

The Effect of Reggio Emilia Approach Application and Learning Styles toward the Language Ability of Children in Kindergartens

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Abstract : *This study aimed at determining the effect of Reggio Emilia Approach (REA) and learning styles of the children language ability at the kindergartens in Makassar. The research design was 2 x 2 factorial designs. The population was all kindergarten children in Makassar. The sample was selected using a random technique. There were two selected kindergartens. The first was TK Teratai UNM as the first experimental group which was taught by applying REA in role play. The second was TK Rahmah as the second experimental group which was taught by applying REA in the storytelling activities in which there were 20 children in each class. Some results were found in this study. First, the language ability of children who apply REA in role-playing is higher than the children who apply REA in storytelling. Second, the language ability of the children who have dependent field learning styles is higher than the children who have independent field learning styles. Third, Language ability of children who apply REA in role play is higher than children who apply REA in storytelling at the group of children who have field dependent learning style. Fourth, language ability of children who apply REA in role play is lower than children who apply REA in storytelling at the group of children who have field independent learning style. Fifth, language ability of children who have field dependent style is higher than the children who have field independent learning style in groups of children who perform REA in role play. Sixth, language ability of children who have field dependent learning style is lower than children who have field independent learning style in groups of children who apply REA in storytelling. Seventh, there is an effect of interaction between REA and learning styles toward the language ability.*

Keywords - *Reggio Emilia Approach, Learning Styles, Field Dependent, Field Independent, Language ability*

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I. Introduction

Early childhood education is an effort to stimulate, guide, nurture, and provide learning activities that are capable of producing abilities and skills of children. It is a place for children aged 0-6 years to develop their potential in physical, cognitive, language, emotional, and social.

Early childhood education should be based on the needs of the child. It must be adapted to the values espoused in the neighborhood. It should be appropriate to the stage of physical and psychological development of children. It should be conducted in an atmosphere of fun play and is designed to optimize the potential of children. This is in line with ministerial regulation number 137 in 2014 Article 13 which states that learning process in kindergarten is conducted through playing in an interactive, inspiring, fun, contextual and child-centered. Therefore, they can actively participate and provide flexibility for innovation, creativity, and independence in accordance with their talents, interests, physical and psychological development.

A fundamental learning approach in early childhood education is a behavioral approach and a developmental approach. The behavioral approach assumes that concepts do not originate within the child and do not develop spontaneously. The developmental approach provides a framework for understanding and appreciating the natural growth of young children and assumes that early childhood is an active learner who constantly gets information about the world through games. One of the developmental approaches is the development of the Reggio Emilia Approach (REA), which considers children as competent learners so that the children themselves can direct the model of curriculum that is run. Teachers follow the interests of children and provide standardized instructions. REA strongly believes that children learn through interaction with friends, parents, teachers as well as interactions with the learning environment. REA approach is committed to "create learning conditions that encourage and facilitate the child to build his own power of thinking through the incorporation of the whole of expressive, communicative, and cognitive" [1]–[3].

REA is a method or approach to education, especially for young children. REA is different from other approaches. REA is committed to "create learning conditions that will encourage and facilitate the child to build up the strength of thinking itself through the incorporation of the whole of expressive, communicative, and cognitive" [3].

Children are encouraged to describe their understanding through one of the symbolic languages, including drawing, sculpture, dramatic playing, and writing. They work together to solve the problems that arise. The teacher facilitates and then observes the debate over the extent to which the child can solve the problem. Revising the drawings or ideas are performed if necessary, and the teachers let the children repeating the activity and modify each other's work for a collective purpose to be a better understanding of the topic. Teachers are involved in the exploration and evaluation process and pay attention to all children development outcomes in resolving problems based on their understanding [1], [4].

The core of Reggio Emilia curriculum is project planning as a result of the child's interest. The project grew from the first experience planned by teachers to help children explore their cultural customs or their surrounding physical environment or the result of spontaneous events such as child ideas or teacher questions. Almost any experience that arouses the interest of the child can be the basis of the project. The project is conducted in depth and detail, using variations in the inquiry method and a selected picture and a graphic form. To complete the process of investigation/inquiry through this long-term project is the children's creativity in using materials to demonstrate and communicate their learning, using the 'hundred languages ". At every step of the activity, teachers observe, discuss and interpret together their observations, which then make new choices to offer to children. Discussing in groups and considering experiences and ideas of children will grow up with their understanding. There are some of the key features of early childhood in the REA program [1], [2], [4].

One of the areas of development in the growth of basic ability in kindergarten is language development. Language allows the children to translate the experience into symbols that can be used to communicate and to think. Language is closely related to cognitive development. A language is a tool for expressing ideas and asking, and language also generates concepts and categories for thinking [5], [6].

Language is a tool to communicate. Through language, a human can interact and communicate, express the results of his thoughts and can express his feelings. With language, people can open the horizon of thinking and develop their knowledge and insight. Children learn language through interaction with their environment, whether home, school or community. In school, children learn language through interaction with teachers, peers and other adults. Early childhood teachers need to understand the language development of the children [5], [7], [8]. Based on these statements, it can be said that language is a system and sequence of words used to communicate with others.

The research results found by [9] have proven that developing language skills is an important step for developing the ability to practice and think and it will have a real impact in all early childhood education experiences. It is possible because the ability to use language is a necessary thing to learn important skills in other disciplines that will also support achievement in school. When a child enters the school environment, he or she must be able to understand others and to express his oral personal opinions so that later he or she can succeed in doing schoolwork such as reading and writing [10].

The role play and storytelling are the methods and strategies to achieve competence of the children. Both of these methods focus more on the activity of students in the learning process [6], [11].

Role play method can be performed by macro role-playing and micro role-playing. In macro role-playing, the children will play social roles that exist in the environment around them. In the micro role-playing, children use tools such as puppets, hand puppets and so forth to portray such social roles. Therefore, the macro role-playing and the micro role-playing naturally will more activate the children in the process of learning, especially regarding ability of children in language both receptive language ability and expressive language ability [7], [12]–[14].

In addition, to role-playing, storytelling is also one of the learning activities that can develop the language skills of children, both receptive language, and expressive language. However, the storytelling activities that have been conducted in kindergarten are more widely used to develop the receptive language skills of children.

It is seen from the storytelling activity that is only conducted by teachers and their students sit and listen to the story till the story is finished [11], [15]–[18].

In addition to learning methods, the child's learning style is also considered to affect the child's intelligence in learning and socialization. Learning style is how the children process information. Learning styles are grouped into field dependent and field independent [19]–[22].

The children who have dependent field style require strong support from other people in the vicinity. They tend to be timid and anxious. They are difficult to take the initiative and work alone. Besides, they tend to be submissive to others, especially in the position of authority [19], [21], [22]. They talk fast without considering the comprehension of others. They are less concerned with interpersonal relationships. They do not require detailed instructions. Besides, they can accept criticism for improvement [19], [21], [22].

Both of the learning styles show the best way for the individual to be able to absorb information from outside and how the children interact with their social life. Thus, learning styles affect the children language ability. It will be proven in this research.

Based on the phenomenon that has been mentioned above, the authors are encouraged to examine the influence of REA and learning styles on the children language ability in kindergarten empirically.

II. Research Methods

This study used an experimental method with quantitative approach. The experimental method which was used was 2x2 factorial designs. The experimental method aims at obtaining or collecting as much information as is necessary and useful to carry out research issues to be discussed. In line with the above opinion, the experimental research method is aimed at examining the causal relationship between risk factors and a particular effect by treating one or more "similar" but different control groups in the treatment [23]–[25].

This research was conducted with the appropriate experimental design 2x2 factorial design draft. The treatments which were given were to present a credible form of learning namely two role-play and storytelling activities which were applied using REA, which then became the independent variable. Meanwhile, the moderator variable is the learning style of the children. This variable is divided into two categories, namely: field dependent learning styles and independent field learning styles.

Based on the theoretical foundation, the design of this study can be described in the following table.

Table 1. Research Design

Attribute	Treatment	Reggio Emilia Approach (REA)	
		ROLE PLAY ACTIVITY A ₁	STORY TELLING ACTIVITY A ₂
Cognitive styles	<i>Field dependent</i> B ₁	A ₁ B ₁	A ₂ B ₁
	<i>Field independent</i> B ₂	A ₁ B ₂	A ₂ B ₂

Independent Variable : A1: REA in role playing
A2: REA in storytelling activity

Dependent variable : Ability of Receptive Language
Ability of Expressive language

Moderator Variables : B1: field-dependent learning style
B2: field independent learning style

This research was conducted in Makassar, and then the populations in this study were all children of class B in kindergartens in Makassar. The samples in this study were two kindergartens by taking into account some characteristics. The first is the kindergartens which have a similar educational background of teachers. The second is the curriculum used. The third is infrastructure, social and geographical environment of the school. The fourth is family characteristics such as parental educational background, and socioeconomic status of the family. Based on these characteristics, the Kindergarten located in Rappocini District, namely TK Teratai UNM Makassar and TK Rahmah Makassar were selected. By using purposive sampling in each school, 27% children who field dependent style and 27% children who have independent field style were selected.

Therefore, the data show that 40 children meet the characteristics to be the sample of this research with the following detail:

1. TK Teratai in Rappocini District Makassar was 20 children consisting of 10 children with field dependent and ten children with field independent.

2. TK Rahmah in Rappocini District Makassar was 20 children consisting of 10 children with field dependent and ten children with field independent.

For more details the sample composition can be seen as follows.

Table 2. Composition of Research Sample

Moderator	Treatments	Reggio Emilia Approach (REA)		Total
		Role Paly A1	Storytelling A2	
Learning Styles (B)	Field Dependent B1	10	10	20
	Field Independent B2	10	10	20
	Total	20	20	40

This study used two kinds of primary data. The first is data about children language ability as a dependent variable and data about children learning style as a moderator variable that acts as a simple effect. To reveal both of the data, research instrument is needed that is the instrument to measure the children language ability and to classify children based on learning styles. The intended learning styles are field dependent and field independent style.

Data on language ability were collected using Likert scale observations in the form of an attitude scale. [26] in the rating scale, explain that a Likert scale is a scale that can be used to measure attitudes, opinions, and perceptions of a person or group of people about a symptom or educational phenomena. There are two forms of questions that use the Likert scale namely positive question form to measure positive attitude, and negative question form to measure negative attitude.

According to [21], the learning style of early childhood students can be obtained after observation through Play Rating Scale (PRS), which consists of 16 items, and divided into four children's play area.

The data analysis consists of two phases. The first is the instrument development phase. The second is statistical analysis phase that is research data processing which is called analysis of research data.

Descriptive statistics are intended to clarify or present research data in a limited scope. In this case, the research data is the dependent variable that is the ability of the children language ability as a result of the treatment by applying REA in role-playing and storytelling. Learning styles as attribute variable are classified into two namely field dependent and field independent.

The inferential analysis is used to analyze sample data, and the results are applied to the population. This analysis is used to analyze data by making accepted conclusions.

III. Results And Discussion

Based on the results of hypothesis testing, it is showed that from all seven hypotheses proposed in this study, two of them are rejected the null hypothesis, and only one accept the null hypothesis. The details of the hypothesis are presented as follows.

The Language Ability of the Group of Children Who Are Applying REA in the Role-Play Is Higher Than the Group of Children Who Are Applying REA in Storytelling

The results showed that the average language ability in storytelling group is lower than the role-playing group. It appears mathematically that the role-playing group is higher than the storytelling group in language ability. It can be concluded that there are significant differences between the two language ability groups namely storytelling and role-playing group.

Language Ability of Children Who Have Field Dependent Style Is Higher Than the Children Who Have Field Independent Style

The results of the research show that the average language ability of children with group field independent style and field dependent style is almost same. However, it shows mathematically that the group of field dependent style is better than the group of independent field styles regarding language ability. Therefore, it can be concluded that there are significant differences between the two groups in terms of language ability. It can be proven that there is almost equal between field dependent and independent field.

Language Ability of Children Who Apply REA in Role Play Is Higher Than Children Who Apply REA in Storytelling at the Group of Children Who Have Field Dependent Learning Style

The results show that in the group of the field-dependent learning style, the average language ability in REA group in storytelling is lower than in role play. It appears mathematically that the REA group in role play is better than in story telling activities in terms of language ability. Therefore, it can be concluded that there are significant differences between the two groups in terms of language ability.

Language Ability of Children Who Apply REA in Role Play Is Lower Than Children Who Apply REA in Storytelling at the Group of Children Who Have Field Independent Learning Style

The results demonstrate that in terms of field independent style, the average of children language ability in the storytelling activities of the REA group is higher than the REA group in role play. It shows mathematically that story telling in REA group activity is better than the role play in terms of language ability. Therefore, it can be concluded that there are no significant differences between the two groups in terms of language ability.

Language Ability of Children Who Have Field Dependent Style Is Higher Than the Children Who Have Field Independent Learning Style in Groups of Children Who Perform REA in Role Play

The results showed that in role play, the average of children language ability with independent field style is lower than field dependent styles. It appears mathematically that group of field dependent style is better than the group of independent field styles in language ability. Thus we can say there are significant differences between the two groups in terms of language ability.

Language Ability of Children Who Have Field Dependent Learning Style Is Lower Than Children Who Have Field Independent Learning Style in Groups of Children Who Apply REA in Storytelling

The results showed that for the storytelling in the REA group, the average language ability with independent field style is higher than the field dependent styles. It appears mathematically that group of field independent style is better than the group of field dependent style regarding language ability. Thus, we can say there are significant differences between the two groups concerning language ability.

There Is an Interaction Effect between REA and Learning Styles on Language Ability

In the Descriptive Statistics chart, it shows that there are differences of average between the measured groups that are the group of field dependent style and the group of independent field style regarding language ability using REA learning approach. The results also show that the children language ability with independent field style at REA group in role play is lower than in storytelling. This happens otherwise on dependent field style where the children at the REA group have higher language ability in role play than in storytelling.

There is a very strong interaction between these two variables (REA and learning style). From the Profile plot, it is indicated that the children language ability that have independent field style at REA group in role play is lower than in storytelling activity. It is on the contrary on field dependent style where the role play at the REA group is higher than storytelling in terms of language ability. That is why there is a mathematical interaction. At the significance level $\alpha = 0.05$, it is statistically shown that there was a strong interaction (see: Tests of between subjects effects) where the interaction between learning styles and role play has a value $F = 110.904$ and p -values < 0.001 was smaller than the significance level $\alpha = 0.05$. Therefore, it can be said that there is a significant interaction between the two groups. Interaction model that is formed is $Y = 97.933 + 16.400 \text{ Style} - 24.333 + 29.467 \text{ Group REA learning styles and storytelling}$.

IV. Conclusion

All hypotheses in research can be tested. With these results, some conclusions can be drawn as follows

1. The language ability of children that perform REA in role play is higher than children who apply REA in storytelling activities.
2. The language ability of children with dependent field style is higher than children who have independent field styles.
3. Language ability of children who apply REA in role play is higher than children who apply REA in storytelling at the group of children who have field dependent learning style
4. Language ability of children who apply REA in role play is lower than children who apply REA in storytelling at the group of children who have field independent learning style.
5. language ability of children who have field dependent style is higher than the children who have field independent learning style in groups of children who perform REA in role play
6. language ability of children who have field dependent learning style is lower than children who have field independent learning style in groups of children who apply REA in storytelling
7. There is an effect of interaction between Reggio Emilia Approach and learning styles toward language ability.

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