

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

Nou HanRith¹

Richard Lynch²

Abstract: This research was conducted at two international high schools in Phnom Penh, in the school year 2016. The purposes were: 1) to determine the Grade 11 students' attitudes towards cooperative learning; 2) to determine the Grade 11 teachers' attitudes towards cooperative learning; 3) To determine if there was a significant difference between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning. The study followed a quantitative research methodology employing both students' and teachers' questionnaires including three main elements of attitudes subscales (affective element, behavioral element, and cognitive element of the ABC model of attitude formation). The sample respondents were 337 Grade 11 students and 51 Grade 11 teachers at two international high schools in Phnom Penh. There were three main findings: 1) the overall level of Grade 11 students' attitudes towards cooperative learning was highly positive; 2) the overall level of Grade 11 teachers' attitudes towards cooperative learning was highly positive; 3) there was no significant difference between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning. The article concludes with recommendations for practice and for future research.

Keywords: The ABC Model, Affective, Behavioral, Cognitive, Cooperative Learning, Social Cognitive Theory, Reciprocal Determinism, Self-Efficacy Beliefs, and Constructivism Learning Theory.

Introduction

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).

¹ M.Ed. Candidate in Curriculum and Instruction, Graduate School of Human Sciences, Assumption University, Thailand.

nou.hanrith@moeys.gov.kh

² Ph.D. Assistant Professor, Graduate School of Human Sciences, Assumption University, Thailand.

richardlynch2002@yahoo.com

The researcher studied, Grade 11 students' and teachers' attitudes towards cooperative learning at two international high schools in Phnom Penh using the ABC model of attitude formation. Previous studies have claimed that teachers need to promote students' attitudes toward their learning because there is direct relationship between attitudes and achievement (Fenneman, 1973; Greenwald, 1965; Lamb, 1987; Levy, 1973; Perry & Kopperman, 1965; Simonson, 1977). Pajares (2002) argued that based on Bandura's reciprocal determinism theory, the development of personality results from continuous reciprocal interaction among all three components: environment, behavioral, and psychological processes, which include attitudes toward learning and learning activities.

Theoretical Framework

Four main theories supported this study: the ABC model of attitude formation, Bandura's reciprocal determinism, Bruner's constructivism and discovery learning, and 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). Thus, every attitude is comprised of three components: feeling, doing and thinking.

The foundation of Bandura's (1986) reciprocal determinism is also a triadic theory wherein (a) personal factors in the form of cognition, affect, and biological events, (b) behavioral factors, and (c) environmental factors together determine how learners feel, behave, and think (Pajares, 2002). Figure 1 below shows the Reciprocal Determinism Model.

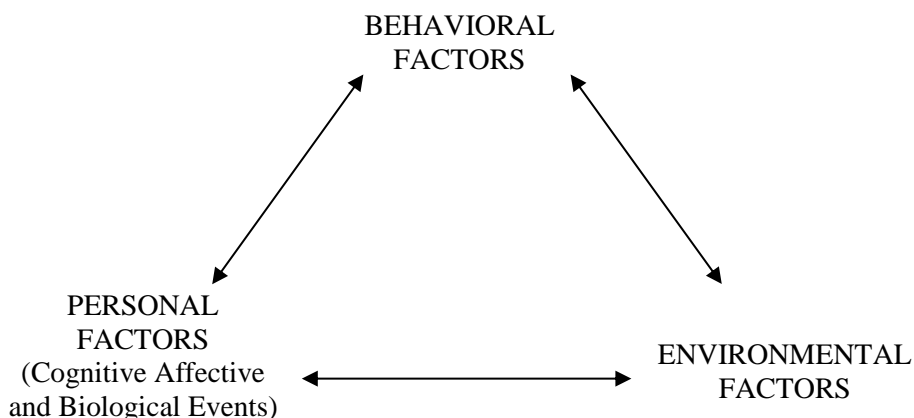


Figure 1: Reciprocal Determinism (Adapted from Bandura, 1986)

Furthermore, 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).

Method/Procedure

This was a quantitative comparative research study aimed at investigating the Grade 11 students' and teachers' attitudes towards cooperative learning at two international schools in Phnom Penh. There were 3 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.

The research hypothesis was derived from research objective 3: There is no significant difference between grade 11 students' and teachers' attitudes towards cooperative learning.

Participants

The sample of this study was the 337 Grade 11 students and 51 Grade 11 teachers at two international schools in Phnom Penh, in the school year 2016.

Instrumentation

Two research instruments were employed in this study. Both instruments were drawn from the same instrument used in the previous study by McLeish (2009).

Student Questionnaire: It was composed of 2 sections.

Section 1: Demographic information which consisted of 2 items asking age and gender. These were important details that helped the researcher to better understand the research sample.

Section 2: This research utilized 15 items measuring attitudes toward cooperative learning. As mentioned above, attitudes were composed of the three elements of the ABC model of attitude formation: the affective element (4 items), the behavioral element (4 items), and the cognitive element (7 items).

Teacher Questionnaire: It was composed of three sections.

Section 1: Demographic information consisting of 4 items about ages, gender, and subject taught, years of teaching experience. These were important details that helped the researcher to better understand the research sample.

Section 2: Consisted of 4 items about group activities involvement including (1) teachers' familiarity with cooperative learning techniques, (2) teachers' views on the appropriateness of cooperative learning for their subjects, (3) teachers' views on their experiences using cooperative learning in class, and (4) the typical size of student groups.

Section 3: This research utilized 16 items measuring attitudes toward cooperative learning, which was composed of the three elements of the ABC model: the affective element (4 items), the behavioral element (4 items), and the cognitive element (7 items)

and the extra items who teachers also indicated that students who work together achieve more those who work alone.

Validity and Reliability

The research questionnaire was adapted from McLeish (2009). Since the questionnaire was adapted, the researcher conducted a validity check with the help of two professors from Assumption University of Thailand and one expert from the Ministry of Education in Phnom Penh. To test the reliability of the students' questionnaire, the researcher carried out a pilot with 30 students at BELTEI International High Schools # 13 excluding those selected for the research sample for the main study. However, for the teachers' questionnaire, the researcher distributed the questionnaire to 30 teachers at BELTEI International High Schools # 13 for the pilot test. Table 1. As shown in Table 1 below, the main study Cronbach's Alpha coefficients for the students' attitudes scale was .92, and for the teachers' attitudes scale was .88; therefore, the reliability of this instrument was confirmed by this study also.

Table 1: Internal Consistency Reliability Coefficients of the Students' and Teachers' Attitudes Toward Cooperative Learning Scales of the Questionnaires

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

Collection of Data

The research was carried out on 29 May, 2016. The researcher requested permission for this research from the director of 2 international schools in Phnom Penh. The researcher coordinated with the teachers of the two schools in order to distribute the questionnaires to students and teachers. The questionnaires were distributed and collected by the researcher. Specifically, there are details of the findings of two separate questionnaire surveys that involved a final sample of a total of 337 students' questionnaires were distributed and 51 teachers at two international schools in Phnom Penh.

Findings

Demographic Information

As table 2 indicates the total number of respondents was 337. There were 181 male students and 156 female students in grade 11.

Table 2: Students' Gender Distribution

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

Table 3 indicates the total number of 51 teacher respondents. There were 42 male teachers and 9 female teachers.

Table 3: Gender of Teachers

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

There were three main findings based on the research objectives.

Research Objective 1

1. The overall level of the students' attitudes based on the ABC model at two international schools in Phnom Penh was highly positive.

1.1 The level of the students' cognitive element of the ABC model towards cooperative learning at two international schools in Phnom Penh was highly positive.

1.2 The level of the students' behavior element of the ABC model towards cooperative learning at two international schools in Phnom Penh was moderate.

1.3 The level of the students' affective element of the ABC model towards cooperative learning at two international schools in Phnom Penh was moderate.

Research Objective 2

2. The overall level of the teachers' attitudes based on the ABC model at two international schools in Phnom Penh was highly positive.

2.1 The level of the teachers' affective element of the ABC model towards cooperative learning at two international schools in Phnom Penh was highly positive.

2.2 The level of the teachers' cognitive element of the ABC model towards cooperative learning at two international schools in Phnom Penh was highly positive.

2.3 The level of the teachers' behavior element of the ABC model towards cooperative learning at two international schools in Phnom Penh was moderate.

Research Objective 3

3. There was no significant difference between Grade 11 students' and Grade 11 teachers' attitudes towards cooperative learning at the two international schools in Phnom Penh.

3.1 There was a significant difference between Grade 11 students' and Grade 11 teachers' affective element of the ABC model at the two international schools in Phnom Penh.

3.2 There was no significant difference between Grade 11 students' and Grade 11 teachers' behavioral element of the ABC model at the two international schools in Phnom Penh.

3.3 There was no significant difference between Grade 11 students' and Grade 11 teachers' cognitive element of the ABC model at the two international schools in Phnom Penh.

Discussion

Findings for Research Objective 1

Attitude plays a very important role in the learning process and helps student to achieve learning outcome. This study Overall the ABC model of the students'

attitudes toward cooperative learning was high positive. The findings showed that students' attitudes would contribute to the learning achievement 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 they also 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, he found that they were not fully aware of what cooperative learning actually is. 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) argued based on Bandura' reciprocal determinism theory that a triadic theory wherein (a) personal factors in the form of cognition, affect, and biological events, (b) behavioral factors, and (c) environmental factors together determine how learners feel, behave, and think. 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

The results of this study revealed that the teachers had a highly positive attitude toward 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 they only moderately applied this teaching method in their classes. Therefore, what they felt and thought did not really motivate them to use cooperative learning more frequently. 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

The overall comparison of students' and teachers' attitudes illustrated that there was no significant difference between their attitudes towards cooperative learning. Students had similar ideas as teachers in terms of the affect, behavior and cognition towards the cooperative approach. These results were very special and the researcher was surprised

by them. A possible explanation for this is those Grade 11 students' and Grade 11 teachers' attitude towards cooperative learning was not met by how the method was actually used in classes. The moderate levels of students' and teachers' use in classroom practices showed that teachers were not able to effectively implement cooperative learning use into their pedagogy. This argues against Mohammed's (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 suggested 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) found that there was also no significant difference in student attitudes toward the teaching method. Especially in the behavior and cognition, 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 were 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 small group activities. 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, the students and teachers in the current study indicated by almost 50% they did not like group work.

Recommendations

Recommendations for Practice

Based on the findings of this study, the researcher would like to propose recommendations for administrators and teachers of the two international schools in Phnom Penh. According to the findings of this study use of cooperative learning was overall unstable among both students and teachers. 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 implement a strategy to develop the human capacity to address human resource issues in the short term. From the research findings, almost 50% of the teachers at the two international schools were less than adequately familiar with how to use cooperative learning.
- **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 can help to improve teachers' attitudes by motivating them to use student-centered learning, including cooperative learning activities. Moreover, teachers should have enough instructional materials for planning and conducting the activities. However,

- Establish a positive learning environment: Class size should be limited such that 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 can be made with more information in place. A positive learning environment offers greater opportunity for students to cooperate and work well together.
- Teachers should 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 understand the practical benefits from this approach.
- 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 that future researchers 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.

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