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The Relationship Between Students' Attitudes Towards Cooperative Learning Strategies and Their Academic Achievement

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ABSTRACT

Purpose of the Study: The purpose of this study was to investigate students' attitudes toward cooperative learning, their levels of academic achievement, the relationship between these two dimensions, and the reasons behind their demonstrated attitudes.

Methodology: This explanatory sequential mixed methods design was employed, and the convenient sampling technique was adopted to choose 422 students and 7 teachers studying and working at two Generation Schools (NGSs). A survey questionnaire and interview protocol were utilized to collect the data. The statistics, such as percentage, mean, standard deviation, and the independent samples t-test, were used to analyze the data.

Main Findings: The findings indicated that students' attitudes towards cooperative learning were highly positive. The reason behind students' attitudes towards cooperative learning focuses on its value and benefits. That is to say, students valued cooperative learning for its benefits, including the development of social skills and cognitive domain, stress reduction, enjoyment, and learning performance. However, they had some concerns, including time-consuming, conflicting interests, and potential grade drawbacks in terms of their final course grade.

Novelty/Originality of this study: The study revealed that cooperative learning improves social skills, cognitive growth, and stress reduction, but students are also concerned about efficiency and fairness in grading. Accordingly, this study shed light on the practical and emotional problems of cooperative learning that were generally missed in the literature. The findings would also provide a more complete knowledge of cooperative learning's adoption in education by bridging theoretical advantages and real-world student concerns.

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1. INTRODUCTION

Cambodia's Ministry of Education, Youth, and Sport (MoEYS) has set a long-term goal of providing high-quality education. Students' learning achievement commonly measures the quality of education. Therefore, it is crucial to identify the effective teaching strategy that can enhance students' learning achievement. Cooperative learning is an evidence-based teaching strategy that has beneficial effects on students' academic and social learning [1]-[3]. Meanwhile, a wealth of studies has also suggested that promoting students' attitudes toward teaching and learning strategies is important because such attitudes influence their students' behaviors to achieve learning outcomes [4]-[7]. Moreover, students' attitude toward particular teaching and learning strategies could determine

their learning engagement, which also affects their learning achievement, and thus promoting students' positive attitude toward cooperative learning is crucial. Existing literature has acknowledged that cooperative learning could enhance student engagement and achievement. Cooperative learning is a creative and successful teaching organizational form and teaching approach that is vital in education and teaching [8]. In this sense, if teachers adopted cooperative learning in the classroom, students would perform better academically [9]. Cooperative and group work can improve academic achievement, conceptual comprehension, pro-social and pro-learning attitudes, as well as communication and social skills [1]-[3], [10]. Social connection is undeniably important in how children learn [10], [11]. Cooperative learning could also promote students' engagement and participation [2], [12]. In many classrooms, students are typically passive consumers of knowledge rather than active participants in its construction. When teachers adopted cooperative learning in their class, students would become more active, which is of significance for today's educational goals. Through cooperative learning, students demonstrate learning enthusiasm by studying hard, completing activities, and consistently striving to comprehend the subject matter [13]. In other words, students take great control of their education, and this emphasizes the real concept of cooperative learning and which has been widely recognized by a body of literature. For instance, students who participate in cooperative learning group tasks tend to have high self-esteem and positive social skills [14] as cited in [9]. According to Thang et al. [15], cooperative learning affected academic attainment in more than half of the studies. Since cooperative learning is one of the significant teaching strategies, a wealth of research has been conducted to investigate it in various contexts.

Cambodia's current educational system prioritizes the development of 21st-century skills in students, such as communication, critical thinking, problem solving, creativity, and collaboration. These skills are not based on content or knowledge, yet they are essential for students to develop into qualified human capital [16]. Cooperative learning is an essential teaching strategy for teachers to integrate into their curriculum to cultivate students' 21st-century skills. Cooperative learning is grounded in social cognitive theory, social constructivist theory, and social interdependence theory. The Social Constructivist theory proposed by Vygotsky [17] posits that students are accountable for building their knowledge based on prior knowledge and experiences. This theory values collaboration among peers during the learning process. Likewise, Social Independent Theory also emphasizes that the success of an individual results from the success of the group [18]. According to Johnson and Johnson [18], collaborative group work in the classroom fosters skills including communication, positive interaction, individual responsibility within a group, and the significance of modeling behavior for peers while contributing to the common good. Social Cognitive Theory by Bandura [19] elucidates the positive and negative outcomes that arise from individuals' experiences. This theory suggests that individuals acquire knowledge through the observation of models, with cognitive processes being integral to this learning process. To that end, cooperative learning has been acknowledged to play a significant role not only in helping teachers enhance students' academic achievement but also in developing students' 21st-century skills. Therefore, some research has been conducted to investigate this teaching strategy, e.g., [20], [21]. However, those studies focused only on EFL education, excluding other disciplines. In addition, students' attitude can determine their learning engagement. In the same vein, teachers' attitudes could influence their teaching practice [22]. Yet, less research has been conducted to investigate students' and teachers' attitudes toward cooperative learning and whether cooperative learning is associated with students' learning achievement in various disciplines. There were four objectives:

1. To determine students' attitudes of grade 7 and grade 10 toward cooperative learning at NGS in Phnom Penh and their attitudes toward academic accomplishment using cooperative learning.
2. To determine the level of grade 7 and grade 10 students' academic achievement resulting from cooperative learning at NGS in Phnom Penh.
3. To determine if there is a significant difference in attitudes toward cooperative learning and academic achievement using cooperative learning between grade 7 and grade 10 students.
4. To explore the reasons explained the attitudes of grade 7 and grade 10 students towards cooperative learning at NGS in Phnom Penh.

2. LITERATURE REVIEW

2.1. Attitudes

Students' attitude has been an extensive research topic, and it has been acknowledged to play a crucial role in their learning achievement. McMillan [23] defines attitudes as thoughts and brain patterns organized via practice that exert a proactive or vibrant influence on behavior. The concept of an attitude is typically divided into three parts: affective, behavioral, and cognitive [22]. Each element has a relationship and connection to every other element [24]. A person's affective attitude is their feeling or emotion toward the attitude object [22]-[24]. The behavioral attitude is the way our mindset affects our actions or demeanor [22]. The cognitive component refers to the individual's thoughts or beliefs regarding the attitude object [24]. Students' attitude is a crucial aspect of their learning. The concept of attitude pertains to how a person thinks, acts, and behaves [24]. Students with a positive attitude are more diligent in studying, resulting in satisfactory results, whereas students with a negative

attitude are less diligent in learning, resulting in disappointing results [25]. This study refers to a favorable or unfavorable evaluation reaction toward the cooperative learning approach indicated in one's ideas, feelings, beliefs, or way of thinking that affects a person's behavior.

2.2. Cooperative Learning

The concept of cooperative learning has been extensive research for decades. It is still one of the active teaching and learning strategies with an increasing presence in the various educational stages in recent years [26]. According to Johnson and Johnson [27], cooperative learning occurs when students work together in a group to achieve a learning goal. It is a student-centered, instructor-facilitated educational technique in which a small group of students is accountable for their learning as well as the learning of all group members. Slavin [28] defines cooperative learning as instructional strategies in which students cooperate in small groups to assist one another to learn. It frequently substitutes individual seatwork, study, and practice, but not teacher-directed teaching [29]. Cooperative learning is an educational style in which students collaborate to achieve a common objective [30].

The cooperative learning paradigm is commonly misunderstood by instructors. The instructors frequently believe that they are using cooperative learning strategies when they simply instruct students to "work together" or assign them to teams [30]. The human desire for collaboration serves as the foundation for the teaching approach known as cooperative learning [31]. Each team member in cooperative group work is accountable for helping other team members learn and fostering an environment of success, in addition to understanding the material that is presented [31]. A teaching method called cooperative learning places students in small groups so they may collaborate to enhance each other's learning [32]. Cooperative learning in small groups encourages students to exchange ideas and materials and split labor as needed to finish the objective. The teachers execute the cooperative and split the students into small manageable groups that can be observed frequently to verify that the students are all participating in the activity and making group contributions [33]. Cooperative learning is a method of teaching in which students have a say in the content, activities, and materials and work together in groups to attain certain learning goals or objectives [28]. While Joliffe's [34] definition of cooperative learning indicates that students collaborate on work in a small, organized group for a long period to boost their own and everyone else's work. However, Gull and Shehzad [35] argued that cooperative learning is the exact opposite of traditional classroom activities, which create a win-win scenario where one can only succeed if another loses.

2.3. Cooperative Learning and Students' Learning Achievement

Both education and school success can be measured by students' learning achievement. Student achievement can be described as how much students study in a given period and meet educational goals. It can be measured by their knowledge, skills, and understanding of a subject. According to Ollendick and Schroeder [36], academic achievement is the information and skills that each student acquires through learning objectives. Teachers play a crucial role in enhancing student learning achievement [37], [38]. One of the main responsibilities of a teacher is to enhance each student's learning achievement. Meanwhile, students' learning achievement can be influenced by various factors, ones of which are their learning motivation and interests [39]. Accordingly, they have been expected to adopt various teaching methods to help promote student learning interest and motivation. In other words, teachers employ a variety of instructional strategies, including cooperative learning. When it comes to enhancing motivation, social skills, and cognitive abilities, cooperative learning is more effective than other teaching approaches [35]. It is useful for raising students' learning success, according to higher education research [40].

2.4. Conceptual Framework

The research mainly focused on the students' attitudes toward cooperative learning and their academic achievement, which was examined on the part of both Grade 7 and Grade 10 students, and their academic achievement in NGS in Phnom Penh. Based on the theoretical framework, the major theory- the ABC model of attitude formation was used to determine the difference in the students' attitudes towards the use of cooperative learning and their academic achievement. Figure 1 presents the conceptual framework of the study.

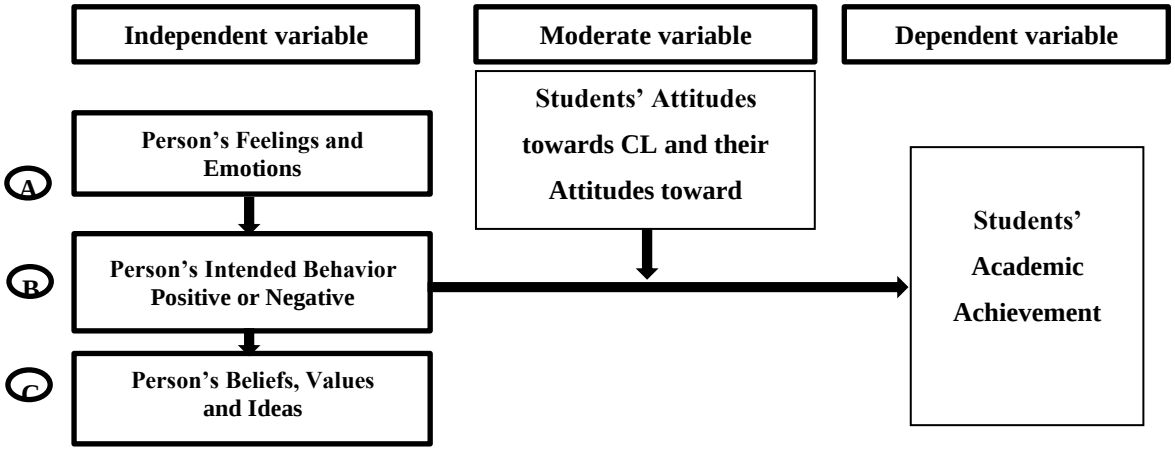

Figure 1. Research Framework

3. RESEARCH METHOD

3.1. Design

This was a quantitative comparative research study aimed at investigating the relationship between students' attitudes towards cooperative learning strategies and academic achievement in an NGS setting in Cambodia. Moreover, the study was carried out employing chosen methods of an explanatory sequential mixed methods design. According to Creswell and Creswell [41], the explanatory sequential mixed methods design entails a two-part data collecting process wherein the researcher first gathers quantitative data, analyzes the findings, and subsequently utilizes these results to inform the planning of the second qualitative phase. In the current study, a quantitative study was conducted in the first phase to collect the data concerning students' attitudes toward cooperative learning and their levels of academic achievement, and the relationship between these two dimensions. In the second phase, a qualitative study was conducted to explore the reasons behind their demonstrated attitudes.

3.2. Research Instrument

A student questionnaire was used as one of the research instruments in this study. The instruments were based on the same instrument used in McLeish's previous study [33]. This instrument consists of 23 items on cooperative learning for the students' questionnaire, which are a combination of closed-ended items. There are two sections: Section I, demographic information, which consists of three items asking about their ages, genders, and grades; Section II, 16 items measuring three constructs (cognitive affect, and behavior) of attitudes toward cooperative learning; 7 items measuring students' attitudes towards the achievement using cooperative learning. This questionnaire is based on a 5-point Likert and Likert-type scale. To identify the level of grade 7 and 10 students' academic achievement resulting from cooperative learning at NGS in Phnom Penh. Furthermore, Interview questions were also utilized to explore the factors that explain the attitudes of grade 7 and grade 10 students toward cooperative learning at NGS in Phnom Penh.

3.3. Validity and Reliability

The research questionnaire has been adapted from that of McLeish [33]. Since the questionnaire has been adapted, the researcher has conducted a validity check with the help of professors from the University of Cambodia (UC) and an expert from MoEYS, as well as establishing both content validity and construct validity. To test the reliability of the students' questionnaire, the researcher conducted a pilot study with 30 students studying at another school in the main study. As seen in Table 1, the alpha value indicated that the questionnaire was highly reliable. Meanwhile, this study also found that the Cronbach's alpha for the students' attitudes reached 89, and the Cronbach's alpha for the students' achievement reached 88; therefore, the reliability of this instrument was also confirmed by this study.

Table 1. Reliability of the Students' Attitudes and Their Academic Achievement Toward Cooperative Learning

Subscale	Cronbach's alpha	Main Study
Students' Attitudes towards Cooperative Learning	0.89	Acceptable
Students' Attitudes towards Achievement using Cooperative Learning	0.88	Acceptable

3.4. The Population and Sample Size

The target population of the research is Grade 7 and Grade 10 students enrolling in the NGS program in Phnom Penh. There are 741 full-time students and 58 part-time instructors in the academic year 2019-2020. Due to the cost and time constraints, a convenient sample was adopted to select 422 students in Grade 7 and Grade 10 in NGS at Prek Leap High School. NGS was selected as a participant because it is an innovative school program [34]-[36] promoting various teaching strategies, one of which is cooperative learning, aiming to cultivate students' 21st-century skills. Table 2 presents the demographic information of the participants. The total number of respondents was 412, and the largest age group (95.4%) was under 18 years old. The majority of students were female, and the majority of students were in Grade 10, according to the latest data from NGS.

Table 2. Presents the students' demographic information (N = 412)

Demographics	Description	Number	Percentages
Age	Under 18	392	95.4
	18 – 20	17	4.1
	Above 20	2	0.5
Gender	Male	185	45.0
	Female	227	55.0
Grade	Grade 7	191	46.0
	Grade 10	221	54.0

3.5. Data Collection Procedures

The researcher initially reached out to the school principal to formally request permission for data collection, accompanied by an official letter from the University of Cambodia. Upon obtaining authorization from the school principal, the researcher scheduled a meeting with the participant to outline the research objectives and subsequently organized the distribution of the questionnaire. Then, the researcher interviewed students and teachers to collect the qualitative data regarding the reasons behind students' demonstrated attitudes toward cooperative learning.

3.6. Data Analysis and Interpretation

SPSS (Statistical Package for the Social Sciences) was adopted to analyze the qualitative data. The study employed various data analysis techniques, including percentages, means, standard deviations, and independent sample t-tests. The key interpretation of students' attitudes was done after Norman [37], as seen in Table 3.

Table 3. Criteria for Interpreting the Students' Attitude Scales

Interpretation of students' 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

Regarding the correlation, Ferguson and Takane [38] noted that if an individual obtains a passing score on the easier items of the test and fails on the more difficult ones, his performance contains no inconsistencies. If all the individuals taking a test obtain their scores in this way, and no inconsistencies are present in the response pattern, the response may be spoken of as an internally consistent pattern. Table 4 illustrates the key interpretation of the correlation coefficient (r).

Table 4. To interpret the correlation coefficient value (r)

Description	Interpretation	Range
Fully Dependable Relationship	Perfect Correlation	±1
Very Dependable Relationship	Very High Correlation	±0.91– ±0.99
Marked Relationship	High Correlation	±0.71– ±0.90
Substantial Relationship	Moderate Correlation	±0.41– ±0.70
Small Relationship	Slightly High Correlation	±0.21– ±0.40
Negligible Relationship	Slight Correlation	±0.00– ±0.20

3.7. Ethical Consideration

The researcher contacted the director of NGS at Prek Leap High School in Phnom Penh to request permission with an official letter from the Dean of the College of Education, The University of Cambodia, to conduct this study in his school. Thus, the researcher was informed by the headmaster in direct contact with the

selected school. All information provided was kept secret and used only for research purposes. After securing permission to conduct the research in the target school from the school director, the researcher made an appointment to discuss the research purposes and then arranged to distribute the questionnaire to the school principals in late March 2021. Since the study is voluntary, all participants were informed that they could withdraw at any time. To maintain the confidentiality of the participants, the qualitative findings from the interview were reported using their pseudonyms (e.g., Teacher 1, Teacher 2).

4. RESULTS AND DISCUSSION

4.1. Students' Attitudes

The first objective of the study was to determine students' attitudes of grade 7 and grade 10 toward cooperative learning at NGS in Phnom Penh and their attitudes toward academic accomplishment using cooperative learning. As shown in Table 5, the overall level of the grade 7 students' attitudes at NGS in Phnom Penh based on the ABC model towards cooperative learning, which ranks student' attitudes from highest to lowest and looks at cognitive, affective, and behavior factors, was found to be very positive in objective one of part I. The level of the students' cognitive element of the ABC model towards cooperative learning at NGS in Phnom Penh was highly positive. The level of the students' affective element of the ABC model towards cooperative learning at NGS in Phnom Penh was highly positive. The level of the students' behavior element of the ABC model towards cooperative learning at NGS in Phnom Penh was highly positive.

Table 5. Overall Rating of the Grade 7 Students' Attitudes Based on the ABC Model

Constructs	M	SD	Interpretation
Cognitive	3.87	0.64	Highly positive
Affect	3.78	0.74	Highly positive
Behavior	3.64	0.83	Highly positive
Overall	3.76	0.73	Highly positive

Table 6 presents the results of the 10th graders' attitudes. The overall level of the grade 10 students' attitudes towards achievement concerning cooperative learning at NGS in Phnom Penh, based on the ABC model, which ranks students' attitudes from highest to lowest, was found to be very positive.

Table 6. The Overall Rating of the Grade 10 Students' Attitudes Based on the ABC Model

Constructs	M	SD	Interpretation
Affect	4.08	0.71	Highly positive
Cognitive	4.04	0.68	Highly positive
Behavior	4.00	0.80	Highly positive
Overall	4.28	0.73	Highly positive

Social Cognitive Theory by Bandura [19] postulates that the individuals 'experience of success and failure influences their attitude. Since the study found that students demonstrated positive attitudes toward cooperative learning, they benefit from cooperative learning. The individuals' positive attitudes indicated their enjoyment of group work for its ease of debating, analyzing, and time-efficient management, Comfort has been defined as modest or conceptualized as a mental state of effort. The existing studies also emphasized the importance of students' attitudes in influencing their learning behavior and achieving learning outcomes [4]-[7], [39], [40]. Thus, promoting students' attitudes toward cooperative learning could enhance their academic achievement.

Although cooperative learning benefits students' learning achievement, some teachers noted that their students may feel scared, shy, or disinterested in group activities. Based on Bandura's reciprocal determinism, "(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. Social cognition theory emphasizes that thoughts, beliefs, feelings, behavior, and students actively engage in their development through action. This indicated that the students were not intrinsically motivated enough to participate in the activities themselves, nor extrinsically by external factors; therefore, the teachers needed to motivate the students to engage in the activities. In addition, the overall level of students' attitudes towards achievement concerning cooperative learning was very positive. The findings are according with previous literature and studies. 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 [41]-[44]. Accordingly, the implementation of cooperative learning strategies has been effective in fostering a supportive and engaging cooperative learning environment, leading to the enhancement of their academic achievement.

4.2. Students' Achievement

The second objective of the current research was to determine the level of grades 7 and 10 students' academic achievement resulting from cooperative learning at NGS in Phnom Penh, the results showed that the majority of grade 7 students under study scored in the "fair" and "medium" categories, while the majority of grade 10 students at NGS scored in the "good" and "fair" categories. Table 7 presents the summary results of grade 7 and grade 7 students' academic achievement.

Table 7. The level of the grade 7 and grade 10 students' academic achievement

Grade	Range				
	Good	Fair	Medium	Poor	Total
Grade 7	12	60	75	44	191
	6.3%	31.4%	39.3%	23.0%	100.0%
Grade 10	81	98	30	12	221
	36.7%	44.3%	13.6%	5.4%	100.0%

The concept of Social Constructivist Theory by Vygotsky [17] encompasses social interaction and the acquisition of meaningful learning experiences. The current study found that grade 7 students perform lower academically than grade 10 students due to the didactic method, which often underutilizes their thinking abilities. Classrooms with limited social interaction and limited cooperative learning opportunities also contribute to this issue. According to Baines et al. [45], a study of classroom grouping methods in the United Kingdom found that although students were seated in small groups, they seldom studied together in collaborative learning. Cooperative learning in schools can significantly impact academic progress, but it's not always effective. Formal and informal learning systems can be effective. Students accustomed to passive learning prefer group investigation and self-discovery. Teachers should be knowledgeable about students' learning styles and use a combination of teacher-centered and student-centered techniques to stimulate critical thinking and cover the full spectrum of student competencies. The teacher's role is to engage and collaborate with students, resulting in improved academic outcomes. Studies show that medium-ability students learn more, and students perform better in pairs. Cooperative learning provides more space for discussion and problem-solving, leading to better achievement, increased intergroup connections, acceptance, self-esteem, and positive attitudes. These benefits highlight the importance of fostering an inclusive classroom environment where all students feel valued and encouraged to participate. By implementing diverse teaching strategies and promoting teamwork, educators can cultivate a dynamic learning atmosphere that supports the growth of every student.

4.3. Group Difference

The third objective of the study was to determine if there is a significant difference in attitudes toward cooperative learning and academic achievement using cooperative learning between grade 7 and grade 10 students. Table 8 indicates the result concerning the difference between grade 7 and grade 10 students' attitudes toward cooperative learning. There was a significant difference in attitudes towards cooperative learning between Grade 7 and Grade 10 students at the NGS in Phnom Penh.

Table 8. Overall Comparison between Grade 7 Students' and Grade 10 students' Attitudes towards Cooperative Learning Based on the ABC model

Grade 7 and Grade 10 Students' attitudes	M	SD	t-test for equality of Means		
			t	Df	Sig. (2-tailed)
Grade 7	3.79	0.19	-4.33	30	0.000*
Grade 10	4.04	0.11			

*Sig. < .05

Because sig. (2-tailed) was 00, which is less than 0.05; the comparison is significant. As a result, the researcher accepted the research hypothesis that there is a significant difference in attitudes toward cooperative learning between Grade 7 and Grade 10 students at NGS in Phnom Penh.

Table 9 shows the results of a comparison of grade 7 and grade 10 students' attitudes toward academic CL at NGS in Phnom Penh. The significant (two-tailed) sig. The value was 0.011, which is less than the 0.05 level of significance for this category. As a result, the researcher accepts the research hypothesis that there is a considerable change in attitudes towards academics between Grade 7 and Grade 10 students at NGS in Phnom Penh

Table 9. Overall Comparison between Grade 7 Students' and Grade 10 Students' Attitudes towards Academic Using Cooperative Learning Based on Attitudes of the ABC Model

Grade 7 and Grade 10 Students' attitudes	M	SD	t-test for equality of Means		
			t	df	Sig. (2-tailed)
Grade 7	3.68	.14	-2.98	12	.011*
Grade 10	3.94	.18			

*Sig. < .05

The findings implied the fact that students require maturation and the skill of individual learning to develop their performance and gain the skills that will help them develop their performance. The success of learning relies on the learning conditions, which comply with the individual characteristics of the learners. Each student has her/his characteristics. The teachers should consider individual differences and should organize the learning environment accordingly. Traditional teaching methods are teacher-based; therefore, less opportunity is given to students for discussion, problem-solving, creating solutions, and working with peers. There was a significant difference between Grade 7 students' and Grade 10 students' attitudes towards cooperative learning based on the Behavior of the ABC model.

However, there was a significant difference between Grade 7 students' and Grade 10 students' attitudes towards cooperative learning based on the Cognitive aspects of the ABC model. Research shows that cooperative learning enhances student achievement through peer interaction and cognitive understanding. Cooperative learning strategies enhance students' academic achievements by engaging them in the learning process and improving critical thinking, reasoning, and problem-solving skills. They encourage active participation and move beyond text, memorization, and lower-level skills, even for those avoiding traditional settings [9]. The major findings of the study included: significantly higher achievement test scores of grade 10 students in cooperative learning than those in grade 7 in the cooperative learning classroom. Cooperative learning also enhances a positive attitude toward learning [21]. Thanh et al. [15] found that cooperative learning affected academic achievement. The findings highlight the importance of cooperative learning environments in enhancing student performance across different grade levels. By fostering peer-to-peer interactions, educators can create opportunities for deeper understanding and retention of material, ultimately leading to improved academic outcomes.

4.4. The Reasons Behind the Demonstrated Attitudes

The last objective of the study was to explore the reasons that helped explain the attitudes of grade 7 and grade 10 students toward cooperative learning at NGS in Phnom Penh. A semi-structured interview was adopted to collect the data from both student and teacher participants.

When asked if they prefer to work for a big group or a small group. Students prefer working in large groups for a variety of reasons, such as the ability to think quickly and collaborate quickly, but prefer working in small groups for the ability to discuss, share knowledge, and find enough people who will facilitate more active engagement. In a big group, it's difficult to synthesize a lot of ideas and to manage a group. In this examination, students' perception of cooperative learning, as used by NGS, recognized the concept of cooperative learning in their learning. This finding was supported by a previous study by Antil et al. [46], which discovered that students in their classrooms used recognized conceptualizations and forms of cooperative learning in several subjects.

In addition, when asked if they prefer to work alone or in a group. Most students prefer group work for various reasons, including increased social skills, better relationships, and time management efficiency. Group work enhances cognitive levels, reduces study stress, and encourages debate and idea generation. It also helps students gain support from gifted students and makes the classroom more enjoyable. Research shows that students benefit socially and academically from group work when structured correctly [3], [47].

Moreover, students also would like their teachers to employ group activities such as group projects, cooperative learning, socializing, and self-learning can help students make progress in their knowledge and generate more ideas. They can also benefit from collaborating with a peer who has advanced knowledge and bridges the knowledge gap, and may have ambivalence about the material subject if the teacher does not teach it. Teachers should also include more exercise in classrooms, but some students think it could have a negative effect on their coursework and results. Most students also believe that teachers can help poor students learn faster and understand the material more easily than working alone, and that poor students can be a burden for talented students. The team leader and the scholar club friend play significant roles in trying to remedy the problem.

Three teachers were also invited to be interviewed. When asked how she assigns group work in class, Teacher 1 said that she organized group work, which consisted of gifted and poor students in groups to allow the gifted students to help the poor ones. Cooperative learning is one of the approaches that can improve the implementation of inclusive education [48]. Inclusive education may be fostered when teachers place their students with varying abilities in the same group so they can support one another. Teacher 1 also added that she usually encourages students to share ideas with other members of the group. Teachers must incorporate cooperative learning into their classroom curricula to promote open communication, investigation, problem-solving, reasoning,

and an emotionally secure environment [21]. However, Teacher 2 reported that encouraging students to choose was a good option: "Allowing students to choose their group members has proven to be the most effective method for resolving disputes."

When asked if they noticed that student performance improved when they worked in groups. All three teachers agreed that their students seemed to perform a lot better if the teacher set up a positive learning environment, which would take time. For instance, Teacher 1 said, “Mixed group work improves students' ability, but can be time-consuming, making it difficult to complete assignments”.

In addition, when asked if cooperative learning enhances the dynamic and pleasant element of teaching and learning experiences, all three teachers also acknowledged that cooperative learning engages students’ learning, as seen in the excerpt of Teacher 3, “It appears that they [students] feel more a part of the process, not just that I am there to teach and all they are there to listen and take notes”. Teacher 3 added, “When I use group activities, I see an increase in total class involvement”. Teachers also believed that cooperative learning could help develop their students’ critical thinking skills. For example, Teacher 2 said, “Cooperative learning allows students to acquire broader ideas and increase critical skills by being in a small group together.”

Hertz-Lazarowitz [49] emphasizes the necessity for setting a teaching and learning environment in higher-order thinking skills (HOTs), assisting teachers to accept change in their role of new teaching school curriculum and training, as well as teaching pupils challenging social and intellectual abilities to succeed in the real world. Moreover, the existing literature also indicated that teachers believed cooperative learning helps them better manage and structure lessons, and research shows that students benefit socially and academically from it [50]-[55]. However, there are challenges to implementing it, such as time management, organizational requirements, and involvement from the teacher [56]-[59].

5. CONCLUSION

The study found that students performed better in schools where teachers must be trained in how to incorporate cooperative learning activities into their curricula to promote open communication and engagement, cooperative investigation, problem-solving, and reasoning, as well as provide a supportive and emotionally secure environment. The study found that 7th-grade students' academic performance is lower than 10th-grade students' due to differences between formal and informal cooperative learning methods and the need for regular teacher reviews. In addition, this study suggested that teachers should prepare programs and examine students’ cognitive development when they transition from elementary to junior high school, which affects students' beliefs and values related to blended academic subjects. There is a significant difference between grade 7th junior and grade 10th senior school. Researchers assume that the distinctions were produced by the youngest and the oldest students. On the other hand, cooperative learning, incorporating accountability and interdependence, enhances secondary school achievement, understanding, and self-confidence, making it a recommended method for secondary schools to implement. This approach not only fosters a sense of community among students but also encourages them to engage with diverse perspectives, ultimately enriching their educational experience during these critical developmental years. Learning success depends on individual characteristics, and teachers should adapt their learning environment. Cooperative learning fosters discussion, problem-solving, and peer collaboration, enhancing student participation and motivation. These innovative approaches prepare students for real-world challenges, enhance academic achievement, and create a more engaged and empowered generation of learners.

The current study has left certain areas for further investigation. Because the current study is a non-experimental research design, future research might employ an experimental study with cooperative learning as a treatment to improve students' learning achievement. In addition, the current study used two NGSs as research sites; the prospective study may duplicate the topic and expand the research sites.

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