table 11 of the questionnaire section 1.

Table 10

Students' Age Distribution

Age	Number	Percentage
Under 18	299	88.7%
18 – 20	35	10.4%
Above 20	3	0.9%
Total	337	100.0%

Table 10 indicates that there were three age groups - under 18, 18 to 20, and above 20 years. Among these groups, the largest age group (88.7%) was under 18 years, the second largest age group (10.4%) was 18 to 20 years, and the smallest age group (0.9%) was above 20 years.

Table 11

Students' Gender Distribution

Gender	Number	Percentage
Male	181	53.7%
Female	156	46.3%
Total	337	100.0%

Table 11 shows the gender breakdown of the sample with 53.7% being male and 46.3% being female.

Teachers’ Questionnaire

Section 1

This section presents the teachers’ demographic information, which consisted of four questions related to their age, gender, department, and teaching experience as part time teacher at both international schools in Phnom Penh. The results are presented in the following Tables 12, 13, 14 and 15.

Table 12 presents the findings regarding teachers’ age distribution.

Table 12

Teachers’ Age Distribution

Age	Number	Percentage
<i>Below 35</i>	6	11.8%
<i>35-45</i>	22	43.1%
<i>46-55</i>	15	29.4%
<i>56 and above years</i>	8	15.7%
Total	51	100.0%

Table 12 indicates that there are four age groups presented in the findings. They are below 35, 35 to 45, 46 to 55, and 56 and above years. Among these groups, the largest age group (43.1%) was 35 to 45 years, the second largest age group (29.4%) was 46 to 55 years, the third largest age group (15.7%) was 56 and above, and the smallest age group (11.8%) was below 35. The majority of part-time teachers at two international schools were 35 to 45 or 46 to 55 years old.

Table 13 presents the findings regarding gender of teachers.

Table 13

Gender of Teachers

Gender	Number	Percentage
Male	42	82.4%
Female	9	17.6%
Total	51	100.0%

Table 13 indicates that the final sample consisted of 42 males (82.4%) and 9 females (17.6%). Therefore, the majority of part-time teachers at the two international schools were male teachers.

Table 14 presents the findings regarding frequency of respondents by department/subject.

Table 14

Number of Teachers Categorized by Subject

Subject	Number	Percentage
Math	6	11.8%
Physics	5	9.8%
Chemistry	5	9.8%
Biology	4	7.8%
Khmer	5	9.8%
English	6	11.8%
Earth Science	5	9.8%
Geography	5	9.8%
History	5	9.8%
Economics	5	9.8%
Total	51	100%

Table 14 indicates that the participants by department were as follows: 6 were math teachers (11.8%), 5 were physics teachers (9.8%), 5 were chemistry teachers (9.8%), 4 were biology teachers (7.8%), 5 were Khmer teachers (9.8%), 6 were English teachers (11.8%), 5 were earth science teachers (9.8%), 5 were geography teachers (9.8%), and 5 were history teachers (9.8%), and 5 were economics teachers (9.8%).

Table 15 presents the findings regarding Years of Work Experience of Part-Time Teachers at the two international schools.

Table 15

Number of Teachers Categorized by Years of Work Experience

Year	Number	Percentage
1 – 5 years	11	21.6%
6 – 10 years	10	19.6%
11 – 15 years	11	21.6%
15 – 20 years	19	37.2%
Total	51	100.0%

Table 15 indicates that there were 11 teachers who had 1 - 5 years of work experience (21.6%), 10 teachers who had 6 - 10 years of work experience (19.6%), 11 teachers who had 11 - 15 years of work experience (21.6%), and 19 teachers who had 15 - 20 years of work experience (37.2%). Therefore, the majority of teachers had 15 - 20 years of work experience.

Section 2

This section presents group involvement. Table 16 presents teachers’ familiarity with cooperative learning techniques

Table 16

Teachers’ Familiarity with Cooperative Learning Techniques

Teachers’ Familiarity	Number	Percentage
Not at all familiar	0	0.0%
Some what familiar	25	49.0%
Very familiar	26	51.0%
Total	51	100%

Table 16 indicates that 25 teachers (49%) were somewhat familiar with cooperative learning techniques and 26 teachers (51%) were very familiar with cooperative learning techniques.

Table 17 presents teachers’ views as to whether their subject is appropriate for cooperative learning activities.

Table 17

Teachers’ Views on the Appropriateness of Cooperative Learning for their Subjects

Teachers’ Views	Number	Percentage
Yes	49	96.1%
No	2	3.9%
Total	51	100%

Table 17 indicates that 49 teachers (96.1%) felt their subject was appropriate for cooperative learning activities and 2 teachers (3.9%) felt their subject was not appropriate for cooperative learning activities.

Table 18 presents whether teachers have ever used cooperative learning activities in their classes.

Table 18

Teachers’ View on Their Experiences Using Cooperative Learning in Class

Teachers’ View	Number	Percentage
Yes	48	94.1%
No	3	5.9%
Total	51	100.0%

Table 18 indicates that 48 teachers (94.1%) had used cooperative learning activities in their class and 3 teachers (5.9%) had not used cooperative learning activities in their class.

Table 19 presents the typical size of student groups.

Table 19

Typical Size of Student’ Groups

Group Size	Number	Percentage
2 – 4	12	23.5%
5 -7	33	64.7%
8 – 10	4	7.8%
Other please specify (10-11)	2	3.9%
Total	51	100.0%

Table 19 indicates 12 teachers (23.5%) typically used group size of 2-4 students, 33 teachers (64.7%) typically used group size of 5-7 students, 4 teachers (7.8%) typically used group size of 8-10 students, and 2 teachers (3.9%) typically used other group size of 10-11 students.

Below are the findings for each of the study research objectives.

Research Objective 1

Objective one of this study was to determine the Grade 11 students’ attitudes towards cooperative learning at two international schools in Phnom Penh.

To determine the students’ attitudes towards cooperative learning at two international schools in Phnom Penh, the researcher utilized the students’ questionnaire section II, which consisted of 15 Likert-type-type items based on the ABC model. Items 1,9,12 and 13 related to the students’ affect towards cooperative learning. Items 3, 11, 14, and 15 related to the students’ behavior towards cooperative learning (CL). Items 2, 4,5,6,7, 8, and 10 related to the students’ cognition towards cooperative learning.

Scale variables were measured by a 5-point Likert-type scale based on Table 6 in the chapter 3, the research findings of objective one are shown in Tables 20, 21, and 22.

Table 20 presents the findings for the items measuring students' affect.

Table 20

Students’ Attitudes Based on Affect Element of the ABC Model (n = 337)

Items	M	SD	Interpretation
Item 1: Group learning is fun for me.	3.62	0.02	Highly Positive
Item 9: I really enjoy learning in groups	3.59	0.00	Highly Positive

(continued)

(continued)

Items	<i>M</i>	<i>SD</i>	Interpretation
Item 13: I am very interested in participating in group activities.	3.43	0.96	Moderate
Item 12: I am very comfortable working in groups.	3.28	0.02	Moderate
Total	3.48	0.78	Moderate

Table 20 indicates that of the four items measuring student affect in relation to cooperative learning, two items (1 and 9) were highly positive while 2 items (13 and 12) were moderate. The total mean score of the 4 items was 3.48, indicating that affect relationship overall was moderate.

Table 21 presents the findings for the items measuring students’ behavior.

Table 21

Students’ Attitudes Based on Behavior Element of the ABC Model (n = 337)

Items	<i>M</i>	<i>SD</i>	Interpretation
Item 3: I willingly participate in cooperative learning activities.	3.64	0.97	Highly positive
Item 11: If I have a choice to work alone or in a group, I will chose to work in a group.	3.53	0.97	Highly positive
Item 15: I wish my teachers would use group learning activities more.	3.45	1.10	Moderate
Item 14: I would be very comfortable if more group activities were incorporated in my classes.	3.38	1.05	Moderate
Total	3.50	0.80	Moderate

Table 21 indicates that of the four items measuring student behavior in relation to cooperative learning, two items (3 and 11) were highly positive while 2 items (15 and 14)

were moderate. The total mean score of the 4 items was 3.50, indicating that the behavior relationship overall was moderate.

Table 22 presents the findings for the items measuring student cognition.

Table 22

Students' Attitudes Based on Cognition Element of the ABC Model (n = 337)

Items	M	SD	Interpretation
Item 5: Cooperative learning helps me to socialize more.	3.86	1.05	Highly Positive
Item 6: Cooperative learning improves my working relationships among my classmates.	3.82	1.06	Highly Positive
Item 8: My creativity improves when I work in group.	3.60	1.08	Highly Positive
Item 7: Cooperative learning improves my class participation.	3.59	1.01	Highly Positive
Item 2: When I work with others I achieve more than when I work alone.	3.59	1.01	Highly Positive
Item 10: Group activities make the learning experience easier for me.	3.52	0.95	Highly Positive
Item 4: Cooperative learning improves my attitude towards learning.	3.43	0.97	Highly Positive
Total	3.63	0.75	Highly Positive

Table 22 indicates that of the seven items measuring student cognition in relation to cooperative learning, all seven were highly positive. The total mean score of the 7 items was 3.63, indicating that the cognition relationship with cooperative learning overall was highly positive.

Table 23 presents the summary of the findings for research objective 1.

Table 23

Summary of the Overall Rating of the Students’ Attitudes Based on ABC Model at Two International Schools

Items	<i>M</i>	<i>SD</i>	Interpretation
Cognition	3.63	.75	Highly Positive
Behavior	3.50	.80	Moderate
Affect	3.48	.78	Moderate
Overall	3.53	.77	High Positive

Table 23 indicates that the overall ratings of the students’ attitudes based on the ABC model at two international schools in Phnom Penh were regarded as highly positive.

Research Objective 2

Objective two of this study was to determine the Grade 11 teachers’ attitudes towards cooperative learning at two international schools in Phnom Penh.

To determine the teachers’ attitudes towards cooperative learning at two international schools in Phnom Penh, the researcher utilized the teachers’ questionnaire section III, which consisted of 16 questions based on the ABC model. Items 1, 5, 10, and 14 related to the teachers’ affect towards cooperative learning. Items 3, 12, 15, and 16 related to the teachers’ behavior towards cooperative learning. Items 2, 4, 6,7,8,9, 11 and 13 related to the teachers’ cognition towards cooperative learning.

Scale variables based on Table 6 in the chapter 3, the research findings of research objective 2 are shown in Tables 24, 25 and 26.

Table 24 presents the findings for the items measuring teachers’ affect.

Table 24

Teachers’ Attitudes Based on Affect Element of the ABC Model (n = 51)

Items	<i>M</i>	<i>SD</i>	Interpretation
Item 1: I enjoy facilitating group activities in my classes.	3.80	1.21	Highly Positive
Item 14: Cooperative learning makes the teaching-learning experience more dynamic and enjoyable	3.68	1.36	Highly Positive
Item 10: I enjoy designing cooperative activities for my classes.	3.66	1.24	Highly Positive
Item 5: My students really enjoy working in groups.	3.64	1.14	Highly Positive
Total	3.69	1.12	Highly Positive

Table 24 indicates that of the four items measuring teacher affect in relation to cooperative learning, four items (1, 14, 10, and 15) were high positive. The total mean score of the 4 items was 3.69, indicating that affect relationship overall was high positive.

Table 25 presents the findings for the items measuring teachers’ behavior

Table 25

Teachers’ Attitudes Based on Behavior Element of the ABC Model (n = 51)

Items	<i>M</i>	<i>SD</i>	Interpretation
Item 3: Student participation increases when I incorporate cooperative learning activities in my classes.	3.66	1.21	Highly positive
Item 12: I intend to use more group work in my classes in future.	3.52	1.28	Highly positive
Item 15: My students willingly participate in cooperative learning activities.	3.50	1.23	Moderate

(continued)

(continued)

Items	M	SD	Interpretation
Item 16: If I have a choice to have my students work in groups or listen to me lecture, I will choose to have them work in groups.	3.27	1.20	Moderate
Total	3.48	1.01	Moderate

Table 25 indicates that of the four items measuring teacher behavior in relation to cooperative learning, two items (3 and 12) were high positive while 2 items (15 and 16) were moderate. The total mean score of the 4 items was 3.48, indicating that the behavior relationship overall was moderate.

Table 26 presents the findings for the items measuring teacher’s cognition.

Table 26

Teachers’ Attitudes Based on Cognition Element of the ABC Model (n = 51)

Items	M	SD	Interpretation
Item 2: Cooperative learning helps my students to socialize more.	3.80	1.34	Highly Positive
Item 4: Cooperative learning enhances class participation	3.74	1.26	Highly Positive
Item 6: Creativity is facilitated when students work in groups	3.74	1.24	Highly Positive
Item 7: Students who work together achieve more than when they work alone.	3.70	1.23	Highly Positive
Item 8: Cooperative learning enhances good working relationships among my students	3.66	1.14	Highly Positive
Item 9: Cooperative learning can improve my students’ attitudes towards learning.	3.58	1.29	Highly Positive
Item 13: My students’ performance increases when they work in groups.	3.54	1.17	Highly Positive

(continued)

(continued)

Items	M	SD	Interpretation
Item 11: Group activities make the learning experience easier for my students.	3.52	1.33	Highly Positive
Total	3.66	1.09	Highly Positive

Table 26 indicates that of the eight items measuring teachers’ cognition in relation to cooperative learning, all the eight were highly positive. The total mean score of the eight items was 3.66, indicating that the cognition relationship with cooperative learning was highly positive.

Table 27 presents the summary of the findings for research objective 2.

Table 27

Summary of the Overall Rating of the Teachers’ Attitudes Based on ABC Model at Two international schools

Items	M	SD	Interpretation
Affect	3.69	1.12	Highly Positive
Cognition	3.66	1.01	Highly Positive
Behavior	3.48	1.09	Moderate
Overall	3.61	1.07	Highly Positive

Table 27 gives the summary of the overall ratings of the teachers’ attitudes based on the ABC model at two international schools in Phnom Penh were regarded as highly positive.

Research Objective 3

The objective three of this research determined if there was a significant difference between Grade 11 students’ and Grade 11 teachers’ attitudes towards cooperative learning at two international schools in Phnom Penh.

The questionnaire contained 15 items for both students and teachers, divided into three parts based upon the ABC model (Sinha, 2015). A is for affect which contains 4 items both for students and teachers and B is for behavior, containing 4 items for both groups and C is for cognition, containing 7 items for each group. The researcher used the Independent Samples t-test to calculate and compare for this research objective 3.

Table 28 shows the results from the comparison using the independent samples t-test based on the ABC model.

Table 28

Comparison between Grade 11 Students’ and Grade 11 Teachers’ Attitudes towards Cooperative Learning Based on Affect of the ABC Model

Students and Teachers’ Attitudes	M	SD	t-test for equality of Means		
			t	df	Sig. (2-tailed)
Students	3.48	.159	-2.48	6	.041*
Teachers	3.69	.071			

*Sig. < .05

Table 28 showed the finding for the comparison between Grade 11 students’ and Grade 11 teachers’ attitudes towards cooperative learning at the two international schools in Phnom Penh, which is based on affect of the ABC model. The research hypothesis was *there is a significant difference between Grade 11 students’ and Grade 11 teachers’ attitudes toward cooperative learning at .05 level at the two international schools in Phnom Penh*. The finding indicates that the significance value was .041 which is smaller than the .05 level of

significance. This means that there was a significant difference in Grade 11 students’ and Grade 11 teachers’ attitudes towards cooperative learning at .05 level at the two international schools in Phnom Penh.

As can be seen in Table 28, the mean of the questionnaire, which measured students’ attitudes, was lower than the mean of the questionnaire which measured teachers’ attitudes. Therefore, the results indicated that students’ attitudes based on affect of the ABC model were lower than teachers’ attitudes based on affect of the ABC model. Furthermore, as Sig, (2 tailed) was .041, which is less than .05, the comparison can be interpreted as significant. Therefore, the researcher accepted research hypothesis: There is a significant difference in Grade 11 students’ and Grade 11 teachers’ attitudes toward cooperative learning.

Table 29 shows the results from the comparison using the independent samples t-test based on the ABC model.

Table 29
Comparison between Grade 11 Students’ and Grade 11 Teachers’ Attitudes toward Cooperative Learning based on Behavior of the ABC Model

Students and Teachers’ Attitudes	M	SD	t-test for equality of Means		
			t	df	Sig. (2-tailed)
Students	3.50	.11	.12	6	.90
Teachers	3.48	.16			

Sig. > .05

Table 29 showed the finding for the comparison between Grade 11 students’ and Grade 11 teachers’ attitudes toward cooperative learning at the two international schools in Phnom Penh, which based on the behavior of the ABC model. The research hypothesis was *there is a significant difference between Grade 11 students’ and Grade 11 teachers’ attitudes*

toward cooperative learning at .05 level at the two international schools in Phnom Penh. The finding in this category indicates that the significance value was .90 which is bigger than the .05 level of significance. This means that there was no significant difference between Grade 11 students’ and Grade 11 teachers’ attitudes toward cooperative learning at .05 level at the two international high schools.

As can be seen in Table 29, the mean of the questionnaire, which measured students’ attitudes, was higher than the man of the questionnaire which measured teachers’ attitudes. Therefore, the results indicated that students’ attitudes based on behavior of the ABC model were higher than teachers’ attitudes base on behavior of ABC model. Furthermore, as Sig. (2 tailed) was .90, which is bigger than .05, the comparison can be interpreted as no significant. Therefore, the researcher rejected research hypothes is: There is no significant difference in Grade 11 students’ and Grade 11 teachers’ attitudes toward cooperative learning

Table 30 shows the results from the comparison using the independent samples t-test based on the ABC model.

Table 30

Comparison between Grade 11 Students’ and Grade 11 Teachers’ Attitudes toward Cooperative Learning based on Cognition of the ABC Model

Students and Teachers’ Attitudes	M	SD	t-test for equality of Means		
			t	df	Sig. (2-tailed)
Students	3.63	.15	-.48	12	.63
Teachers	3.66	.14			

Sig. > .05

Table 30 showed the finding for the comparison between Grade 11 students’ and Grade 11 teachers’ attitudes towards cooperative learning at the two international schools in Phnom Penh, which based on cognition of the ABC model. The research hypothesis was

there is a significant difference between Grade 11 students’ and Grade 11 teachers’ attitudes toward cooperative learning at .05 level at the two international schools in Phnom Penh. The finding in this category indicates that the significant value was .63 which is bigger than .05 level of significance. This means that there was no significant difference between Grade 11 students’ and Grade 11 teachers’ attitudes towards cooperative learning at .05 level at the two international high schools in Phnom Penh.

As can be seen in Table 30, the mean of the questionnaire, which measured students’ attitudes, was lower than the mean of the questionnaire, which measured teachers’ attitudes. Therefore, the results indicated that students’ are lower than teachers’ attitudes based on cognition of the ABC model. Furthermore, as Sig, (2 tailed) was .63, which is bigger than .05, the comparison can be interpreted as no significant. Therefore, the researcher rejected research hypothesis: There is no significant difference in Grade 11 students’ and Grade 11 teachers’ attitudes toward cooperative learning at two international high schools in Phnom Penh.

Table 31 showed the overall comparison using the independent sample t-test based on the ABC model.

Table 31

Overall Comparison of Grade 11 Students’ and Grade 11 Teachers’ Attitudes towards Cooperative Learning Based on the ABC Model

Students and Teachers’ Attitudes	M	SD	t-test for equality of Means		
			t	df	Sig. (2-tailed)
Students	3.55	.15	-1.31	28	.20
Teachers	3.62	.14			

Sig. >.05

Table 31 showed the finding of the overall for comparison between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning at the two international schools in Phnom Penh, which based on the ABC model. The research hypothesis was *there is a significant difference between Grade 11 students' and Grade 11 teachers' attitudes toward cooperative learning at .05 level at the two international schools in Phnom Penh*. The detailed finding indicated that the significant value was .20 which was bigger than the .05 level of significance. This means that there was no significant difference between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning at .05 level at the two international high schools.

As can be seen in Table 31, the mean of the questionnaire, which measured students' attitudes, was lower than the mean of the questionnaire which measured teachers' attitudes. Therefore, the results indicated that student' attitudes were lower than teachers' attitudes based on the ABC model. Furthermore, as Sig, (tailed) was .20, which is bigger than .05, the comparison can be interpreted as no significant.

Therefore, the researcher rejected research hypothesis: There is no significant difference in Grade 11 students' and Grade 11 teachers' attitudes toward cooperative learning at two international high schools in Phnom Penh.

This chapter present of finding of the study and chapter 5 will provide conclusion and discussion of the study.

In this study, there were three objectives to identify students' and teachers' attitudes towards, to compare and to determine the significant difference between students' and teachers' attitudes towards cooperative learning at two international schools in Phnom Penh.

The research finding indicated that there were 337 respondents of students and 51 respondents of teachers in total. The results derived from the data analysis of demographic were that the majority of the teachers were between 35-45 and 46-55 years old, and the majority teachers of male respondents was more than the number of female respondents. Among teachers' familiarity with cooperative learning techniques, 25 out of 51 respondent were somewhat familiar and 26 respondent were very familiar, In terms of years of work experience, the number of participated teachers in 1-5 years 11 (21%), 6-10 years 10 (19.6%), 11-15 years 11 (21.6%), and 15-20 years 19 (37.2%) were quite difference. Among the four age groups, the majority of the teachers had more than 15-20 year of experience.

From the further analysis, for objective one, the researcher found that the ABC model ranked from the highest to the lowest were cognition, behavior, and affect.. While, for objective two, the teachers' attitudes ranked from the highest to the lowest were affect, cognition, and behavior. Meanwhile, for objective three was to determine if there was a significant between students' and teachers' attitudes, the study found there was no significant difference in the use of cooperative learning among difference two groups. Thus, hypothesis was rejected at a significant level of 0.05.

CHAPTER V

CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

Chapter 4 reported the findings of this study regarding a comparative study of Grade 11 students' and teachers' attitudes towards cooperative learning at two international schools in Phnom Penh. This chapter will present the conclusion of this research including the research objectives and hypotheses, the research methodology, and the findings of the study. It will then discuss the implications of the findings, and propose recommendations for the two international schools in Phnom Penh and for future research.

Conclusion

This study focused on students' and teachers' attitudes towards and cooperative learning at two international schools in Phnom Penh in year 2016. The study utilized a quantitative research design employing a questionnaire in order to investigate the Grade 11 students' and teachers' attitudes towards cooperative learning and aimed to find out if there was any significant difference between students' and teachers' attitudes in the two international schools.

The data was collected from 337 of students' and 51 teachers' participants in the two international schools in Phnom Penh in the academic year 2016. The responses to the questionnaire and the average level of students' and teachers' attitudes were analyzed by descriptive and inferential statistics.

Main Findings

There were three main findings based on the research objectives presented as follows:

- 1. To determine the Grade 11 students’ attitudes towards cooperative learning at two international schools in Phnom Penh.
- 2. To determine the Grade 11 teachers’ attitudes towards cooperative learning at two international schools in Phnom Penh.
- 3. To determine if there is a significant difference between Grade 11 students’ and Grade 11 teachers’ attitudes towards cooperative learning at two international schools in Phnom Penh.

These main findings are summarized in Tables 32 and Table 33

Table 32
The Summary of the Main Findings of Student

Items	M	SD	Interpretation
Cognition	3.63	.75	High Positive
Behavior	3.50	.80	Moderate
Affect	3.48	.78	Moderate
Overall	3.53	.77	High Positive

In determining the students’ attitudes towards cooperative learning at the two international schools in Phnom Penh, the ABC model was adopted.

The overall the mean score of the students’ attitudes based on ABC model was

3.53. Ranked from the highest to the lowest, were:

- Students’ cognition with 3.63
- Students’ behavior with 3.50
- Students’ affect with 3.48

Table 33

The Summary of the Main Finding of Teacher

<i>Items</i>	<i>M</i>	<i>SD</i>	<i>Interpretation</i>
Affect	3.69	1.12	High Positive
Cognition	3.66	1.01	High Positive
Behavior	3.48	1.09	Moderate
Overall	3.61	1.07	High Positive

In determining the teachers’ attitudes towards cooperative learning at the two international schools in Phnom Penh, the ABC model was adopted.

The overall the mean score of the teachers’ attitudes based on ABC model was

3.61. Ranked from the highest to the lowest, were:

- Teachers’ affect with 3.69
- Teachers’ cognition with 3.66
- Teachers’ behavior with 3.48

Discussion

Findings for Research Objective 1

For the ABC model of the students' attitudes towards cooperative learning, the results of this study revealed that the students had a high level of cognition cooperative learning, but the affect level was slightly moderate. Similarly, students' behavior was moderate in the two international schools.

Overall the ABC model of the students' attitudes toward cooperative learning was highly positive. Educators have been interested in this component of attitudes because it can be influence learning behavior to achieve learning outcomes as confirmed by a number of researchers that there was a direct relationship between attitudes and achievement (Fenneman, 1973; Greenwald, 1965; Kopperman & Perry, 1965, 1966; Lamb, 1987; Levy, 1973; Simonson, 1977).

Social cognition theory argues that individuals proactively engage in their own development and can make things happen through their action (Bandura, 1986). Bandura believed that what people think, believe, and feel affects how they behave. These research findings responded accordingly to what Bandura emphasized. Students moderately felt that cooperative learning was fun and they enjoyed it and also were highly positively believed that cooperative learning helped improve their socialization, relationships, class participation, creativity, achievement, learning experience and even their improved attitudes towards the approach. This is a very interesting finding. As the researcher studied the Grade 11 students' attitudes in two international schools, the researcher found that the students were not fully aware of what cooperative learning is. In the two international schools, the curriculum in high school in 2013 required teachers to differentiate their instruction by using different teaching strategies to make learning fun. The students enjoyed learning with group activities such as

playing games, singing songs, watching videos and other activities. However, when interpreted using the five-point interpretation scale listed in chapter three, according to the Table 23 the students' affect element and students' behavior element was not as high after their initial introduction to cooperative learning. This indicated that the students were not intrinsically motivated enough to participate by the activities themselves, nor extrinsically by external factors; therefore, the teachers needed to motivate the students to engage in the activities. Pajares (2002) reported that based on Bandura's reciprocal determinism proposed a triadic theory wherein (a) personal factors in the form of cognition, affect, and biological events, (b) behavior, and (c) environmental factors together determine how learners feel, behave, and think. Though it is expected to be highly positive, it would be accepted that their behavior was highly positive because the average means score was 3.50. Social cognition theory (Bandura, 1986) suggested that such behavior was influenced by an individual's aspirations, self-efficacy, personal standards, emotional status, and other self-regulatory influences, not the economic, socioeconomic status, and educational and family structures. Therefore, students at the two international schools had positive attitudes towards cooperative learning which the researcher believes contribute to better learning outcomes. This findings agreed with attitude is a positive or negative evaluation which reaction towards an object, situation, and general environment (Tessor & Shaffer, 1990, as cited in Passer & Smith, 2007). Of course, attitudes come from the internal states influencing what students are likely to do. These internal states is the degree of positive or negative or prefer or not prefer reaction state an objective, situation, group of activity, and general environment. In addition, also conformed to the results found by a number of previous researchers that students had positive attitudes towards cooperative learning and these results indicated that cooperative learning activities helped improve reading skills and motivate reading comprehension, improve students' writing, socialize and enhance class participation (see e.g. Akhta, Kiran,

Rashid & Satti, 2012 ; Bronet, 2008 ; Chu, Ki , Li, & Woo, 2011 ; Dennis & Phiwpong, 2016 ; Farzaneh & Nejadansari, 2014 ; Reda, 2015 ; Wichadee, 2005). However, Adamseged (2015) found that students had a strong disagreement to using cooperative learning in class because they thought that it wasted their time. This was because students were not motivated enough to participate.

Findings for Research objective 2

Overall the ABC model of the teachers' attitudes, the results of this study revealed that the teachers had a highly positive level of cooperative learning which means that teachers thought that cooperative learning could help students perform better in terms of socialization, class participation, creativity, achievement, relationships, and attitudes. Teachers felt well about cooperative learning and believed that such an approach would enhance teaching and learning, but the level moderate applied this teaching method in class. Teachers felt good about cooperative learning and they believed such an approach would contribute much to students' learning. However, what they felt and thought did not really motivate them to behave very well. This could be because most of the teachers worked part-time and did not have much time to prepare because they also engaged in teaching in other schools. Mohammed (2016) found that teachers expressed that cooperative learning was time consuming and created idleness in some students and demanded more control. Another reason might be that teachers were not familiar with cooperative learning. Mohammed (2016) also suggested that teachers should receive sufficient training in implementing this approach.

Findings for research objective 3

For the comparative part of this study, a more detailed analysis shows the three different elements of the ABC model in this research were affect, behavior, and cognition. However, the overall comparison illustrated that there was no significant difference between students' and teachers' attitudes towards cooperative learning. Students had similar ideas as

teachers in terms of their affect element of the ABC model, the behavior and their cognition towards the cooperative approach. These results were very special and the researcher was surprised by them. A possible explanation for this is that Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning used was not met, maintaining moderate of students' and teachers' behavior element of the ABC model use in classroom practices shows that teachers are not able to effectively implement cooperative learning use into their pedagogy. This argues against Mohammed (2016) claim that teachers do not know how to use cooperative learning. This could be because most of the teachers worked part-time and did not have much time to prepare. Moreover, these results suggest that cooperative learning was time consuming and created idleness in some students and demanded more control. Furthermore, he also suggested that teachers should have received a sufficient amount of training to use cooperative learning. From the previous study by Abu and Flowers (1997) which found that there was also no significant difference in student attitudes toward the teaching method. Especially in the behavior and cognition of ABC model, there was no significant difference. After concluding the research findings, the researcher considered that based on the findings it is evident that more students and teachers are not fully aware of the various cooperative learning techniques that can be utilized. In addition, students' attitudes were the same as teachers' attitudes; they felt the same as teachers about that small group activity. Sharan (1994) considered cooperative learning as a group-centered and learner-centered method of teaching and learning, Slavin (2011) regarded it as a method where teachers organize students into small groups which work together to help one another learn. Moreover, students and teachers on almost 50% they do not like group work. Coelho (1994) pointed out that in many Asian countries such as Thailand, there has been a strong tradition of teacher-centered and teacher-directed instruction.

Recommendations

Recommendations for Practice

With the happening before findings found in this study, the following recommendations were forwarded. Based on the findings of the Grade 11 students' and teachers' attitudes towards cooperative learning at two international schools in Phnom Penh, the researcher would like to propose especially the administrators of two international schools were aware of the students' and teachers' attitudes towards cooperative learning. According to the findings of this study was unacceptable and unstable was revealed. The school cannot develop well without strong stable attitudes of students and teachers. Therefore, the researcher would like to propose the following specific recommendations:

- Professional Development for Teachers:** the school should need to make a strategic for develop the human capacity to address human resource issues in the short term. From the research findings, at two international schools employs almost 50% teachers were less familiar with cooperative learning therefore, were more teachers likely to continue to teach in the current schools.
- Provide sufficient time and instructional resources to teachers:** From another point of view, the administrators should provide sufficient time to increase of the rate of teachers' attitudes. However, the administrators of two international schools can help to improve teachers' attitudes by motivate them to behave very well. This could be because most of the teachers worked as part-time job and did not have much time to prepare for the group activities because they also engaged in teaching in other schools. Moreover, teachers should have enough instructional materials for planning and conducting the activities. However, Mohammed (2016) pointed that cooperative

learning method was time consuming and created idleness in some students and demanded more control.

Another reason might be that teachers were not familiar with cooperative learning with cooperative learning. For increasing teachers' behavior need: provided and supported. Such as increasing sufficient time, encouraging teamwork and social cohesion between the teachers, create more chance to support teachers' professional development to help them achieve their goals for career. They should also understand that problem carried out during the working time may result from teachers' personal problem. Mohammed (2016) also suggested that teachers should receive sufficient training in implementing this approach. Furthermore, suppose the school is famous to be a supportive and productive workshop.

- **Establish positive learning environment:** The size of the class should be limited to such amount where students can work well together and teachers feel more comfortable to employ this approach in class. If the group is smaller, members can frequently communicate; hence, better decisions made with more information in place. A positive learning environment offers great opportunity for students to cooperate and work well together
- **Promote students' attitudes toward cooperative learning:** Teachers have to make sure that students feel that cooperative learning will help them grow in terms of socialization, relationships, class participation, creativity, achievement, learning experience and even their improved attitudes toward the approach. Thus, teachers should encourage and motivate them to see great benefits from this approach.
- Based on the findings of this study, the researcher would like to recommend that teachers consider to find out how effective the use of cooperative learning can be as well as conduct action research of cooperative learning in all subject areas.

Therefore, as noted, the researcher believes that it is important that teachers at The two international schools review their instructional methods and consider differentiated instruction to improve their teaching strategies based on this study. During the teaching process, teachers can adjust their teaching strategies to encourage students to learn by developing project topics which they self-select based on their own interests. For example, students can work as a group and choose their own topics to develop and to present.

Recommendations for Future Researchers

The researcher hopes that future researchers continue to survey students' and teachers' attitudes and preferences in other places in a variety of Schools – both public and private - and grade levels in different regions in Cambodia, to include pre service and in service teachers, education leaders, principals, and all relevant departments.

The researcher would like to recommend to the future researchers to employ mixed research designs. A questionnaire could be used to collect quantitative data to measure attitude levels, correlations or group differences. Qualitative methods, such as interviews, document analysis and observations should be utilized to ensure a greater richness and depth of data collection regarding teachers' and students' attitudes and preferences toward cooperative learning methods in all subjects as well as across grade levels. In addition, experimental approaches could be utilized to assess the effectiveness of implementing particular cooperative learning strategies for various subject areas within the Cambodian context.

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APPENDIX A

Students' Questionnaire

Students' Cooperative Learning Questionnaire



Instructions: Read the following questions carefully and place a “√” in the box that corresponds with the answers chosen.

Cooperative Learning can be defined as the collaboration of students working in groups to achieve a prescribed objective. For example a class of twenty (20) geography students may be placed in groups to research how globalization impacts on small developing countries like Cambodia.

SECTION I

1. Age:
- ☐ Under 18 ☐ 18 – 20 ☐ Over 20
2. Gender
- ☐ Male
- ☐ Female

SECTION II

Read the following items and indicate your level of agreement or disagreement with the statements.

Questionnaire Key

- SA – Strongly Agree
- A - Agree
- N - Neutral
- D - Disagree
- SD - Strongly Disagree

Item	1 SD	2 D	3 N	4 A	5 SA
1. Group learning is fun for me.					
2. When I work with others I achieve more than when I work alone.					
3. I willingly participate in cooperative learning activities.					
4. Cooperative learning improves my attitude towards learning.					
5. Cooperative learning helps me to socialize more.					
6. Cooperative learning improves my working relationships among my classmates.					
7. Cooperative learning improves my class participation.					

Item	1 SD	2 D	3 N	4 A	5 SA
8. My creativity improves when I work in groups .					
9. I really enjoy learning in groups.					
10. Group activities make the learning experience easier for me.					
11 If I have a choice to work alone or in a group, I will chose to work in a group.					
12. I am very interested in participating in group activities.					
13. I am very comfortable working in groups.					
14. I would be very comfortable if more group activities were incorporated in my classes.					
15. I wish my teachers would use group learning activities more.					



APPENDIX B

Khmer Students' Questionnaire

Students' Cooperative Learning Questionnaire



ឧបសម្ព័ន្ធ B

កម្រងសំណួរស្តីពីការរៀនជាក្រុមរបស់សិស្ស

សេចក្តីណែនាំ៖ សូមអានសំណួរខាងក្រោមដោយយកចិត្តទុកដាក់ និងគូសសញ្ញា “v” នៅក្នុងប្រអប់ដែលត្រូវនឹងចម្លើយដែលបានជ្រើសរើស។

ការរៀនជាក្រុម ត្រូវបានឱ្យនិយមន័យថា ជាការសហការគ្នារបស់សិស្ស ដែលធ្វើកិច្ចការជាក្រុម ដើម្បីសម្រេចគោលដៅដែលបានកំណត់។ ឧទាហរណ៍ ថ្នាក់ភូមិវិទ្យាដែលមានសិស្សម្ភៃ (20) នាក់ត្រូវបានបែងចែកជាក្រុម ដើម្បីធ្វើការស្រាវជ្រាវអំពីផលប៉ះពាល់នៃសកលភាវូបនីយកម្មទៅលើប្រទេសកំពុងអភិវឌ្ឍន៍ភូមិ។ ដូចជាប្រទេសកម្ពុជាជាដើម។

ផ្នែកទី I

១. អាយុ៖

- ☐ ក្រោម 18 ឆ្នាំ ☐ 18 – 20 ឆ្នាំ ☐ លើស 20 ឆ្នាំ។

២. ភេទ៖

- ☐ ប្រុស
☐ ស្រី

ផ្នែកទី II

សូមអានសេចក្តីប្រកាសខាងក្រោម និងបញ្ជាក់ពីកម្រិតនៃការយល់ស្រប ឬការមិនស្របរបស់អ្នកចំពោះសេចក្តីប្រកាសទាំងនោះ។

ចម្លើយនៃកម្រងសំណួរ

- SA យល់ស្របទាំងស្រុង
A យល់ស្រប
N គ្មានយោបល់
D មិនយល់ស្រប
SD មិនយល់ស្របទាំងស្រុង

សេចក្តីប្រកាស	1 SD	2 D	3 N	4 A	5 SA
1. ការរៀនជាក្រុមផ្តល់ភាពរីករាយដល់ខ្ញុំ។					
2. នៅពេលខ្ញុំធ្វើកិច្ចការជាមួយអ្នកដទៃ ខ្ញុំសម្រេចបានលទ្ធផលល្អប្រសើរជាងនៅពេលខ្ញុំធ្វើកិច្ចការតែម្នាក់ឯង។					
3. ខ្ញុំមានបំណងចូលរួមនៅក្នុងសកម្មភាពរៀនជាក្រុម។					
4. ការរៀនជាក្រុមធ្វើឱ្យប្រសើរឡើងដល់ឥរិយាបថរបស់ខ្ញុំចំពោះការរៀនសូត្រ។					
5. ការរៀនជាក្រុមជួយខ្ញុំឱ្យមានទំនាក់ទំនងក្នុងសង្គមកាន់តែច្រើន។					
6. ការរៀនជាក្រុមធ្វើឱ្យប្រសើរឡើងដល់ទំនាក់ទំនងនៃការធ្វើកិច្ចការជាមួយមិត្តរួមថ្នាក់របស់ខ្ញុំ។					
7. ការរៀនជាក្រុមធ្វើឱ្យប្រសើរឡើងដល់ការចូលរួមរបស់ខ្ញុំនៅក្នុងថ្នាក់។					
8. គំនិតច្នៃប្រឌិតរបស់ខ្ញុំមានភាពប្រសើរឡើង នៅពេលខ្ញុំធ្វើកិច្ចការជាក្រុម។					
9. ខ្ញុំពិតជារីករាយក្នុងការរៀនជាក្រុម។					
10. សកម្មភាពជាក្រុមធ្វើឱ្យការរៀនសូត្ររបស់ខ្ញុំកាន់តែងាយស្រួល។					
11. ប្រសិនបើខ្ញុំត្រូវជ្រើសរើសធ្វើកិច្ចការតែម្នាក់ឯង ឬជាក្រុម ខ្ញុំនឹងជ្រើសរើសធ្វើកិច្ចការជាក្រុម។					
12. ខ្ញុំមានការចាប់អារម្មណ៍ខ្លាំងក្នុងការចូលរួមក្នុងសកម្មភាពជាក្រុម។					
13. ខ្ញុំមានអារម្មណ៍ស្រួលក្នុងចិត្តនៅពេលធ្វើកិច្ចការជាក្រុម។					
14. ខ្ញុំនឹងមានអារម្មណ៍ស្រួលក្នុងចិត្តខ្លាំង ប្រសិនបើសកម្មភាពជាក្រុមបន្ថែមទៀតត្រូវបានបញ្ចូលនៅក្នុងថ្នាក់របស់ខ្ញុំ។					
15. ខ្ញុំចង់ឱ្យគ្រូរបស់ខ្ញុំប្រើប្រាស់សកម្មភាពរៀនជាក្រុមបន្ថែមទៀត។					

APPENDIX C

Teachers' Questionnaire

Teachers' Cooperative Learning Questionnaire



Instructions: Read the following questions carefully and place a “√” in the box that corresponds with the answers chosen.

Cooperative Learning can be defined as the collaboration of students working in groups to achieve a prescribed objective. For example a class of twenty (20) geography students may be placed in groups to research how globalization impacts on small developing countries like Cambodia.

SECTION I

1. Ages

☐ 21 - 25 ☐ 26 - 30 ☐ 31 - 35

☐ Over 35

2. Gender

☐ Male

☐ Female

3. To which department do you belong?

☐ English ☐ Math ☐ Khmer ☐ Physics

☐ Chemistry ☐ Economics ☐ Biology ☐ Earth Science

☐ Geography ☐ History ☐ ICT ☐ Sports

4. How long have you taught at high school?

☐ 1 – 5 years ☐ 11 – 15 years

☐ 6 – 10 years ☐ 15 – 20 years

SECTION II

1. How familiar are you with cooperative learning techniques?

☐ Not at all familiar ☐ Somewhat familiar ☐ Very familiar

2. Is your subject appropriate for cooperative learning activities.

☐ Yes ☐ No

3. Have you ever used group learning activities in your classes?

☐ Yes ☐ No

4. What has been the typical size of student groups?

☐ 2 - 4 ☐ 5 -7 ☐ 8 – 10 ☐ other please specify_____

SECTION III

Read the following items and indicate your level of agreement or disagreement with the statements.

Questionnaire Key

SA – Strongly Agree
A - Agree
N - Neutral
D - Disagree
SD - Strongly Disagree

Item	1 SD	2 D	3 N	4 A	5 SA
1. I enjoy facilitating group activities in my classes.					
2. Students who work together achieve more than when they work alone.					
3. My students willingly participate in cooperative learning activities.					
4. Cooperative learning can improve my students’ attitudes towards learning.					
5. My students really enjoy working in groups.					
6. Cooperative learning helps my students to socialize more.					
7. Cooperative learning enhances good working relationships among my students.					
8. Cooperative learning enhances class participation.					
9. Creativity is facilitated when students work in groups.					
10. I enjoy designing cooperative activities for my classes.					
11. Group activities make the learning experience easier for my students.					
12. If I have a choice to have my students work in groups or listen to me lecture, I will choose to have them work in groups.					

Item	1 SD	2 D	3 N	4 A	5 SA
13. My students’ performance increases when they work in groups.					
14. Cooperative learning makes the teaching-learning experience more dynamic and enjoyable.					
15. Student participation increases when I incorporate cooperative learning activities in my classes.					
16. I intend to use more group work in my classes in future.					



APPENDIX D

Khmer Teachers' Questionnaire

Teachers' Cooperative Learning Questionnaire



សេចក្តីណែនាំ៖ សូមអានសំណួរខាងក្រោមដោយយកចិត្តទុកដាក់ និងគូសសញ្ញា “v” នៅក្នុងប្រអប់ដែលត្រូវនឹងចម្លើយដែលបានជ្រើសរើស។

ការរៀនជាក្រុម ត្រូវបានឱ្យនិយមន័យថា ជាការសហការគ្នារបស់សិស្សដែលធ្វើកិច្ចការជាក្រុម ដើម្បីសម្រេចគោលដៅដែលបានកំណត់។ ឧទាហរណ៍ ថ្នាក់ភូមិវិទ្យាដែលមានសិស្សម្ភៃ (20) នាក់អាចត្រូវបានបែងចែកជាក្រុម ដើម្បីធ្វើការស្រាវជ្រាវអំពីផលប៉ះពាល់នៃសកលភាវូបនីយកម្មទៅលើប្រទេសកំពុងអភិវឌ្ឍន៍តូចៗ ដូចជាប្រទេសកម្ពុជាជាដើម។

ផ្នែកទី I

១. អាយុ

- ☐ 21-25 ឆ្នាំ ☐ 26-30 ឆ្នាំ ☐ 31-35 ឆ្នាំ ☐ លើស 35 ឆ្នាំ។

២. ភេទ

- ☐ ប្រុស
☐ ស្រី

៣. តើលោកគ្រូ/អ្នកគ្រូបង្រៀនមុខវិជ្ជាអ្វី?

- ☐ ភាសាអង់គ្លេស ☐ គណិតវិទ្យា ☐ ភាសាខ្មែរ ☐ រូបវិទ្យា
☐ គីមីវិទ្យា ☐ សេដ្ឋកិច្ច ☐ ជីវវិទ្យា ☐ ផែនដីវិទ្យា
☐ ភូមិវិទ្យា ☐ ប្រវត្តិវិទ្យា ☐ បច្ចេកវិទ្យាព័ត៌មាន និង ទូរគមនាគមន៍
☐ កីឡា។

៤. តើលោកគ្រូ/អ្នកគ្រូបង្រៀននៅវិទ្យាល័យប៉ុន្មានឆ្នាំហើយ?

- ☐ 1 – 5 ឆ្នាំ ☐ 11 – 15 ឆ្នាំ
☐ 6 – 10 ឆ្នាំ ☐ 15 – 20 ឆ្នាំ។

ផ្នែកទី II

១. តើលោកគ្រូ/អ្នកគ្រូចេះបច្ចេកទេសនៃការរៀនជាក្រុមច្បាស់ប៉ុណ្ណា?

- ☐ មិនចេះទាល់តែសោះ ☐ ចេះខ្លះៗ ☐ ចេះច្បាស់ណាស់។

២. តើមុខវិជ្ជារបស់លោកគ្រូ/អ្នកគ្រូមានភាពសមស្របសម្រាប់សកម្មភាពរៀនជាក្រុមដែរឬទេ?

- ☐ បាទ-ចាស ☐ ទេ។

៣. តើលោកគ្រូ/អ្នកគ្រូធ្លាប់ប្រើប្រាស់សកម្មភាពរៀនជាក្រុមនៅក្នុងថ្នាក់របស់លោកគ្រូ/អ្នកគ្រូដែរឬទេ?

- ☐ បាទ-ចាស ☐ ទេ។

៤. តើជាធម្មតាមួយក្រុមមានសិស្សប៉ុន្មាននាក់?
☐ 2 - 4 នាក់ ☐ 5 - 7 នាក់ ☐ 8 - 10 នាក់ ☐ ផ្សេងទៀត សូមបញ្ជាក់_____។

ផ្នែកទី III

សូមអានសេចក្តីប្រកាសដូចខាងក្រោម និងបញ្ជាក់ពីកម្រិតនៃការយល់ស្រប ឬការមិនស្របរបស់លោកគ្រូ/អ្នកគ្រូចំពោះសេចក្តីប្រកាសទាំងនោះ។

ចម្លើយនៃកម្រងសំណួរ

- SA យល់ស្របទាំងស្រុង
- A យល់ស្រប
- N គ្មានយោបល់
- D មិនយល់ស្រប
- SD មិនយល់ស្របទាំងស្រុង

សេចក្តីប្រកាស	1 SD	2 D	3 N	4 A	5 SA
1. ខ្ញុំរីករាយនឹងជួយសម្របសម្រួលសកម្មភាពរៀនជាក្រុមនៅក្នុងថ្នាក់របស់ខ្ញុំ។					
2. សិស្សដែលធ្វើកិច្ចការជាមួយគ្នាសម្រេចកិច្ចការបានច្រើនជាងនៅពេលពួកគេធ្វើកិច្ចការតែម្នាក់ឯង។					
3. សិស្សរបស់ខ្ញុំមានបំណងចូលរួមនៅក្នុងសកម្មភាពរៀនជាក្រុម។					
4. ការរៀនជាក្រុមអាចធ្វើឱ្យប្រសើរឡើងដល់ឥរិយាបថសិស្សរបស់ខ្ញុំចំពោះការរៀនសូត្រ។					
5. សិស្សរបស់ខ្ញុំពិតជារីករាយនឹងធ្វើកិច្ចការជាក្រុម។					
6. ការរៀនជាក្រុមជួយសិស្សរបស់ខ្ញុំឱ្យមានទំនាក់ទំនងក្នុងសង្គមកាន់តែច្រើន។					
7. ការរៀនជាក្រុមធ្វើឱ្យប្រសើរឡើងដល់ទំនាក់ទំនងនៃការធ្វើកិច្ចការក្នុងចំណោមសិស្សរបស់ខ្ញុំ។					
8. ការរៀនជាក្រុមធ្វើឱ្យប្រសើរឡើងដល់ការចូលរួមនៅក្នុងថ្នាក់។					
9. គំនិតច្នៃប្រឌិតត្រូវបានជួយសម្រួលនៅពេលសិស្សធ្វើកិច្ចការជាក្រុម។					
10. ខ្ញុំរីករាយនឹងចាត់ចែងសកម្មភាពរៀនជាក្រុមសម្រាប់ថ្នាក់របស់ខ្ញុំ។					
11. សកម្មភាពជាក្រុមធ្វើឱ្យការរៀនសូត្ររបស់សិស្សខ្ញុំកាន់តែងាយស្រួល។					

12. ប្រសិនបើខ្ញុំត្រូវជ្រើសរើសឱ្យសិស្សរបស់ខ្ញុំធ្វើកិច្ចការជាក្រុម ឬស្តាប់ការបង្រៀនរបស់ខ្ញុំ ខ្ញុំនឹងជ្រើសរើសឱ្យសិស្សធ្វើកិច្ចការជាក្រុម។					
13. លទ្ធផលសិក្សារបស់សិស្សខ្ញុំនឹងប្រសើរឡើងនៅពេលពួកគេធ្វើកិច្ចការជាក្រុម។					
14. ការរៀនជាក្រុមធ្វើឱ្យការបង្រៀន-ការរៀនមានភាពកាន់តែសកម្មនិងរីករាយ។					
15. ការចូលរួមរបស់សិស្សនឹងមានភាពប្រសើរឡើង នៅពេលខ្ញុំបញ្ចូលសកម្មភាពរៀនជាក្រុមនៅក្នុងថ្នាក់របស់ខ្ញុំ។					
16. ខ្ញុំមានបំណងប្រើប្រាស់កិច្ចការជាក្រុមបន្ថែមទៀតនៅក្នុងថ្នាក់របស់ខ្ញុំនាពេលអនាគត។					



APPENDIX E

Validity Approval Form



GRADUATE SCHOOL OF EDUCATION
VALIDITY APPROVAL FORM

Student Name: Mr. Nou Han Rith

Contact Information (phone/e-mail): 097-885-1816 / nou.hanrith@moeys.gov.kh

Thesis Title : A comparative study of grade 11 students' and teachers' preferences for and attitudes towards cooperative learning in two international high schools in Phnom Penh

Questionnaire Title: Students' Cooperative Learning Questionnaire + Teachers' Cooperative Learning Questionnaire

Validity Approval

Does the validity of this questionnaire have your approval?

☒ Yes. I, Dr. Samnab Lakson have read and certify the validity of this questionnaire, entitled Students' Cooperative Learning Questionnaire + Teachers' Cooperative Learning Questionnaire

My comments, suggestions are noted below.

☐ No. I, have read and are unable to certify the validity of the questionnaire, entitled Students' Cooperative Learning Questionnaire + Teachers' Cooperative Learning Questionnaire

Comments or suggestions:

Against the wordings on pages 63 and 68.

Name..... Dr. Samnab Lakson
Validity expert Signature..... S. Lakson
Date : 16 Sep 2016

GRADUATE SCHOOL OF EDUCATION
VALIDITY APPROVAL FORM

Student Name: Mr. Nou Han Rith

Thesis Title : A COMPARATIVE STUDY OF GRADE 11 STUDENTS' AND TEACHERS' ATTITUDES TOWARDS AND PREFERENCES FOR COOPERATIVE LEARNING AT TWO INTERNATIONAL HIGH SCHOOLS IN PHNOM PENH

Questionnaire Title: Students' Cooperative Learning Questionnaire and Teachers' Cooperative Learning Questionnaire

Validity Approval

Does the validity of this questionnaire have your approval?

- ☒ Yes. I, Dr. Yan Ye, have read and certify the validity of this questionnaire, entitled the Current and Desirable Leadership Styles of English Program Leadership. My comments, suggestions are noted below.
- ☐ No. I,have read and are unable to certify the validity of the questionnaire, entitled the Current and Desirable Leadership Styles of English Program leadership. My comments, suggestions are noted below.

Comments or suggestions:

- 1) Add the symbol words such as "SD-D-N-A-SA" into the space and make sure it's also shown on the next page in the top row.
- 2) "Never - Rarely - Not often - sometimes - often"
Can also use the symbol like "N-R-NO-S-O"
to represent the details.
- 3) Check the numbers and spacing in the questionnaire as well.

Name Dr. Yan Ye

Validity expert Signature.....

Date: 16 September 2016

GRADUATE SCHOOL OF EDUCATION
VALIDITY APPROVAL FORM

Student Name: Mr. Nou Han Rith

Contact Information (phone/e-mail): 097-885-1816 / nou.hanrith@moeys.gov.kh

Thesis Title : A comparative study of grade 11 students' and teachers' preferences for and attitudes towards cooperative learning in two international high schools in Phnom Penh

Questionnaire Title: Students' Cooperative Learning Questionnaire + Teachers' Cooperative Learning Questionnaire

Validity Approval

Does the validity of this questionnaire have your approval?

☒ Yes. I, *Khim Sarin*.....have read and certify the validity of this questionnaire, entitled Students' Cooperative Learning Questionnaire + Teachers' Cooperative Learning Questionnaire

My comments, suggestions are noted below.

☐ No. I,have read and are unable to certify the validity of the questionnaire, entitled Students' Cooperative Learning Questionnaire + Teachers' Cooperative Learning Questionnaire

Comments or suggestions:

The questionnaire has been checked and approved for piloting.

Name... *KHIM SARIN*

Validity expert Signature.....

Date : *16 Sept 2016*



APPENDIX F

Letter of Certification





PARAMOUNT LANGUAGE SERVICE, registered
under No. So. 0850 KH/2015 with the ministry of
Commerce of Cambodia

Address: No. 44 Street 70, Sras Chak, Daun Penh, Phnom Penh, Cambodia
Phone: 015 966 944, 012 62 22 50, Email: paramounttranslation@gmail.com,
Website: paramountcam.com

Letter of Certification

This is to certify that Mr. Nou Hanrith's questionnaire for his Master's Thesis in Assumption University of Thailand is translated and edited into standardized Khmer simplified version by one of staff of *Paramount Language Service*. The translated version is really based on the original document, the English version. After checking, it is also to confirm that the translated Khmer version is with high accuracy and regarded as reliable.

Phnom Penh, Cambodia

September 23, 2016

The Translator



REATH PANHA

APPENDIX G

Letter of Introduction for Data Collection





มหาวิทยาลัยอัสสัมชัญ
ASSUMPTION UNIVERSITY

Ref: DE 043/2016

Graduate School of Human Sciences
Assumption University of
Hua Mak
Bangkapi
Bangkok 10240

September 16, 2016

Director Nou Reth
Pannasastra International School
No.71, St 370
Boeung Keng Kong 1
Khan Cham Kamon
Phnom Penh

Dear Director Nou Reth,

I would like to introduce Mr. Nou Hanrith who is our student in the Master of Education Program in Curriculum and Instruction, Graduate School of Human Sciences, Assumption University. He is conducting a thesis on **"A Comparative Study of Grade 11 Students' and Teachers' Attitudes towards and Preference for Cooperative Learning at Two International High Schools in Phnom Penh"**

In this regard, Mr. Nou Hanrith would like your kind permission to collect data at your esteemed institute. Should you need more information, please contact him at email nou.hanrith@moeys.gov.kh.

Thank you so much in anticipation of your positive reply relating to this request and his possible further information needs.

Sincerely yours,

Dr. Sangob Laksana
Dean, Graduate School of Human Sciences
Assumption University

BIOGRAPHY



Name NOU HANRITH
Gender Male
Nationality Cambodia
Date of Birth April 15th, 1970
Marital Status Married with two sons Rotanak Viset age 3 & Visal age 12.

Education Background

M.Ed (Curriculum & Instruction) (Assumption University)

BACHELOR Degree of Science in Computer Science of IIC the International
Institute of Cambodia University (2010)

DIPLOMA MINISTRY OF EDUCATION Pedagogical University of
Vientiane (1995)

Job Experience

The Ministry of Education, Youth and Sport (MoEYS) of Cambodia

Department of Curriculum Development (DCD) 1996 – 2008

HUN SEN LIBRARY 2008-Present

Deputy of Director of HUN SEN LIBRARY

