Evaluation of the Impacts of Play Activities on the Formation and Development of Cooperative Skills in Preschool Children Aged 5-6 Years: Scientific Evidence from Experimental Study in Vietnam

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Abstract

Preschool children's main activity is playing. This study will use exploratory factor analysis (EFA) and a multiple regression model to assess the impact of play activity elements on the formation and development of cooperative skills in preschool children aged 5-6. According to research findings and scientific evidence, the factors of play activities and cooperative skills for 5-6 year-old preschool children have a strong correlation. This means that play activities have been identified as the primary tools and means of educating, forming, and developing cooperative skills in preschool children aged 5-6. This study also makes recommendations for kindergartens: It is necessary to integrate and mix skill education content with other educational contents so that children's education can be carried out naturally and effectively through children's experiences in preschool activities, in order to contribute to the development of psychological functions and comprehensive personality formation for children.

Keywords: Play Activities, Cooperative Skills, Preschool Children Aged 5-6, The Process of Playing, Group Games.

Introduction

According to Tran Thi Bich Tra (2011), one of the most important qualities and skills required to educate preschool children is cooperative skills. Cooperative skills not only help children gain a better understanding of the subject of cognitive activities, thereby contributing to the formation of personal characteristics and human, social, and moral values, but also support the concurrent development of other social skills, thereby significantly contributing to children's success in life in adulthood.

The transition from preschool to primary school occurred between the age of 5 and 6, with the primary activity shifting from "playing" in preschool to "learning" in the first grade. Thus, children must be well prepared not only for physical background and awareness, but also for cooperative skills. This is an important factor in helping children learn effectively in the first grade (When the latest General Education Program of Vietnam in 2018 at this level set the increasingly high requirements for interaction and teamwork as an effective way to help children gain knowledge and the necessary foundation for lifelong learning). In this context, teaching cooperative skills to children aged 5-6 is essential (Nguyen Thi Thu Ha, 2014).

There is one standard in the Developmental Standards Set for 5-year-old children that expresses the content: "Children demonstrate cooperation with friends and others". The five indicators covered by this standard are all related to children's communication cooperation, and they are as follows: "Listen to others' opinions"; "Exchange opinions with friends"; "Show friendliness and solidarity with friends"; "Accept the assignment of groups of friends and adults"; and "Ready to perform simple tasks with others" (Ministry of Education and Training, 2021). In practice, however, preschool teachers continue to face challenges when it comes to organizing cooperative skill education for preschool children. Children understand how to work "side by side," "together," but do not know how to cooperate with one another. One of the primary reasons

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for this situation is that preschool teachers do not know how to organize play activities as an effective route and means of educating preschool children's cooperative skills (Le Xuan Hong, 2000).

Literature Review

Play Activities

Play activities are especially important for preschool children aged 5-6 years old because they help them develop social skills (including conscious education, behavior to protect their surroundings). Through play activities, children will know how to communicate, share, support each other and raise awareness for them during the process of exploring the world around them (Vurgotsky, 1997). William H. Brown, Samuel L. Odom, and Scott R. Conroy (2008). This study analyzes the role of games in developing children's social skills, including cooperative skills. The researchers found that cooperative games help children develop teamwork, sharing, and effective communication skills. Mary Gauvain and Michael Cole (2007). This study examines how cooperative games affect the social development of preschool children. The results show that children participating in cooperative games demonstrate significant progress in communication skills, conflict resolution, and building social relationships. Gill Ellis and Maureen Lawrence (2011). This study focuses on how peer interactions through cooperative play activities can help children develop social skills. The researchers assert that these activities provide opportunities for children to learn to listen, compromise, and work together to achieve common goals. Sue Rogers and Julie Evans (2015). This study emphasizes the importance of learning through play for the development of children's social skills. Cooperative games are shown to be an effective method for children to learn teamwork, communication, and problem-solving.

Marjorie Smith and Helen Cowie (2017) highlights that cooperative play activities are crucial tools for helping children develop essential social skills. Through these games, children learn teamwork, communication, conflict resolution, and social relationship building. The study points out that when engaging in cooperative play, children not only develop social skills but also improve flexible and creative thinking abilities. Key points from the study:

Development of communication skills: Children learn to express their ideas and feelings, as well as listen to and understand others' opinions.

Conflict resolution: Children learn to compromise and seek common solutions in conflict situations.

Building social relationships: Cooperative games provide opportunities for children to make friends and build strong relationships with peers.

Enhancing creative thinking: Children are encouraged to use their imagination and think flexibly to solve challenges in the games.

Meaghan Elizabeth Taylor and Wanda Boyer (2020). This study analyzes the role of Play-Based Learning (PBL) in developing social skills and learning in kindergarten children. PBL is a child-centered learning method that focuses on comprehensive development in academic, social, and emotional areas through age-appropriate play activities.

Social development: Children learn teamwork, communication, and sharing through highly interactive play activities.

Academic development: PBL helps children access knowledge naturally and enjoyably, encouraging creative thinking and problem-solving.

Emotional development: Children learn to manage their emotions and understand others' feelings, laying the foundation for healthy emotional development.

Playing is a way of organizing life that allows children to form societies and form friendships. Children can easily gain socio-cultural experiences while playing. Play activities are extremely important in a child's life... The child demonstrates how, while playing, he or she may later demonstrate the same in work life. Thus, children's skills developed through play activities will influence the development of their future working skills (Nguyen Thi Vien, 2016). According to Maria Montessori, games are children's work. The perceptual property of games in Montessori's educational method is that the child's playtime is also the time when the child is learning and imagining. Through different ways, the games are played to recreate the activities carried out in daily life. Children use their own ways to experience life, teachers need to coordinate with children to help them learn and develop (Ngoc Thi Thu Hang, 2014). In the process of playing, it is necessary to help children implement the principles and rules of play while also recreating the principles, rules of play, and situations reflecting the children's socio-cultural world, where they learn to put forward and comply with social principles, cooperate with others strongly, and promote appropriate social behavior (Nguyen Anh Tuyet, 2011). A children's society forms very naturally in games, particularly thematic roleplaying games. The game has the potential to bring children together while also providing opportunities for them to practice sustainable environmental behaviors. It is critical for children to understand how to coordinate their actions when working together (Nguyen Anh Tuyet, 2005). Flexible role switching in games is the basis and foundation for developing reasonable behavior characteristics in children based on their situation and later circumstances (Ngo Cong Hoan, 1995).

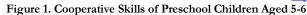
Cooperative Skills

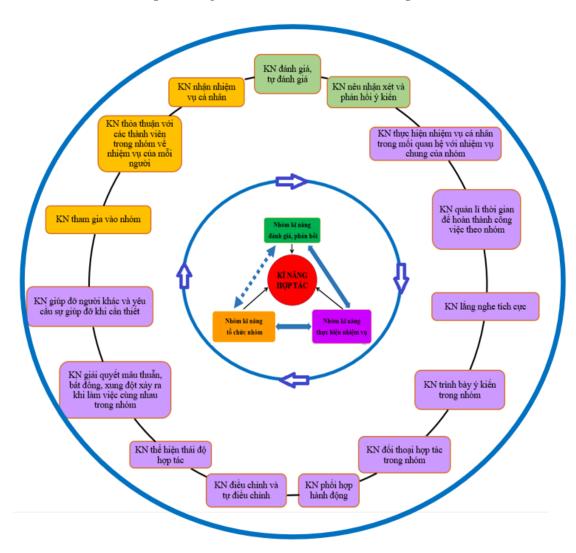
According to Raja Roy Singh, the issue to focus on in human education today is the development of cooperative skills, which will assist people in learning how to live with others and engage with society in a globalized world with increasing interdependence (Nguyen Thi Vien, 2016). Shinina (2017) said that cooperative skills are considered one of the key skills of preschool children in the twenty-first century. David (1991) outlined a way to form children's cooperative skills that he called the "liberal work method in group." Through group activities that are "free", children learn to "express themselves, listen to and understand others; persevere, imitate and respect others". According to Johnson (1996), in order to teach cooperative skills to children, an emphasis should be placed on creating a pedagogical environment with groups of activities that require team members to coordinate with one another. Moll (2007) pioneered the practice of dividing students into groups for activities. Teachers facilitate learners' exchange, talk, cooperate to share, help each other learn, and discover objects of awareness through group activities in order to form students' cooperative skills and improve teaching efficiency. To teach cooperative skills, teachers must create conditions in which students can choose their own friends and form groups, and then dissolve the group once the learning/playing is completed. Richard (2000) presented a model for organizing cooperative activities in groups, in which the author highlighted the important factors in the process of forming cooperative skills for learners to form their own communication skills, as well as to solve conflicts in a civilized manner. The author believes that this model is appropriate for all age groups of children (from the end of preschool to university students).

All studies in Vietnam emphasize the importance of cooperative skill education for children, viewing it as a necessary skill for children to achieve success in life. According to Le Xuan Hong (2000), the formation of cooperative skills is a task that must be taken care of and promoted by helping children learn how to communicate with other children, creating opportunities for children to play and work with other children, helping children learn how to participate in a group activity, and creating sensations that help children respect the rights of other children through sharing and taking turns (Le Xuan Hong, 2000). In this study, cooperative skills are understood as a part of the capacity that allows the individual (the subject of the action) to effectively perform the actions in coordination with each other on the basis of dependence, positive interaction, and personal responsibility to solve the problem, in order to achieve the common goal under certain conditions, based on existing concepts. Cooperative abilities are a type of social skill that has a strong social nature.

The structure of cooperative skills is shown in the following diagram:

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(Source: Author's suggestions)

Impact of Play Activities on Cooperative Skills of Preschool Children (Aged 5-6)

Play activities are appropriate and effective ways to teach preschool children cooperative skills. Children in kindergartens have the opportunity to participate in interactive activities with others, particularly their peers, through play and other educational activities, promoting the development of knowledge and social skills, including cooperative skills (Patricia, 2003).

While playing, children easily coordinate actions and form relationships with their peers. Play is a method for preschool children to form and develop cooperative skills (UNESCO, 2010). Collective games (group games) force children to interact with one another, resulting in group friendships. When children play, they learn how to combine individual rights with group rights, and they sometimes learn how to sacrifice their will for the good of the group; these are the first manifestations of cooperation (UNICEF, 2017). According to Oak Yoo Youn (2012), in most cases, how a child performs at play is how he or she performs at work. Play is the school of life; as a means of forming and developing social skills. Cooperation in preschool children later in life. Collective games (group games) force children to interact with one another, resulting in group friendships. When children play, they learn how to combine individual rights will group games) force children to interact with one another, resulting in group friendships. When children play, they learn how to combine individual rights with group rights, and they sometimes learn how to sacrifice their will for the good of the group. When children play, they learn how to combine individual rights with group rights, and they sometimes learn how to sacrifice their will for the good of the group (Dao Thanh Am, 2007).

Nguyen Anh Tuyet (2005) pointed out that it is critical for children to understand how to coordinate their actions when working together. Preschool teachers should: Encourage children in the play group to always be friendly and equal to one another. It is necessary to skillfully find ways to eliminate "bossiness" in some children and encourage them to play cooperatively. In a play group with a "leader," it is necessary to pay attention to guide the "leader's" behavior so that both the child's "leadership" and respecting and reconciling with friends are promoted. Adults must guide children in developing a friendship and solidarity relationship between "leaders" and team members that is equal and respectful of each other (Nguyen Thi Thu Ha, 2014). Vu Thi Nhan (2011) investigated educational measures of cooperative skills for children in kindergartens using themed role-playing games, such as: creating a play environment for children; encouraging and creating opportunities for children to work together to make more toys; directing children to group activities; providing symbolic enrichment on children's cooperative skills in role-playing games through pictures, poems, and stories; supporting and encouraging children to share their experiences and ideas; assisting children in coordinating actions while playing; creating play situations and playing circumstances for children; allowing children to comment on and evaluate the cooperation results of play groups.

Research Model and Method

Research Model

From the point of view of inheriting and continuing to develop previous research works, the author proposes the following research model:

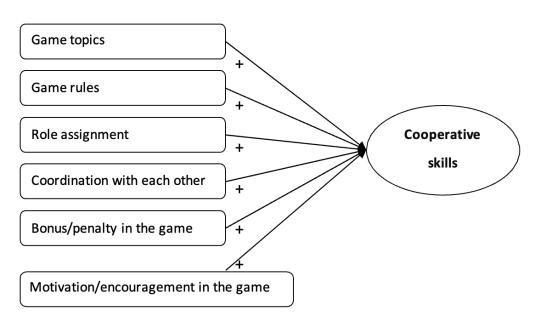


Figure 2. Research Model

The authors developed a questionnaire based on the research model and conducted a survey of 286 preschool teachers, of which 250 people responded, accounting for 87.4%, and 182 people with valid responses accounted for 72.8%. The questionnaire included personal information, as well as 8 open-ended and 17 closed-ended questions with 5 Likert scale levels. The collected data is cleaned and entered into the SPSS software for quantitative analysis.

The explanation of reference sources and encoding of variables are shown in Table 1 below.

No.	Variable content and reference sources	Encoding of
x 1		variables
A	lent variable: Play activity	
1	Game topic: Sudeshna Lahiri (2011); A. Kollmuss & J. Agyeman	CDC1-3
	(2002); Nguyen Thi Vien (2016); Le Minh Thuan (1996); Maria	
	Montessori (1949); Nguyen Anh Tuyet (2005); Vu Thi Nhan (2011);	
	Nguyen Thi Thu Ha (2014).	
2	Game rules: Sharifah Norhaidah Syed Idros (2012); Pedro et al. (2010);	LC1-2
	Nguyen Thi Vien (2016); Fisher et al. (2011), Nguyen Anh Tuyet	
	(2005); Vu Thi Nhan (2011) ; Nguyen Thi Thu Ha (2014).	
3	Role assignment: Nguyen Thi Vien (2016); Tran Thi Nga (2009);	PCVC1-2
	Fisher et al. (2011); Nguyen Anh Tuyet (2005); Vu Thi Nhan (2011);	
	Nguyen Thi Thu Ha (2014).	
4	Coordination with each other: Darshana Rajapaksa (2018); Nguyen	PHVN1-3
	Thi Vien (2016); Fisher et al. (2011); Nguyen Anh Tuyet (2005);	
	Nguyen Thi Thu Ha (2014).	
5	Bonus/penalty in the game: Nguyen Thi Vien (2016); Tran Thi Nga	TP1-2
	(2009); Nguyen Anh Tuyet (2005); Vu Thi Nhan (2011)	
6	Children were encouraged to participate: Nguyen Thi Vien (2016);	DVKL1-2
	Tran Thi Nga (2009); Maria Montessori (1949); Nguyen Anh Tuyet	
	(2005)	
Depende	nt variable: Collaborative skills	
1	Skills to perform tasks: Le Xuan Hong (2000); Raja Roy Singh (1991);	KNHT1
	Tatiana Shinina (2017)	
2	Group organization skills: Le Xuan Hong (2000); Raja Roy Singh	KNHT2
	(1991); Tatiana Shinina (2017)	
3	Assessment and feedback skills: Le Xuan Hong (2000); Raja Roy Singh	KNHT3
	(1991); Tatiana Shinina (2017)	

Table 1. Explanation of Reference Sources and Encoding of Variables

Research Method

Data Collection

The data for this study were collected directly using a 5-level Likert scale questionnaire to measure research concepts in a factorial analysis model with levels ranging from 1 to 5 (with 1: Strongly disagree, 5: Strongly agree). For 182 survey samples, the minimum sample size of 165 (according to Hair, 2006) is suitable for analysis. The subjects of the survey are education managers from the Hanoi Department of Education and Training, the Education and Training Divisions; principals, vice principals, preschool teachers, and preschool education experts. Quantitative questionnaires are distributed to identified subjects via direct mail and email.

Analytical Method

The author uses a combination of the following research methods in this study:

Descriptive statistical analysis: To synthesize and process data. The descriptive statistical analysis method was used to compile statistics on the surveyed subjects (182 people).

Scale quality control: To test the reliability of the scale and determine whether the exploratory factor analysis (EFA) method can be used.

Exploratory factor analysis (EFA): To identify the factors of play activities that have an impact on preschool children's cooperative skills.

Multiple regression model analysis: The author proposes a regression model to test the above hypotheses in the following form:

Cooperative skills = $\beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \varepsilon$ (3.1)

In which:

- Cooperative skills: Children's cooperative skills are measured by the scale of a group of variables that have integrated processing directly after exploratory factor analysis.
- Variable X1: Game theme: (CDC)
- Variant X2: Game rule (LC)
- Variable X3: Role assignment (PCVC)
- Variable X4: Mutual coordination (PHVN)
- Variable X5: Reward/penalty (TP)
- Variable X6: Children encouraged to participate (DVKL)
- ε: Noise factor
- β_i: Regression coefficient

Results and Discussion

Descriptive Statistics Results

In terms of gender, among the investigated people, the number of female participants was higher than that of male participants, specifically 172/182 people, accounting for 94.5% compared with 10/182 people, accounting for 5.5. %. This is understandable when women's participation in the field of Early Childhood Education is often much higher than that of men. During the interview, the author learned that 16 men participating in the survey were education managers in the field of Early Childhood Education. They are not directly involved in the care and education of children.

In terms of age, among the investigated people, the number of people aged 30-39 years old is higher than that of other age groups, namely 97/182 people, accounting for 53.2% compared to 25/182 people (22-29 years old), accounting for 13.7%; 41/182 people (40-49 years old) accounting for 22.5% and 19/182 people (50-55 years old) accounting for 10.6%. Thus, the majority of preschool teachers in the survey sample are aged between 30-39 years old.

Regarding the level of training, among the investigated people, the number of people with a university degree is 144/182 people, accounting for 79.1%, higher than the number of people with a undergraduate degree of 21/182 people, accounting for 11.5% and the number of people with a postgraduate degree is 17/182 people, accounting for 9.4%.

Results of Scale Reliability Test

Table 2 below illustrates the results of scale quality inspection.

_{Scale} Scale average	if variable	Scale variance	Total	Cronbach's
exclusion		if variable	variabl	Alpha if
		exclusion	e	variable
			correla	exclusion
			tion	
Game theme: $\alpha = 0.860$				
Game theme	7.4011	1.556	.70	.834
1			1	
Game theme	7.4121	1.393	.72	.815
2			5	
Game theme	7.4396	1.419	.78	.759
3			2	
Game rule: $\alpha = 0.903$				
Game rule 1	10.7912	3.503	.84	.854
			0	
Game rule 2	10.8462	3.435	.88	.836
			4	
Role assignment: $\alpha = 0.7$				
Role assignment 1	10.9396	2.223	.674	.817
Role assignment 2	11.1868	2.274	.717	.804
Mutual collaboration: a	= 0.896			
Mutual collaboration	11.0934	2.837	.78	.863
1				
Mutual collaboration	11.0769	2.679	1.77	.864
2			6	
Mutual collaboration	11.1593	2.809	.75	.871
3			6	
Game reward/penalty: a	z = 0.894		1	1
Reward/penalty 1	15.1868	5.169	.72	.874
waru/penany i	15.1000	5.107	9	.0/4
Reward/penalty 2	15.2582	5.275	.70	.878
waiu/ penalty 2	13.2302	5.215	8	.070
Children encouraged t	o participate:	$\alpha = 0.869$	0	1
Encouragemen 1	14.7802	4.891	.69	.840
	14./002	4.071		.040
Engouragement 2	14.0451	4.014	8	.836
Encouragement 2	14.9431	4.914		.630
Encouragement 2	14.9451	4.914	.71 4	

Table 2. Summary of Scale Quality Inspection Results

Cooperation skills: $\alpha = 0.851$

Cooperation skill	14.3736	4.622	.619	.830
1				
Cooperation skill	14.4011	4.639	.582	.840
2				
Cooperation skill	14.4121	4.299	.714	.805
3				

(Source: Analytical results from SPSS software)

Thus, all scales have a total variable correlation coefficient greater than 0.3. The test results show that the Cronbach's Alpha coefficient of the total component scales is greater than 0.7. This shows that the scale used is good (Nguyen Dinh Tho, 2011). Therefore, the model is accepted for exploratory factor analysis (EFA).

Results of Exploratory Factor Analysis

The exploratory factor analysis (EFA) for dependent variable, which is the cooperative skill, has the reliability coefficient Cronbach's Alpha > 0.8, these observed variables are included in the exploratory factor analysis (EFA). The results after EFA show that the KMO coefficient of the cooperative skill variable group is 0.805, satisfying the condition 0.5 < KMO < 1 with the significance level of Sig.= 0.000 in the Bartlett's test (Sig<0, 05) (Nguyen Dinh Tho, 2011). The results of EFA show that there is a group of factors extracted with Eigenvalue greater than 1 and extracted variance value of 62.699%, which means the cooperative skill variable explains 62.699% of the variation of observed variables. The detailed results are presented in Table 3.

Table 3. Rotating Factor Matrix of Cooperative Skills

Name of Variable Factor

Cooperative Skills

Cooperative	skill	0.838
1		
Cooperative	skill	0.837
2		
Cooperative	skill	0.805
3		

Source: Analytical results from SPSS software

The EFA for the scale of factors affecting cooperative skills, the results show that the KMO coefficient of the group of factors affecting cooperative skills is 0.884>0.50, so the scale of the factors affecting cooperative skills are considered suitable for EFA. Breakpoint when extracting factors at eigenvalues=1.078>1. The extracted variance of 71.497% > 50% is satisfactory, 17 observed variables all have factor loading coefficient > 0.45 (Hair et al., 1998); This shows that the factor analysis results are appropriate and the number of extracted factors is 6, which is completely consistent with the theory of cooperative skills.

The EFA for 6 independent variables was performed with the hypothesis H0: The observed variables have no correlation in the population. The obtained analytical results are summarized as follows: Barlett test: Sig = 0.000 < 5%: Rejecting hypothesis H0, observed variables in EFA are correlated with each other in the population. Based on the results of EFA, the extracted factors of the main research hypotheses are satisfactory. Therefore, the research model to evaluate the factors affecting the cooperative skills of preschool children, consists of 6 variables: Game theme; Game rule; Role assignment; Mutual coordination; Game reward/penalty; Children encouraged to participate. Table 4 shows the rotating factor matrix of the scale of factors affecting cooperative skills.

Table 4. Rotating Factor Matrix of The Scale of Factors Affecting Cooperative Skills

Variables

Factors

Observed	1		2	3	4	5	6	
Game theme 3		.823						

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Game theme 2	.790					
Game rule 1		.807				
Game rule 2		.777				
Role assignment 1			.869			
Role assignment 2			.850			
Mutual coordination 2				.851		
Mutual coordination 1				.787		
Mutual coordination 3				.763		
Reward/penalty 1					.870	
Reward/penalty 2					.804	
Encouragement 1						.67 7
Encouragement 2						.62 2

.810

(Source: Analytical results from SPSS software)

Game theme 1

Results of Correlation Analysis Among the Factors

The results of correlation analysis in Table 5 show that all variables have a fairly close linear relationship at the significance level $\alpha < 0.01$, because all absolute correlation coefficients among variables range from 0.564 to 0.681, i.e. satisfying the condition $-1 \le r \le +1$. Therefore, all variables are satisfactory in multiple linear regression analysis.

Game theme	Game	Role	Mutual	Rewward	Encourag	Cooperative
	rule	assignment	coordinati	/Penalty	ement	skill
			on			
Game theme $_1$	0.564**	0.600**	0.646**	0.681**	0.577**	0.670**
Game rule 0.564**	1	0.447**	0.311**	0.421**	0.312**	0.507**
Role assignment	0.447**	1	0.364**	0.505**	0.365**	0.455**
0.600**						
Mutual coordination	0.311**	0.364**	1	0.537**	0.454**	0.477**
0.646**						
Reward/ Penalty	0.421**	0.505**	0.537**	1	0.465**	0.419**
0.681**						
Encouragement	0.312**	0.365**	0.454**	0.465**	1	0.451**
0.577**						
Cooperative skill	0.507**	0.455**	0.477**	0.419**	0.451**	1
0.670**						

Table 5. Correlation Coefficient Matrix

(**) Pearson correlation was statistically significant at level P < 0.01; N =182

Source: Analytical results from SPSS software

Results of linear regression analysis

Ν	Model	Regression	Level of	Statistical value	Order of
о.		coefficient	significanc	t	influence
			е		
1	(Constant)	- 0.513	0.007	-2.718	
2	Game theme	0.132	0.002	3.156	6
3	Game rule	0.133	0.001	3.425	5
4	Role assignment	0.234	0.000	4.617	2
5	Mutual coordination	0.246	0.000	4.754	1
6	Reward/ penalty	0.134	0.002	3.096	4
7	Encouragement	0.229	0.000	4.821	3

Table 6. Results of Regression Model Estimation

Coefficient R2: 0.743

Source: Analytical results from SPSS software

Table 6 shows that: The established linear regression model is suitable for the existing data set. The analysis results also show that the variables included in the model are statistically significant at 1% (Sig. < 1%). In addition, the results also reveal that R2 = 0.743 means that this linear regression model fits the data at 74.3%. In other words, 74.3% of the dependent variable's variation is explained by the independent variables, while the remaining 25.7% is due to random error and because there may be another independent variable explaining the dependent variable that have not been included in the research model. The research model to determine the factors affecting the cooperative skills of preschool children has the following functional form:

Cooperative skills = -0.513 + 0.132.Game theme + 0.133.Game rule + 0.234.Role assignment + 0.246.Mutual coordination + 0.134.Reward/ Penalty + 0.229.Encouragement

The results of regression research show that: cooperative skills of preschool children are affected by factors and the influence levels of these factors are not the same, specifically as follows: Assuming other factors remain unchanged, when changing any factor at the level of 1 unit, the cooperative skills of preschool children will also be changed to a specific corresponding value: 0.132 for the game theme; 0.133 for the game rule; 0.246 for role assignment; 0.234 for mutual coordination; 0.134 for reward /penalty while playing and 0.229 for encouragement while playing.

Conclusion

There is a positive correlation between the factors of play and cooperative skills for 5-6 years old preschool children. Accordingly, the level of impact of factors on the cooperative skills of preschool children is determined as corresponding to the coefficient β obtained. Accordingly, the factor "Mutual coordination" has the strongest impact on the cooperative skills of preschool children with the coefficient $\beta = 0.246$; The factor "Game theme" has the weakest impact on the cooperative skills of preschool children with the coefficient $\beta = 0.132$. However, these factors are closely correlated with each other. Therefore, when organizing play activities for preschool children of 5-6 years old, the following issues need to pay attention:

Firstly, appropriately integrate the objectives of cooperative skill education for preschool children of 5-6 years old with other educational goals and activities according to the daily routine of children in preschool.

Second, be fully aware of the importance of play activities as it is a suitable and effective way and means to educate cooperative skills for 5-6 years old preschoolers.

Third, preschools and teachers need to organize play activities with comprehensive preparation and focus on the following six issues:

Design appropriate game themes and aim to educate the cooperative skills for children;

Develop game rules and regulations suitable to the game theme and children's psycho-physiological characteristics;

Help children to assign roles that match each child's abilities, interests and aspirations;

Create a favorable environment and opportunities for children to cooperate and interact with each other (not simply playing side by side);

Encourage and agree with children on the game rules, reward and penalty while playing so that children can participate voluntarily in the rules on rewards and penalty and voluntarily implement;

Always encourage children to participate in play activities so that children can promote their initiative, positivity and creativity when playing.

As a result, play activities have a comprehensive and profound effect on the education and formation of preschoolers' cooperative skills in an effective and sustainable way.

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