



## TEAMWORK SKILLS EDUCATION IN THEMED ROLE-PLAYING GAMES IN PRESCHOOL

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### ABSTRACT

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This study aimed to investigate the current state of education on the development of children's cooperative abilities via the use of themed role-playing games in Dak Lak, Vietnam. The period between March through June 2019 was devoted to administering an online survey for data collection. The findings indicate that preschools have devoted attention, effort, intellect, and time to developing primary students' collaboration abilities. Despite this, the findings are still relatively low and do not reflect the proportional number of participants. The youngsters aged 5 to 6 years old have shown that the measures benefit their ability to collaborate with others. The youngsters are more engaged in the activity, taking the initiative, and showing enthusiasm for interacting with one another. The experimental and control groups were quite different regarding their ability to collaborate effectively. In comparison to the youngsters in the control group, those in the experimental group demonstrated superior collaboration skills on a more consistent and regular basis.

**Contribution/Originality:** Our study examined whether playing role-playing games in preschool helped children improve their collaboration ability. Students who participated in role-playing games demonstrated more dedication to collaboration and were inclined to collaborate with others. In addition, role-playing games taught them how to develop emotional equations with others.

### 1. INTRODUCTION

Teamwork is a working group with direct cooperation to achieve common goals (Vodopivec & Hmelak, 2015). Teamwork is an important skill for a job and life. In preschool, teamwork can help children communicate with each other, learn and implicate problem-solving, listening, creativity and self-esteem (Small World, 2018). Schools have been trying to prepare students for future development (Quesenberry, Mustian, & Clark-Bischke, 2016). Preschools can introduce teamwork according to learning and playing activities. Role-playing games are virtual games in a fictional world in which player is the main game character (Arjoranta, 2011). In role-playing games, children can copy adults' actions and behaviors (Vinogradova & Ivanova, 2016). Therefore, role playing games can be an effective way to educate and promote children for social ethics and intellectual development (Vinogradova & Ivanova, 2016).

Teamwork skills are important social skills for individual development (Vodopivec & Hmelak, 2015). Teamwork is conducted by at least two people to achieve goals. In teamwork, participants must to have same spirit, goals, close tie and communication. To develop teamwork skills, individuals have to follow five phases are formation, storming, normalization, results and end (Vodopivec & Hmelak, 2015). Early childhood education is an important part as a foundation for children to develop their teamwork skills. Numerous researchers have introduced role-played games as an effective way for teamwork skill training. However, from our knowledge, there are limited research that has examined themed role playing games involving team skills for children in preschool. In this research, we examined the development of children's team skills through themed role-playing games in Vietnam. Our study established the impact of themed role-playing games on the teamwork skill development and the children teamwork skill performance.

On the other hand, we explored what factors affected children's teamwork skill development. The rest of the paper is organized as follows: the next part presents a review of literature related to the theory of teamwork skills and themed role-playing games. Part Three describes the research methodology; Part four discusses the research results and discussion section is the last section. This section also presents implications for future researches and application of themed role-playing games in early childhood education.

## 2. LITERATURE REVIEW

### 2.1. Theory of Teamwork Skills

Teamwork skills has been analyzed in different ways when determining its component skills. Some authors have divided teamwork skills into individual skills, while others have divided into group skills. At the individual level, Johnson and Johnson (1989) pointed out, teamwork skills included 4 component skills namely communication skills, trust-building and maintenance skills; leadership sharing skills; conflict resolving skills with upbuilding spirit.

Schmuck and Schmuck (2000) from an interpersonal perspective, divided teamwork skills into six basic skills: explaining skill; skill to understand the behavior of others; receptive skill; communication skill; behavioral expression skill; emotional expression skill. Ngo (2001), in a study on students' team learning skills, suggested 18 team cooperation skills including skills like team cooperation in students' learning, which is: self-association in a group; self-organization of group; management of group work; assignment of tasks to each member; planning to solve group tasks; collaboration, sharing to solve the group tasks; listening, agreement with opinions or acceptance of opposing opinions. According to Nguyen and Vu (2017), teamwork skills of preschool children should include team forming and maintaining skills; communication skills according to the principle of interaction among team members; work performance skills of the team; conflict resolving skills of the team.

Vu-Thi (2016) suggested forming a number of cooperative skills as a component of teamwork skills of preschool children, including discussion skills, listening skills; reasonable job assignment skills; sharing skills; action cooperative skills; and conflict resolving skills. At the group level, Villa (2002) suggested 4 groups of skills in teamwork, arranged according to the team development process: team formation skills; team functions performance skills; structure formation skills; and team completion skills.

According to Le-Van (2004) it is necessary to form groups for elementary school students with hearing impairment in the classroom to integrate 4 groups of cooperative skills in teamwork: team formation skills; communication skills in the team; trust-building and maintaining skills; conflict resolving in an up-building spirit. From the above points of view combined with the research of Vodopivec and Hmelak (2015) it can be concluded that teamwork skills for 5-6 years old children in preschool include following component skills: Team formation skill; Cooperative skill among team members; Task performance skill of the team; Conflict resolving skill while playing; and Team development skill

## 2.2. Theory of Themed Role-Playing Game

Themed role-playing game is a creative, unique reflection of adult social life through theme and content, according to Arjoranta (2011) and Vodopivec and Hmelak (2015). Compared with other types of games, a "themed role-playing game is the type of game that has the most complete and clearest characteristics of games in general", specifically the following characteristics:

- *Themed characteristics:* Themed role-playing game always has a theme - it is a slice of real-life reflected in the game, based on children's own vivid impressions and symbols of their daily life, such as family, kindergarten, shopping... "The wider the scope of reality that children come into contact with, the richer the themes of the game" (Bowman, 2010).
- *Symbolism:* In this game, roles, actions and toys are all symbolic; thus, when playing, children must imagine the situations, thereby helping their imaginations develop strongly. In the game, children act with a substitute that represents the real object: give a new name to the substitute, act with it in accordance with this new name (Arjoranta, 2011).
- *Freedom, voluntariness and independence:* One of the features of the game is that children's freedom, voluntariness and independence are highly expressed. While playing, children are not dependent on practical needs; they play out of their own immediate needs and interests (Arenas, Viduani, & Araujo, 2022).
- *Cooperation:* Children work together while playing. The main content of this game is a reflection of different human relationships, so in the themed role-playing game children voluntarily play together to show the interrelationship between the roles. It is the content of themed role-playing games that creates in children the need for collective play (Small World, 2018).
- *Creativity:* An important feature of themed role-playing games is that there are seeds of creativity during gameplay. Some psychologists assume that children's games should not be considered a creative activity because children do not create anything new while playing (Bowman, 2010; McConville, Rauch, Helgegren, & Kain, 2017).

## 2.3. Theory of Teamwork Skills Education for 5-6 Years Old Children in Themed Role-Playing Games in Preschool

Teamwork skills education for 5-6 years old children in themed role-playing games is the process of teachers' influence on children to develop children's ability to cooperate with their team members to perform common tasks according to the setup purpose and intention. A few of these tasks are here as under:

- *Cognitive education for 5-6 years old children about teamwork skills in themed role-playing games.* This involves providing children with an understanding of teamwork skills in themed role-playing games through conversation, games and daily activities in the preschool. These are the skills to join teams: cooperative skills between team members, task performance skill of the team, conflict resolving skill of the team; team development skill (Arenas et al., 2022; Han, Catron, Weiss, & Marciel, 2005; Small World, 2018).
- *Forming positive attitudes and emotions when demonstrating teamwork skills in themed role-playing games.* Teachers need to arouse in children the interest and excitement when demonstrating teamwork skills in themed role-playing games. Children should know how to express their positive emotions to their friends in the team. Especially, children should know how to show care, sharing and sympathy with team members to ultimately achieve effectiveness in the team (Anning, 2010).
- *Practicing teamwork skills for 5-6 years old children in themed role-playing games.* Children's teamwork skills do not appear naturally. In order to form and develop such skills, teachers need to train according to a process and gradually increase the difficulty to help children form effective teamwork skills in themed role-playing games (Dyson et al., 2016).
- *Practicing team formation skills and cooperative skills among team members:* These are two important skills that help children create unity in the team to perform common tasks. Teachers help children know how to choose

friends to join the team, negotiate, and assign tasks to members. Teachers need to help children know how to build common working rules for the team so that the children in the team may effectively perform together (Vinogradova & Ivanova, 2016).

- *Practicing conflict resolving skills in the team:* During teamwork, children often have many conflicts. Therefore, teachers need to guide children to identify conflicts that occur in the team, find ways to resolve the conflicts, then resolve the conflicts. In case children are in an impasse and cannot solve the conflicts, the child must know how to seek help from others (Clark, 2006; Kyllonen, 2012).
- *Practicing team development skill:* After a period of time participating in teams, teachers need to educate children to logically present and arrange issues, to act and behave according to the common rules of the team, to control their own emotions and desires. Especially, children must know how to check and report the team's performance when completing assigned tasks and know-how to expand playing topics and content (Salas, Reyes, & McDaniel, 2018).

Teamwork skills education in a themed role-playing game is a way of implementing and education towards the formation and development of teamwork skills for children. In order to educate teamwork skills for 5-6 years old children in themed role-playing games, it is necessary to use the following methods: Methods of visual - illustration; methods of using words; methods of practice and experience; methods of education with affection and encouragement; methods of setting an example - evaluation. Methods of teamwork skills education for 5-6 years old children in themed role-playing games in preschool should always be directed at children, promoting children's positivity, initiative and creativity in teamwork. Teachers must skillfully and flexibly apply a combination of the above methods to achieve the objective of training and developing teamwork skills for children.

In education, assessment is a very important component of the educational process (Hager & Butler, 1996; Harlen, Gipps, Broadfoot, & Nuttall, 1992; Weeden, Winter, & Broadfoot, 2002). It has feedback and a positive role in adjusting impact measures, impact forms, educational content, etc., aiming to achieve the objectives (Schmuck & Schmuck, 2000). Assessment of children's teamwork skills in themed role-playing games should be conducted regularly, during the performance and after the ending of the games. Regular assessment will help teachers quickly identify problems and make timely adjustments in content, methods, teaching materials or educational environment.

On the basis of the concept of children's teamwork skills in themed role-playing games and the manifestations of children's teamwork skills in themed role-playing games, the thesis builds criteria for assessment of teamwork skills in thematic role-playing games for children in preschool based on the following five component skills (Hager & Butler, 1996; Harlen et al., 1992; O'Neil Jr, Wang, Lee, Mulkey, & Baker, 2003; Wu, Richards, & Saw, 2014):

Criterion 1: Team formation skill. Indicator 1: Children want and enjoy playing with friends; Indicator 2: Children know how to invite friends to play with them; Indicator 3: Children respond positively when they are invited to play with friends; Indicator 4: Children know how to discuss and negotiate with their friends in the team to agree on play ideas, role assignment, play space, toys...

Criterion 2: Cooperative skills among team members. Indicator 1: Children know how to listen to the ideas of team members; Indicator 2: Children know how to discuss and exchange with team members to perform the roles well; Indicator 3: Children know how to cooperate with team members to complete common tasks; Indicator 4: Children know how to sacrifice their interests to complete the common task of the team.

Criterion 3: Team's common task performance skill. Indicator 1: Children accept the assignment of the team; Indicator 2: Children know how to encourage each other while playing; Indicator 3: Children know how to accept the differences of the team members; Indicator 4: Children know how to check and assess team members on task performance.

Criterion 4: Conflict-solving skill. Indicator 1: Children are able to identify conflicts that occur in the team; Indicator 2: Children know how to find a way of conflict resolving; Indicator 3: Children are able to resolve conflicts occurred in the team; Indicator 4: Children know how to seek help from others to resolve conflicts.

Criterion 5: Team development skill. Indicator 1: Children know how to stabilize the team, check the team's results; Indicator 2: Children know how to create bonding situations between different teams; Indicator 3: Children know how to establish relationships between different roles and teams; Indicator 4: Children know how to develop ideas to expand topics and content of the games.

In order to assess the teamwork skills of 5-6 years old children, this study was formulated at three levels: Level 1: Teamwork skills in themed role-playing games are at a good level ( $2.33 \leq \text{Average score} \leq 3.00$ ). Level 2: Teamwork skills in themed role-playing games are at an average level ( $1.67 \leq \text{Average score} \leq 2.32$ ). Level 3: Teamwork skills in themed role-playing games are at a weak level ( $1 \leq \text{Average score} \leq 1.66$ ).

### 3. METHOD

#### 3.1. Objectives of the Survey

This study constructed a survey based on various situations of 5-6 years old children involved in themed role-playing games in preschools as a practical basis for proposing measures to develop teamwork skills. The survey also focused on the current situation of preschool teachers' perceptions about teamwork skills education in themed role-playing games; about conducting the educational process, contents and measures for teaching teamwork skills, and organization of educational environment.

#### 3.2. Participants and Scope

The survey was conducted at 11 preschools with total 110 preschool teachers working in kindergarten classes (5-6 years old) in Dak Lak province, including 6 preschools in Buon Ma Thuot City (Khanh Xuan Kindergarten, Tan An Kindergarten, Thanh Cong Kindergarten, Tan Lap Kindergarten, Thang Loi Kindergarten, 10/3 Kindergarten) and 5 preschools in districts (Hoa Po Lang Kindergarten - Buon Don District; Vang Anh Kindergarten - Ea H'Leo District; Vanh Khuyen Kindergarten - Lak district; Hoa Sim Kindergarten - M'Drak district; Son Ca Kindergarten - Ea Sup district). Survey of 60 children aged 5-6 years old at Thang Loi Kindergarten (Buon Ma Thuot City) and Hoa Po Lang Kindergarten (Buon Don district), Dak Lak Province.

*Survey period:* From March 2019 to June 2019.

*Method:* This study adopted different types of methods of data collection namely, questionnaire survey method, for collecting primary data from preschool teachers; method of pedagogical observation, which directly observed the process of organizing activities for children in preschools to learn how teachers conduct themed role-playing games and organize play environments for children; the conversational method, which included chats, exchanges and interviews with preschool teachers to collect necessary information about teamwork skills among 5-6 years old children in preschools; and method of activity product analysis, which analyzed the teacher's activity plan on themed role-playing games and analyzed the results of 5-6 years old children playing themed role-playing games by determining the child's teamwork skills in themed role-playing games.

**Table 1.** Teachers' perception of teamwork skills education for 5-6 years old in a themed role-playing games in preschools.

No.	Teacher's perception	Number (N=110)	Percentage (%)
1	Teaching teamwork skills for 5-6 years old in themed role-playing games is the process by which teachers organize and guide to form in children the ability to act in coordination with friends in a themed role-playing game to perform the group's common task according to the stated purpose of playing.	35	31.8
2	Teaching teamwork skills for 5-6 years old in themed role-playing games is the process by which teachers teach children to interact with each other during play.	15	13.6
3	Teaching teamwork skills for 5-6 years old in a themed role-playing game is the process by which teachers teach children to support the members of the playing group.	28	25.5
4	Teaching teamwork skills for 5-6 years old in a themed role-playing game is the process by which teachers teach children to discuss and agree among group members to play the game together.	32	29.1
Total		110	100.0

*Tools:* Use observation sheets to record children's teamwork skills when organizing three themed role-playing games: Sales game (career theme), Veterinarian game (career theme) and the game of Gong Culture Festival (Homeland - Country theme).

*Evaluation tools:* Based on the criteria and rating scale developed in Chapter 1 to evaluate children's teamwork skills in themed role-playing games.

## 4. RESULTS

### 4.1. The Actual Education Situation of Teamwork Skills For 5-6 Years Old Children in Themed Role-Playing Games in Preschools.

Table 1 shows that the majority of teachers are aware of teamwork skills education for 5-6 years old children in a themed role-playing game (68.2%), of which 13.6% of teachers think that "Teaching teamwork skills for 5-6 years old children in a themed role-playing game is the process by which teachers teach children to interact with each other during play", 25.5% teachers think that "Teaching teamwork skills for 5-6 years old children in themed role-playing game is the process by which teachers teach children to support the members of the playing group" and 29.1% teachers think that "Teaching teamwork skills for 5-6 years old children in a themed role-playing game is the process by which teachers teach children to discuss and agree among group members to play the game together". The survey results also show that only 31.8% of teachers are fully and correctly aware of the nature of teamwork skills education for 5-6 years old children in themed role-playing games.

Table 2 shows the average score = 2.22 and standard deviation = 0.63, which suggests that preschool teachers in the survey have conducted teamwork skills education for 5-6 years old children at an average level. Moreover, the level of teamwork skills education is different in each activity. Table 2 also shows that teachers most often use play activities as the mean of teaching teamwork above all (ranked 1st) with an average score of 2.79 followed by learning and outdoor activities (average score 2.58 and 2.17, respectively).

**Table 2.** Current activities that teachers use to teach teamwork skills for 5-6 years old children in preschools.

No.	Activities	Level			Average score	Standard deviation	Ranking
		Never	Seldom	Frequently			
1	Morning exercise activity	21	50	39	2.16	0.72	4
2	Learning activities	11	24	75	2.58	0.67	2
3	Outdoor activities	18	55	37	2.17	0.69	3
4	Play activities (in corners)	5	13	92	2.79	0.51	1
5	Eating activities	19	69	22	2.03	0.61	5
6	Sleeping activities	49	56	5	1.60	0.58	6
Overall average score					2.22	0.63	

**Table 3.** Current situation of the educational content of teamwork skills for 5-6 years old children in themed role-playing games in preschools.

No.	Teamwork skills	Level of performance			Average score	Standard deviation	Ranking
		Never (1p)	Seldom (2p)	Frequently (3p)			
1	Play team formation skill	10	75	25	2.14	0.55	3
2	Coordination skill among team members	28	35	47	2.17	0.81	1
3	Task performance skill of the team	17	59	34	2.15	0.67	2
4	Conflict resolving skill during play	15	82	13	1.98	0.51	5
5	Team development skill	22	54	34	2.11	0.71	4
Overall average score					2.11	0.65	

Table 3 presents current situation of the educational content of teamwork skills for 5-6 years old student in themes of role-played games. With the average score = 2.11 and standard deviation = 0.65, it shows that the educational content of teamwork skills for 5-6 years old children in themed role-playing games in preschools is taught by preschool teachers at an average level. Teamwork skills are conducted with varying degrees, in which "Coordination skills among team members" is the most practiced (average score = 2.17), followed by "Task

performance skill of the team" (average score = 2.15). The results in the table also show that preschool teachers teach little in "conflict resolving skill during play" and "Team development skill" (average score is 1.98 and 2.11, respectively).

**Table 4.** Current situation of building an educational environment for teamwork skills for 5-6 years old children in themed role-playing games at preschool.

No.	Content	Level of performance			Average score	Standard deviation	Ranking
		Never (1p)	Seldom (2p)	Frequently (3p)			
1	Prepare all the objects and toys	15	13	82	2.61	0.72	2
2	Build new and attractive play corners for children	55	25	30	1.77	0.85	6
3	Constantly innovate different play corners	25	50	35	2.09	0.74	5
4	Arrange objects, toys that are easy to see, easy to get, easy to choose	2	19	89	2.79	0.45	1
5	The teacher and children make toys to stimulate children's creativity	19	37	54	2.32	0.75	3
6	The teacher creates shared objects and toys for groups to exchange and play together	14	47	49	2.32	0.69	3
Overall average score					2.32	0.70	

With average score = 2.32 and standard deviation = 0.70, it shows that building an educational environment for teamwork skills for 5-6 years old children in themed role-playing games at preschools has been conducted by preschool teachers recently at an average level (upper range). The building of an educational environment for teamwork skills for 5-6 years old children are carried out at different levels, in which "Arrange objects and toys that are easy to see, easy to get, easy to choose" is done most often with an average score of 2.79 (ranked 1st) (Table 4).

**Table 5.** Current situation of measures to educate teamwork skills for 5-6 years old children in themed role-playing games in preschools

No.	Measures	Level of performance			Average score	Standard deviation	Ranking
		Never (1p)	Seldom (2p)	Frequently (3p)			
1	Create a play corner, play environment, arrange objects and toys reasonably to attract children	64	27	19	1.59	0.77	5
2	Create situations to help the children expand play content and play topics	13	68	29	2.15	0.60	2
3	Guide children to discuss to assign roles to each member of the group	17	45	48	2.28	0.72	1
4	Guide the children to resolve conflicts that arise during play	56	38	16	1.64	0.73	4
5	The teacher guides the children to self-check and evaluate the group's performance when the game is over	40	55	15	1.77	0.67	3
6	Guide the children to expand the content and theme of the play	87	17	6	1.26	0.55	6
Overall average score					1.78	0.67	

Table 5 shows that, although preschool teachers in the survey have used a lot of methods to organize themed role-playing games for children, these measures are not really aimed at teaching teamwork skills to children (only measures 3, 4, 5 are related to teaching teamwork skills for children). With the average score = 1.78 and standard deviation = 0.67, it shows that the measures of teaching teamwork skills for 5-6 years old children in themed role-playing games are recently introduced by preschool teachers at an average level. These measures are used with

varying degrees in which the measure "Guide children to discuss to assign roles to each member of the group" is the most frequently used by teachers (average score = 2.28).

The results in the Table 6 show that preschool teachers encounter many difficulties when teaching teamwork skills for 5-6 years old children in themed role-playing games, with the average score = 2.03 and standard deviation = 0.74 and at an average level. Teachers encounter these difficulties with varying degrees: some have great difficulty, some have moderate difficulty, and some have only a low level of difficulty (little difficulty). The greatest difficulty that preschool teachers encounter in the process of teaching teamwork skills for 5-6 years old children in themed role-playing games is "Children are not active during play" (average score = 2.39), followed by "Children do not really make efforts while performing the task" (average score = 2.36), all these difficulties are at a high level.

#### 4.2. Experimenting with Some Measures to Teach Teamwork Skills for 5-6 Years Old Children in Themed Role-Playing Games at Preschools

##### 4.2.1. Overview of the Experimental Process

Experiments to determine the effectiveness and feasibility of measures to teach teamwork skills for 5-6 years old children in themed role-playing games in preschools were proposed in this study. Each experiment was conducted with 150 children in 5 classes of 10/3 Kindergarten (Thang Loi ward), Thang Loi Kindergarten (Thang Loi ward) and Tan Lap kindergarten (Tan Lap ward) Buon Ma Thuot city, Dak Lak province. Experimental application of measures to teach teamwork skills for 5-6 years old children in themed role-playing games was proposed in Section 3.2 in 3 games: "Central Highlands gong culture festival" (theme 'Homeland – Country'), "Veterinarian" (theme 'Profession') and "Sales" (theme 'Career'). The experimental content applies synchronously to the proposed measures and was conducted through playtime with the direct guidance of teachers at preschools.

**Table 6.** Difficulties when teaching teamwork skills for 5-6 years old children in themed role-playing games

No.	Difficulty	Level of difficulty			Average score	Standard deviation	Ranking
		Not difficult (1p)	Difficult (2p)	Very difficult (3p)			
1	Children are not active during play	16	35	59	2.39	0.73	1
2	Differences in children's awareness and skills and experiences affect the exchange and performance of common tasks	27	30	53	2.24	0.82	4
3	The child is confused and does not know how to coordinate with friends	23	32	55	2.29	0.79	3
4	Children do not really make an effort while performing the task	18	34	58	2.36	0.75	2
5	Objects and toys lack a variety	40	23	47	2.06	0.89	5
6	The teacher has no experience in organizing group activities	75	29	6	1.37	0.59	7
7	The content of group activities does not attract children to actively participate	67	33	10	1.48	0.66	6
Overall average score					2.03	0.74	

Next an experiment was conducted on the 120 sample participants aged 5-6 years old children in 4 large kindergarten classes belonging to Thang Loi kindergarten (Thang Loi ward) and Tan Lap kindergarten (Tan Lap ward), Buon Ma Thuot city, Dak Lak province. Each kindergarten had an experimental class and a control class. There were 60 children each in experimental and control groups. In experimental rounds, both experimental and control group's teachers possessed college degrees and almost the same working seniority. Children 5 - 6 years old in both groups were randomly selected, similar in the expression level of teamwork skills in themed role-playing games, health, with equal male-female ratio. Both groups carried out the same play topics with the same equipment

preparation. However, in the experimental group, when organizing themed role-playing, the teacher applied the proposed measures. In the control group, when organizing themed role-playing, teachers still followed their usual methods. The time frame for the experimental was from August 2019 to December 2020.

To assess the children's teamwork skills, we observed the children's teamwork skills in themed role-playing games before and after the experiment. Experimental results were analyzed and compiled according to the criteria for assessing and classifying children both quantitatively and qualitatively. Quantitatively, the experimental results were processed by a number of mathematical-statistical formulas: calculating the percentage, the mean, the standard deviation and checking the reliability of the mean values. Qualitatively, the results of the children's observation sheets, the minutes of conversations and discussions with teachers were analyzed and evaluated.

#### 4.2.2. Conduct the Experiment on Children

*Step 1: Conduct input measurement:* In order to measure the input level of teamwork skills in 5-6 years old children in themed role-playing games in the experimental group and the control group before the experiment, the children's expressions through play sessions were observed and noted on observation sheets.

*Step 2: Deploy the experiment:* For the control group (30 children in class Leaf 1-Thang Loi Kindergarten and 30 children in class Leaf 1-Tan Lap Kindergarten), the teacher taught using traditional educational methods. For the experimental group (30 children of Leaf 2 class-Thang Loi Kindergarten, 30 children of Leaf 2-Tan Lap Kindergarten) the teacher applied measures to teach teamwork skills to children in role-playing games with a previously established theme.

*Step 3: Conduct output measurement.* At the end of each round of the experiment, the author measured the level of teamwork skills of children in the experimental and control groups.

**Table 7.** Group activity skills of 5-6 years old children in the experimental group and the control group before the second round of the experiment (theme 'Central Highlands tourism').

No.	Teamwork skills	Group	Average score	Standard deviation	Ranking
1	Team formation skill	Control	2.16	0.45	1
		Experimental	2.05	0.48	2
2	Coordination skill among team members	Control	2.02	0.51	2
		Experimental	2.09	0.44	1
3	Task performance skill of the playgroup	Control	1.97	0.44	3
		Experimental	1.87	0.67	4
4	Conflict resolving skill in the playgroup	Control	1.93	0.52	4
		Experimental	1.82	0.48	5
5	Team development skill	Control	1.86	0.56	5
		Experimental	1.98	0.50	3
Overall total		Control	1.99	0.49	
		Experimental	1.96	0.51	

#### 4.3. Experiment Results

##### 4.3.1. Teamwork Skills of 5-6 Years Old Children in Themed Role-Playing Games Before the Second Round of the Experiment

Table 7 shows that before the experiment, as well as during the first round of the experiment, the teamwork skills of 5-6 years old children in themed role-playing games in both groups were similar and only at an average level (The average score was 1.99 in the control group and 1.96 in the experimental group, respectively). Moreover, skills showed uneven average scores, in which "Team formation skill" was the highest but only average, followed by "Task performance skill of the playgroup". The weakest skills were "Team development skill" and "Conflict resolving skill in the playgroup" (The average score was low). Independent Samples Test results showed  $p > 0.05$  (sig = 0.533), which meant that this difference was not statistically significant.

4.3.2. Teamwork Skills of 5-6 Years Old Children in Themed Role-Playing Games after the Experiment

In Table 8, we can see that after the experiment, the children's teamwork skills in themed role-playing games are significantly different between the experimental group and the control group: In the experimental group, the children's teamwork skills after the experiment achieved a good level (average score is 2.47), while the teamwork skills of the children in the control group after the experiment was still at an average level (average score is 2.15). Independent Samples Test results show  $p < 0.05$  (sig = 0.000), which means that this difference is statistically significant (Table 9). This disparity is reflected in all the component skills of the children's teamwork skills in themed role-playing games—especially the team formation skill; conflict resolving skill in the playgroup, coordination skills among team members. If, before the experiment, the children's conflict resolving skills in the group were still limited and inadequate, then after the experiment, this skill had significantly improved.

Table 8. Teamwork skills of 5-6 years old children in the experimental group and the control group after the experiment.

No.	Teamwork Skills	Group	Average score	Standard deviation	Ranking
1	Team formation skill	Control	2.29	0.52	1
		Experimental	2.62	0.37	1
2	Coordination skill among team members	Control	2.18	0.50	2
		Experimental	2.56	0.42	3
3	Task performance skill of the playgroup	Control	2.14	0.50	3
		Experimental	2.22	0.59	5
4	Conflict resolving skill in the playgroup	Control	2.10	0.51	4
		Experimental	2.57	0.45	2
5	Team development skill	Control	2.02	0.63	5
		Experimental	2.37	0.46	4
Overall total		Control	2.15	0.53	
		Experimental	2.47	0.46	

Table 9. Teamwork skills of children in the experimental group and the control group before and after the experiment

Group	Before the experiment	After the experiment	Difference
Control group	1.99	2.15	0.16
Experimental group	1.96	2.47	0.51

From Table 9, we can see that, before the experiment, teamwork skills in themed role-playing games of the experimental group and the control group were similar and were at an average level. After the experiment, teamwork skills in themed role-playing games increased compared to before the experiment. However, the teamwork skills of the children in the control group increased not significantly: the difference was 0.16p (average score from average level: 1.99 to 2.15 – still at an average level). While the teamwork skills of the children in the experimental group increased quite a lot: the difference was 0.51 (Average score from average level: 1.96 to the good: 2.47). Figure 1 clearly presents the difference in teamwork skills of children in the experimental group compared to the control group after the experiment:

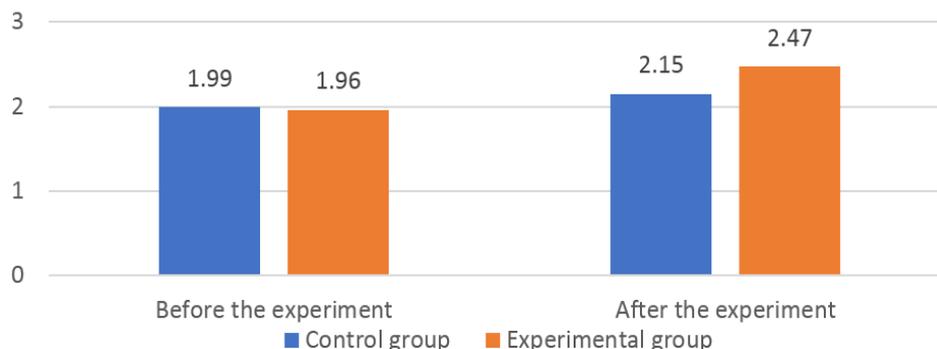


Figure 1. Teamwork skill level of children in the control group and experimental group before and after the second round of the experiment.

Figure 1 confirms that the teamwork skills in themed role-playing games of the children in the experimental group are better than those of the children in the control group. Experiment results show that the teamwork skills in the experimental class are better than those in the control class. The higher development and expression of teamwork skills of 5-6 years old children are more clearly shown in the experimental group, which proves that the experimental program is effective in teaching teamwork skills for 5 - 6 years old children and demonstrate that the proposed measures are feasible.

## 5. DISCUSSION AND CONCLUSION

The current research assessed children's teamwork skills in themed role-playing games based on five components: team formation skills, collaborative skills among team members, team's common task performance skills, conflict-solving skills, and team development skills in three-levels with both children and teachers. The results indicated that the teacher's awareness of teamwork skills for children in role-playing games was not so high, with only 31.8% of the teachers fully aware of its importance.

However, in their teaching activities, various activities were used to teach teamwork skills. Learning and playing activities were two frequently used activities which included outdoor activities and morning exercise activities. From the student perspective, coordination skills among team members was the most practised skill, followed by task performance skills of the team and team development skills. From the educational condition, the teacher usually taught teamwork skills in the themed role-playing game by arranging objects and toys that were easy to see, easy to get, and easy to choose.

From the measurement perspective, teachers usually guided children to discuss and assign roles to each member of the group and measure their teamwork skills in the theme of the role-playing game. Children educated with role-playing games presented teamwork skills better than others. Based on the current situation of teamwork skills education for 5-6 years old children in preschools and based on the principles of teamwork skills education for 5-6 years old children in themed role-playing games, 7 measures to teach teamwork skills have been proposed in this study. These measures have a close relationship with each other and support each other to be effective on children, so in the process of using these measures, teachers need to be flexible and combine them well to make teaching teamwork skills for 5-6 years old children highly effective.

The experimental program conducted in this study aimed to evaluate the effectiveness of measures to teach teamwork skills for 5-6 years old children in themed role-playing games, thereby proving the scientific hypothesis of the topic. The experimental program was adjusted and improved gradually. The experimental content was built on the current preschool education program with the view that children are the subject of the educational process, so it has prioritized the use of active educational methods and forms to help children obtain more opportunities to cooperate and learn from each other to draw their own experiences on teamwork skills.

Statistical test results have confirmed that there was a significant difference between the experimental and control groups. And therefore, measures to teach teamwork skills have had a positive impact on the development of children's teamwork skills. Teaching teamwork skills for 5-6 years old children in themed role-playing games is a long process that requires the initiative and active participation of children. Teachers need to support and motivate children to actively participate in the play, coordinate and resolve conflicts during play, help children develop group play, thus developing children's teamwork skills.

The study faced a few limitations due to many subjective and objective reasons. For instance, the author could only conduct an investigation and organize the experiment in preschools of the Dak Lak province of Vietnam. Therefore, the research results obtained through descriptive and inferential statistics cannot be representative of the larger sample. In addition, the author only conducted the study on Education of teamwork skills for 5-6 years old children in themed role-playing games for preschool children when Education of teamwork skills and themed role-playing games were differentiated. In fact, these two factors never exist completely independently but are

always in relationship with many other factors. Therefore, further and more comprehensive studies are needed.

This study would have some policies implication at both ministry and preschool levels. At the ministry level, Ministry of Education and Training and Preschool Education Management may organize training sessions and seminars on the education of teamwork skills for 5-6 years old children in particular and preschool children in general, with the participation of preschool education experts, representatives of lecturers from different pedagogical universities that trains preschool teachers and staff who are working in different types of preschools today. At preschool levels, preschool should regularly organize professional seminars to help preschool teachers properly understand the importance of teamwork skills for children's personality development and prepare children for primary school, finalize the methods of organizing appropriate activities to effectively implement the goal of training teamwork skills and the task of educating children for comprehensive development.

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