

## **Early Childhood Cooperative Behaviors through HighScope Approach in Thailand**

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Cooperative behaviors are very important for human lives, works and society in 21<sup>st</sup> century. It has been recognized by educators around the world that is a one of the most crucial factors for successful in complex problem solving and sustainable peaceful lives. This research was conducted in the context of Thai early childhood classroom. The objectives were to 1) compare the early childhood students' scores of cooperative behaviors before and after the implementation of HighScope approach and to 2) analyze the early childhood students' cooperative behaviors through the HighScope approach. Mixed research methodology was employed in this study. The pretest-posttest control group design was conducted mixing by the analytic description method. The experimental group consisted of 42 students from 84 students by cluster random sampling and the control group consisted of 42 students. They were studied in kindergarten during the first semester of the 2019 academic year at the Khon Kaen University Demonstration School. The research instruments consisted of lesson plans, cooperative behavior evaluation form, field notes, and a photo camera. Data were collected by 3 raters blind evaluating the students' cooperative behavior, and 3 researchers taking field notes and photos. The data were analyzed by statistics (mean, S.D., t-test), and framework of Holz (2013). The results revealed that the experimental group students' post-cooperative behavior score (mean = 3.71, S.D. = 0.06) higher than the pre-cooperative behavior score (mean = 3.45, S.D. = 0.06) with the statistical significance at the level of .01 and t-value of 5.46. Moreover, they demonstrated cooperative behaviors: social skills, expression of ideas, choice and decision making, feeling perception and conflict resolution, which are basis to form cooperative habit of mind. Teachers and educators could use HighScope approach to design instructional activities that promote students' cooperative learning meaningfully.

**Keywords:** cooperation, cooperative behaviors, early childhood students, highscoope approach

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Cooperation lies at the heart of human lives and society from day-to-day interactions to some of our greatest endeavors. Understanding cooperation—what motivates it, how it develops, how it happens, and when it fails— is therefore an important part of understanding all forms of human behavior (Kousta, 2018). Cooperation is important in several settings, including behavioral interactions, biological evolution, sociobiology, cultural dynamics, and collective intelligence (Montoreano & Jaffe, 2020). Cooperative behavior has become a focus of research since the organizations started to structure employees into teams or groups, such as management teams, project groups, or self-managed teams (Cohen & Bailey, 1997). In the context of school, especially in the classroom, teachers should deliberately create opportunities for students to cooperate, share responsibilities, solve problems, and control conflict. These opportunities can be found in cooperative learning that differs from individualistic or traditional learning, where the students work independently (Kelly, 2019). In recent years, there has been an increasing focus on cooperation. It has been identified as an important educational outcome in its own right, rather than only as a means to develop or assess knowledge, which is learned through engagement and practice (Child & Shaw, 2016). As mentioned earlier, it is imperative to cultivate the importance of cooperation among students in the 21<sup>st</sup> century while also promoting it as a characteristic of the people in society.

Although cooperation is extremely important; however, in the context of Thai classrooms, several classrooms did not prepare the students with cooperation activities appropriately. Some of the people lack appropriate social thoughts and attitudes, they lack cooperation skills even if they are smart and talented, and they cannot solve social problems. According to The Quality Learning Foundation, Thailand (2019) stated that Thai children have the learning and innovation skills as any children from other nations in the world, but they lack the cooperation skill for teamwork. It is in the life and occupation skills that affected communication skills. The lack of cooperation skills is the result of the traditional teaching approach. Phanich (2019) and The Quality Learning Foundation, Thailand (2019) mentioned that most Thai teachers still use the teaching approach that focuses on the students' memorization of contents, which negatively affects students' leadership and cooperation skills. Balliu and Belshi (2017) indicated that the traditional methods consider teachers as the center of the teaching process as well as the managers and the main and referential source of scientific information, which does not help develop the practical skills of the students. Tularam and Machisella (2018) suggested that the traditional teaching approaches are generally teacher-directed, wherein the students are taught in a manner that is conducive to sitting and listening only. It is often argued that these approaches may not provide students with valuable learning skills. Phanich (2016) suggested that the focus of the education system has to change from teacher's teaching to student's learning, from individual learning to team learning, and from competition to cooperation. Children's cooperation could be observed through cooperative behavior. Therefore, teachers must change the traditional teaching approach to newer teaching approaches that focuses on the students' cooperative behavior. Especially, early childhood students should be prepared by engagement in cooperative learning and by encouraging expression of cooperative behavior, because the preschool stage is the golden age of life and the age of laying important foundations both

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physically, emotionally, mentally, socially, intellectually, morally, and ethically. According to Khammanee (1993) and Chingchana (2004), children aged 12 months to 6 years could learn to cooperate with others and play with others in a friendly manner, cooperative behavior, and likes to do things to please others.

The teachers who expect to organize activities to promote cooperation behavior for early childhood students in the classroom context should be able to recognize the importance of cooperation and should be able to arrange the activities according to the children's interests and needs. Moreover, they need an appropriate approach for teaching that encourages children's cooperative behavior. There are several approaches for increasing children's cooperative behavior that has been mentioned in past studies (see Zill, O'Donnell, & Sorongon, 2003; UNICEF, 2015; Brown, 2016; Capraro, Jagfeld, Klein, Mul, & van de Pol, 2019; Curtin & Jia, 2020). These research studies provide the importance of cooperative behavior as terminology for future study and some of the interventions to increase cooperative behavior. The HighScope is one of the approaches that encourage cooperative behavior in the classroom context, create learning activities for children to have the opportunity for interaction with others and participate in learning activities with a group through the important step including plan, do, and review (Zill, O'Donnell & Sorongon, 2003; UNICEF, 2015). HighScope was designed by Weikart, Hohmann and Schweinhart, in 1962 focusing on child development through active learning and playful active engagement in real-life experiences using real materials (Hohmann & Weikart, 1995). The HighScope, including plan-do-review activities, was recognized by several educators who encourage students to construct knowledge by themselves (French, 2012). The HighScope approach emphasizes child-initiated learning activities for preschool and elementary school children. The strongest evidence depicts that it helps children living in poverty to achieve greater success and responsibility throughout their lives (Schweinhart & Weikart, 1999). Cooperative play is one of the key development indicators in social and emotional development within the HighScope approach (Epstein, 2014). The results of the HighScope approach highlighted that, for the children, they could cooperate with other children. The children could be expected on social skills with peers, that is they could learn to share and cooperate with other children, to respect them, and to understand their feelings (UNICEF, 2015). Moreover, the HighScope approach have arranged the classroom and children's daily routine with thought and intention, implement a child-center approach to problem-solving and conflict resolution and created a cooperative environment (Delgado, 2018).

Social learning of children requires cooperation. The children who accept their friend's opinions, feelings of others' emotion, knowing and sharing their understanding, and showing leadership as well as fellowship skills in group working could perform cooperative behavior. Early childhood students are of an appropriate age for promoting their cooperative behavior to cultivate good character traits (Krogh, 1990 cited in Siriwattananon, 2001). Cooperative behavior is acting or functioning in a specified, desired way with each other. In addition, before we can expect children to have self-discipline, we need to assist them to deal with emotions and feelings and provide them with an environment in which they can relate to others in a calm manner (Holz, 2012). Student behavior within cooperative groups has consistently reported that students who

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gain most from cooperative work are those who give and receive elaborated explanations (Webb, 1985; 2008). Student cooperative behavior could be found in cooperative learning, referring to instructional methods in which teachers organize students into small groups, which then work together to help one another learn academic content (Slavin, 2011). Six tips to encourage cooperative behavior in children including focus on what they can do, role model cooperative behavior, offer choices, praise and reward specific behavior, consider the child's feelings and be patient (Bonker, 2020). Cooperative behavior could be considered based on 5 aspects including social skills, ideas expression, choice and decision making, feeling perception, and conflict resolution (Holz, 2012). An appropriate teaching approach could develop early childhood students' cooperative behavior. Therefore, teachers have to consider and implement teaching approaches to enhance cooperative behavior for early childhood students.

By the aforementioned rationale, cooperative behavior is extremely important for early childhood students. Teachers and researchers could prepare their children by using the teaching approach. This study determines the hypothesis that HighScope approach is a teaching approach that might enhance early childhood students' cooperative behavior. This research focuses on the development of early childhood students' cooperative behavior by using HighScope learning activities including plan, do, and review processes. The result of this research will be useful for early childhood teachers and researchers in designing appropriate learning activities for early childhood students.

### **Literature Review**

#### **HighScope Approach**

The name 'HighScope' refers to the high purposes and far-reaching mission of a model of education originating in the USA. Its goal is to improve the life chances of children and young people by promoting high-quality educational programs. The HighScope approach was designed by Weikart et al., beginning in 1962, '... in response to the persistent failures of high school students from Ypsilanti's poorest neighborhoods' (Weikart, Deloria, Lawser, & Wiegerink, 1970; Hohmann & Weikart, 1995). HighScope is a quality approach to early childhood care and education that has been shaped and developed by researches and practices >50 years. It identifies and builds on children's strengths, interests, and abilities (HighScope Ireland Institute, 2020). The HighScope Educational Research Foundation has conducted a comparison study of 3 groups of children, consisting of direct instruction, a traditional nursery, and HighScope. Based on these studies, from early childhood to 23 years of age, they found that those who study with the HighScope programs have fewer social-emotional behavior problems, such as being arrested for stealing, hurting others, emotional disability, and failure in life. Therefore, this program is proven to help prevent criminals from enhancing educational success and lifelong productivity (Schweinhart & Weikart, 1997; Wilson, 2000). In an HighScope setting, the children learn through a three-phase cycle: plan, do, and review (French, 2012; Izadpanah & Gunce, 2014). Pholyothin et al., (2013) have defined organizing the process of HighScope approaches, as follows.

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**Planning.** The first step is the child's thinking process about the goals that define expected actions. The child's planning depends on their age. Communication and language ability allow children to make plans through gestures or words. Planning is important because it supports ideas, clear selection, and decision-making in children, as well as promotes a child's self-confidence and a sense of self-control, which encourages children's interest in the planned play to promote the development of playing with more complex.

**Do or work time.** The second step is a time when children act, play, and solve problems with a purpose, concentration, and learning based on their experience. Working time is the period in which a child has complied with what he had intended. Discovering new ideas is a time when the children have to choose and decide to use materials and equipment to play.

**Reviewing or recall time.** The last step is the review period is where the child reflects, talks, and presents about what is done during work. In the review process, children understand by using language, discussion, and analysis, reflecting their thoughts about actions and experiences. It is the process of creating an understanding of what has been done. The children who are aware of the implications due to the work plan and the results obtained. They talk to others about their experience. It is a good opportunity for the children to practice the narrative of the narration, and the children will practice their ability to demonstrate to others. They understand that their experience realizes the past. The review causes the child to reflect on the original goal set. Actions that have been surveyed or planned improvements and the products that are currently received causing them to consider from the past which is present and future indicators, it is a skill that can be used in life.

The HighScope approach emphasizes child-initiated learning activities for preschool and elementary school children. The strongest evidence indicates that it helps children living in poverty to achieve greater success and responsibility throughout their lives (Schweinhart & Weikart, 1999). The advantage of HighScope has been supported by research studies (see Hohmann & Weikart, 1995; French, 2012), especially, it has encouraged cooperative behavior (see Epstein, 2014; UNICEF, 2015; Delgado, 2018).

In conclusion, organizing experience in the HighScope approach consists of 3 important phases. The first one is the planning phase—a process in which children think, make decisions, and talk about things they want to do based on their interests. They think about activity methods as well as talk about which activities they want to do next. The second phase involves action or “to do”. In this phase, children perform the planned activities. The children have to do activities by themselves based on their plans. The third phase is to review. It involves a presentation about what to do during work activities. For this research, we adapted the 3 phases of HighScope for designing and implementing the children's activities and to observe the children's cooperative behavior through learning activities. This research hypothesized that HighScope approach could support the early childhood students' cooperative behavior.

### **Cooperative Behavior**

Cooperation lies at the heart of human lives and society. Human beings are a social species that rely on cooperation to survive and thrive. Understanding how and why cooperation succeeds or fails is integral to solving several global challenges (Kousta, 2018). Cooperation is one of the most important themes for modern organizations. Cooperation, as a synergistic force, is at the core of the organizational process driving organizational effectiveness (Chen, Chen, & Meindl, 1998; Smith, Carroll, & Ashford, 1995; Schalk & Curseu, 2010). Cooperation was structurally created by the involvement of two or more participants to perform tasks and activities (Anderson & Caldwell, 2018). Cooperation is an important component of a human career and success in work and life. It is the heart of the interaction among individuals, families, and society and an inevitable part of life (Chingchana, 2004). Cooperation should start from early childhood because early childhood is the golden age of life—it is the age of laying important foundations in the areas of physical, emotional, societal, intellectual, moral, and ethical behaviors (Khammanee, 2016; Chingchana, 2004). Early childhood cooperation could be observed through cooperative behavior. Early childhood students are at an appropriate time to promote their cooperative behavior to cultivate good character traits (Krogh & Roos, 1996; Siriwattananon, 2001). Cooperative behavior is acquired through cooperative learning, which involves the instructional use of small groups of students who work together to maximize their own and each other's learning (Slavin, 2011; Johnson & Johnson, 2017).

The meaning of cooperative behavior can be explained using the root of vocabulary. To 'co-operate' is to work or act together or jointly and to be of assistance. Therefore, to be 'co-operative' is to be willing to 'co-operate', be helpful, and act in conjunction with others. It is to do with communicating and interacting with others and involves empathy and self-discipline. Cooperative behavior is acting or functioning in a specified, desired manner with each other (Holz, 2012). The basic elements of the cooperative team, include positive interdependence, individual accountability, face-to-face promotive interaction, interpersonal and small-group skills, and group processing (Johnson, Johnson, and Smith, 1998). For early childhood students, there are some important aspects of cooperative behavior, including social skills (e.g., taking turns, dividing and sharing resources, and working cooperatively), children's expression of ideas (to be guided by children's interest and encourage ideas), choice and decision making (allowing plenty of opportunities to make their own choices and decisions), feeling perception (to use role-play for children to explore their feelings), and conflict resolution (to use role-play for children's practice of conflict resolution) (Holz, 2012). This research was based on 5 important aspects, according to Holz (2012), to determine the early childhood students' cooperative behaviors.

For this research, the conceptual framework consisted of the variables including pre- and post-stage cooperative behaviors and HighScope approach. The pre-stage students' cooperative behaviors were evaluated by 3 teachers at the beginning of the semester in classrooms by implementing the HighScope approach (Plan-Do-Review activities) and focusing on cooperative behaviors. HighScope is a treatment that affects students' cooperative behaviors. Teachers design learning activities by considering how

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to encourage the students' cooperative behaviors. They teach and observe the students' cooperative behaviors. The qualitative data of students' cooperative behaviors was investigated by the researchers in this study. Finally, post-stage students' cooperative behaviors were evaluated by 3 teachers at the end of the semester. The conceptual framework has been depicted in Figure 1.



Figure 1: Conceptual Framework

## Method

This research implemented mixed methods, type II embedded research design (Creswell, 2007) by collecting and analyzing quantitative and qualitative data. The quantitative part was conducted by the pretest-posttest control group design (Campbell & Stanley, 1963) and the qualitative part was employed by the analytic description method based on framework of cooperative behaviors (Holz, 2012). The research questions including of whether the post-stage early childhood students' cooperative behaviors in which after implementation of HighScope approach higher than the pre-stage early childhood students' cooperative behaviors? and what are qualitative evidences of early childhood students' cooperative behaviors after implementation of HighScope approach? We investigated the quantitative pre-stage data and the results of the early childhood students' cooperative behaviors, along with the qualitative data and the results of the early childhood students' cooperative behaviors, and, finally, the post-stage data and results of the early childhood students' cooperative behaviors. The research design for quantitative part is show in Figure 2 and the details of our research methodology are as follows.

R	O1	X	O2
R	O3		O4

Figure 2: Research Design (Campbell & Stanley, 1963)

## Research Instruments

The research instrument for collecting quantitative data was the cooperative behaviors evaluation form synthesized by the researcher based on the framework of Holz (2012) and verified by 2 experts in the field of early childhood education and an expert in educational assessment. The determination of cooperative behaviors is depicted in Table

1. Moreover, the instruments for collecting qualitative data were field notes for taking notes of the early childhood students' cooperative behaviors, a photo camera, and worksheets.

**Table 1**  
*Determination of Cooperative Behaviours*

Score	Interpretation
1	The students' cooperative behavior needs to improve
2	The students' cooperative behavior is at a fair level
3	The students' cooperative behavior is at a good level
4	The students' cooperative behavior is at a very good level

### **Participants**

The experimental group consisted of a classroom of 42 kindergarten students during the 1st semester of the 2019 academic year in the Demonstration School, Khon Kaen University, Thailand. These students were statistically selected by cluster random sampling (Gall, Brog, & Gall, 1996; Kerlinger, 1986). Each class was a mix of all students' abilities (excellent, good, fair, and poor). One classroom out of two classes comprised of 84 kindergarten students, which served as the experimental group. Additionally, another classroom consisted of 42 kindergarten students were the control group. The teachers and all the students in these classes contented to participate in this research.

### **Data Collection**

Research data were collected by 3 teachers as raters who are blind between themselves. The raters evaluated the individual student's cooperative behaviors, in both of the experimental and control groups, at the beginning of the semester using the cooperative behaviors evaluation form and determining the score (Table 1). Then, the HighScope approach was implemented as the intervention for the experimental group. The researchers took field notes and recorded the photos of the experimental group students' cooperative behaviors based on the 5 aspects of cooperative behaviors (Holz, 2012) in learning activities and worksheets within the context of the HighScope approach. Finally, the 3 raters evaluated the individual students' cooperative behaviors, in both of the experimental and control groups, at the end of the semester by using the cooperative behaviors evaluation form.

### **Data Analysis**

The quantitative data of the experimental and control group students' cooperative behaviors was analyzed by statistics, that is, using the Mean, Standard Deviation, and t-test for the dependent samples. Qualitative data of the experimental group students' cooperative behaviors was analyzed by applying the framework of cooperative behaviors for early childhood students (Holz, 2012) by using the method of analytic description. The events were determined as unit of analysis (Steffe & Thomson, 2000) and the protocols and pictures were considered as empirical data conform to the framework of cooperative behaviors.

**Results**

**The Quantitative Result of the Comparison of the Early Childhood Students’ Pre- and Post-Stages Cooperative Behaviors**

The early childhood students’ cooperative behaviors between the pre- and post-stages of implementation of the HighScope approach is depicted in Table 2.

**Table 2**  
*The Early Childhood Students’ Pre- and Post-Stages Cooperative Behaviors*

Group of Students	Period	Number of Students	Mean	SD.	t	df	sig
Experimental Group	Pre-stage	42	3.45	0.06	5.46	41	.00**
	Post-stage	42	3.71	0.06			
Control Group	Pre-stage	42	3.44	0.06	1.35	41	.09
	Post-stage	42	3.51	0.04			

\*\*statistical significance at the level of .01

According to the statistics shown in Table 2, the experimental group students have a higher post-stage average score ( $\bar{x} = 3.71, SD. = 0.06$ ) on cooperative behaviors than the pre-stage average score ( $\bar{x} = 3.45, SD. = 0.06$ ), with their statistical significance at the level of .01 and the t-value of 5.46. For the control group students, they have a post-stage average score ( $\bar{x} = 3.51, SD. = 0.04$ ) on cooperative behaviors no different from the pre-stage average score ( $\bar{x} = 3.44, SD. = 0.06$ ) which was considered at the level of .01 of statistical significance with the t-value of 1.35. These statistics indicated that the implementation of the HighScope approach could improve the early childhood students’ cooperative behaviors.

**The Qualitative Result of Early Childhood Students’ Cooperative Behaviors**

The experimental group students’ cooperative behaviors were based on the following 5 aspects of cooperative behaviors.

**Social skills.** The early childhood students could work together cooperatively. They could divide and share colored pencils for painting pictures in their group work. They could share responsibilities in doing group work. These were pieces of evidence to demonstrate that they possessed social skills. The early childhood students’ social skills have been depicted in following episode and Figure 3.

*Oil: We can color our work together.*

*Win: Yes, all right, beautiful work is performed by everyone*

*San: You can use my colored pencil to do that part, I will do this part, we will finish on time.*

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Figure 3: The Early Childhood Students' Social Skills

**Expression of ideas.** The early childhood students could show their ideas in group working and whole-class presentations. They shared their ideas of folding and sticking the paper and also of painting pictures. Moreover, they could express their ideas about a story in their worksheet for the whole class presentation. These are the evidence for the expression of ideas, as shown in episode and Figure 4.

*Wa: This is folding and then bring together; it shows lovely boy and girl.*

*Mo: They go to buy snack together; they share snack to their friend.*

*Mik: We will present our group work, the boy and the girl go to a shop for buying some snack, then they go to school, they give some snack to their friends.*



Figure 4: The Early Childhood Students' Expression of Ideas

**Choice and decision making.** The early childhood students could cooperate with their friends for understanding the characteristics of rice (raw rice, ripe rice, raw sticky rice, ripe sticky rice, and paddy). Then, they cooperated to decide on what types of rice could be used to make grilled rice with egg. This activity provided the students with opportunities to cooperate to make choices and decisions. Finally, they could complete the task of preparing grilled rice with egg and felt proud of their skills. The episode and pictures in Figure 4 represent choice and decision-making.

*Teacher: So, we have raw rice, ripe rice, raw sticky rice, ripe sticky rice, and paddy, which one you select to make grilled rice, why?*

*Na: I will select...ummm..... ripe sticky rice, I used to saw from the street market.*

*Toto: Ripe sticky rice, it could be molded into various shape.*

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Figure 5: The Early Childhood Students' Choice and Decision Making

**Feeling perception.** The early childhood students could perceive the feeling of their friends. They could perceive not only the positive feeling but also the negative feeling of their friends during cooperative working. Feeling perception allowed the early childhood students to adjust their positions when dealing with their friends and sustain a cooperative working style to accomplish the common purpose. The evidence of feeling perception has been shown in Figure 6.

*Som: We can color these pictures together (smile, happy); we will finish before another group.*

*Nim: We had finished (smile, happy), you can check our work, it is good, you are so careful.*

*Sun: You calm down please, I am in a hurry, we will complete our work on time.*

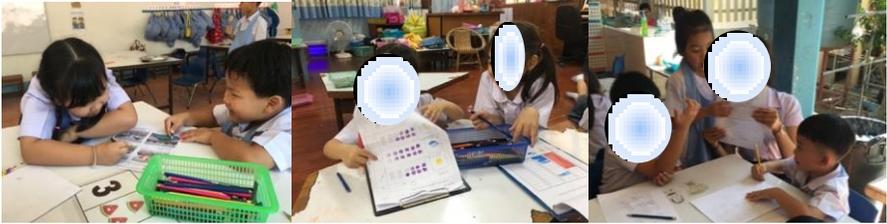


Figure 6: Images Depicting Early Childhood Students' Positive and Negative Feeling Perception

**Conflict resolution.** The early childhood students' conflict resolution occurred during cooperative working. When some of the students did not agree with their friends during group work, another child tried to negotiate to sustain the group working system until the common purpose was achieved. The below episode and Figure 7 reflect the evidence of conflict resolution.

*Max: Why you paint my picture?*

*Bow: Is it good?*

*Max: No, I do not need anybody to paint my picture.*

*Pink: The time is almost over. Bow would like to help you. Our group will complete quickly.*

*Sun: I agree.*

*Max: Umm...okay.*



Figure 7: Image Depicting Early Childhood Students' Conflict Resolution

The summary of the present research obtained from the qualitative data analysis revealed that cooperative behaviors involved 5 aspects: 1) Social skills—the early childhood students' ability to work together, divide, and share color pencils as well as share responsibilities when doing group work; 2) Expression of ideas—the early childhood students could demonstrate their ideas to their peers in group working and also to the whole class during the presentation. The students' ideas could be shared in both small and large groups; 3) Choice and decision making—the early childhood students could cooperate with their friends to understand the choice, then cooperate to make decisions based on everyone opinions; 4) Feeling perception—the early childhood students could perceive the positive and negative feelings of their friends during cooperative working tasks, and they adjusted their position to try and sustain the cooperative work mode to accomplish their common purpose, and 5) Conflict resolution—the early childhood students could resolve conflicts that occurred during their cooperative working. The conflict occurred when some students did not agree with their friends or were not satisfied with the group work, which is when another child tried to negotiate to sustain the group working mode to accomplish the common purpose. The conflict was resolved and the students could continue cooperative work until they achieved their common goal.

### **Discussion**

The quantitative result revealed that the early childhood students in experimental group had a higher post-stage average score of cooperative behaviors than the pre-stage average score with statistical significance. This result indicated that the implementation of the HighScope approach could improve early childhood students' cooperative behaviors. This result is a consequence of the activities in the HighScope approach that were designed using plan, do, and review corporate activities with cooperative features in group working. Remarkably, the version of HighScope in this study may be called adaptive HighScope, because it could be incorporated with cooperative features. The result supported prior research results by Epstein (2014), UNICEF (2015), and Delgado (2018) who reported that the HighScope approach has encouraged cooperative behaviors. Moreover, the results could confirm the importance of cooperation when the early childhood students worked and learned together. They could maximize their own and each other's learning (Slavin, 2011; Johnson & Johnson, 2017). These results also support the statement by Khammanee (2016) and Chingchana (2004) that cooperation should start from early childhood because early childhood is the golden age of life; it is the age of laying important foundations in the areas of physical, emotional, societal,

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intellectual, moral, and ethical behavior. Therefore, we should cultivate cooperative behaviors in students since their early childhood period.

The qualitative result found that the early childhood students' cooperative behaviors consisting of 5 aspects. The first aspect was social skills—the early childhood students could work together, divide and share the color pencils, and shared responsibilities when doing group work. These skills could mainly be performed in small group work according to the small group skills and group processing (Johnson, Johnson, & Smith, 1998). Moreover, the students were split into small collaborative groups during the activities, which lead to the creation of a suitable educational environment, which helped them in understanding the information, applying it in new situations, analyzing it, synthesizing it, and finally assessing it (Elsayed, Abbas, & Abdou, 2021). These results inferred that social skills, small group skills, and group processing could support each other. On the other hand, social skills deficits emerged as significant predictors of cognitive failures, attention deficits and psychological maladjustment in school children (Mukhtar & Naz, 2021). The second aspect was the expression of ideas; the children could demonstrate their ideas to their peers in group working and also in the whole class presentation. The expression of ideas relates to face-to-face promotive interaction and interpersonal skills (Johnson, Johnson, & Smith, 1998). The third aspect was the choice and decision making, wherein the children could understand the choices and make decisions by considering the opinions of all the members of their group. This aspect is related to the idea of democracy in group work, which is important for the students in daily life. The fourth aspect was feeling and perception; the early childhood students could perceive the positive and negative feelings of their friends and they adjusted their positions and tried to sustain cooperative work to accomplish common goals. This aspect deals with the recognition of the status of emotion. According to Khammanee (2016) and Chingchana (2004), early childhood is the golden age and the age of laying important foundations both physically and emotionally. This stage is best for the foundation of the emotional quotient (EQ). The last aspect was conflict resolution, and it was not easy for the early childhood students to resolve conflict. This study noted evidence of conflict resolution that occurred during students' cooperative working. The episode of conflict resolution in this study is a perfect scenario as it reveals that the early childhood students used the peaceful approach to resolve an issue. Undoubtedly, we would like to see people live in a peaceful society. Hence, we should cultivate a behavior among early childhood students to resolve their conflicts in a peaceful manner. Moreover, we could use the conflict resolution scenario like a role-play for children to practice conflict resolution (Holz, 2012). These scenarios could be used to not only cultivate the early childhood children with cooperative learning, but also design the appropriate learning activities for the next lessons that promote long term habit of mind in cooperation and peaceful mind in their future life.

### **Conclusions**

This research concluded that the HighScope approach can be an important treatment approach for developing early childhood students' cooperative behaviors. Besides, the HighScope approach could appropriately engage early childhood students to perform in group working. Moreover, the students were very enjoying in the learning

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activities, including the cooperative plan, do, and review activities. This is an important foundation for early childhood students to develop social skills, express ideas, make choices and decisions, perceive positive and negative feelings, and resolve conflicts.

Early childhood teachers and researchers can learn from the research results and use the design learning activities to conform to the steps of adaptive HighScope—cooperative plan, do, and review—for the early childhood students to cultivate in them a cooperative culture and characterize them with cooperative behaviors. Learning activities should be designed by covering the 5 aspects of cooperative behaviors and the interest of the early childhood students. If early childhood student learns regularly through appropriate activities, they can grow to become adults with cooperative habit and peaceful mind, and hence live in a peaceful society.

### **Recommendations**

Generally, the HighScope approach including the plan, do, and review activities are not necessarily applied with cooperation or group working systems. This research result found the importance of cooperative features of group working; therefore, the early childhood teachers and researchers who liked to promote the early childhood students' cooperative behaviors should recognize the important features of cooperation and cooperate with the HighScope activities, namely with the cooperative plan, do, and review activities.

This research focused on the early childhood students' cooperative behaviors based on the 5 cooperative behaviors (Holz, 2012). Future research may focus on the elements of the cooperative team (see Johnson, Johnson, & Smith, 1998), including positive interdependence, individual accountability, face-to-face promotive interaction, interpersonal and small group skills, and group processing. Another research topic was to study focused on the important aspect of cooperative behaviors, such as conflict resolution. The body of knowledge on conflict resolution and the method to teach early childhood students to resolve conflicts in their classroom and daily life require further exploration.

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