Entering Children's Literacy Through Whole Language Approach

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Abstract—The aim of this research was to determine the influence of the whole language for kindergarten students, especially in early literacy. The researcher chose a whole language approach to help children age 4-5 years understanding early literacy because it integrated 4 language capabilities: reading, writing, listening and speaking in one package, and the children could learn all materials effectively. The samples of this research were 54 kindergarten students aged 4-5 years in Surabaya, following a quasi-experimental design that had an experimental group and control group. In the experimental group, the students did various interesting activities relating to literacy, while in the control group the students did usual learning activities. In this study, the data collection technique used were observation and documentation. The results of this research suggest that students in the experimental group show a greater development at all levels in literacy compared to the students in the control group. In addition, whole language approach was proven effective for early literacy learning.

Keywords—Whole language; literacy; children.

I. INTRODUCTION

Children need to develop their literacy ability as unseparated parts of the language. Teaching literacy for children was special because we had to adjust with their stage of age development. Basically, early childhood education contains all effort and acts in caring, nursing, nurturing, and educating by creating an environment where the children can explore their learning experiences. This environment would give the children a chance to know and to understand things by continuing watching, imitating, experimenting and all of the process involving their brightness potential. Through early childhood education which emphasized on development of physical, cognitive, religion and morality value, social-emotional, language and art, considering children uniqueness and development steps for children we hope it can stimulate the development of children optimally in order to gain a good learning readiness as the main key to children's next step successful study.

Teaching literacy for kindergarten students had to consider their early childhood development. Learning by doing is the best way for children aged 4-5 years old because children can absorb the material naturally.

The development of children literacy could not be separated from their social literacy contexts. That's why, each child has their language level ability depending on their stimuli and the environment encourages. Children surrounded by literacy environment could learn alphabets, words, and sentences easier. The development of language, especially literacy could not be separated from other areas of development, including cognitive development.

Understanding the storyline and reading certain symbols was closely related to the thinking process. The process of thinking was the individual ability to combine, assess, and consider an event so that the thinking process was a cognitive development related to the level of intelligence that marks the child with various interests and potential. So it could be concluded that cognitive development also affects the development of one's language. This was in line with Piaget's opinion [1] which in his observations revealed that the development of cognitive aspects of the child will affect the language he used.

The whole-language approach was used in this study to determine how far the effects on the development of literacy in early childhood. The whole language had integrated four language abilities, such as reading, writing, listening, and speaking in one unified. Researchers use the actual objects that were familiar in the child's life, as well as symbols of images to introduce literacy for children. Reading books and classroom decoration, as well as the running theme, was also prepared to help children understand the concept of literacy. Classroom activities were also adjusted to the things being discussed, starting with the taught songs or poems, stories, and worksheets to work on. Children could be familiarized using their symbolic thinking skills to learn literacy Utilization of images as food symbols that were often consumed by children can be used to introduce literacy by adding letters formed words about images such as introducing apple images and letters that form the word "apple". [2] stated *"Iconic brands are developed over time, not born. They weave themselves into the fabric of everyday life. Early childhood exposure to a brand is a way to create an emotional attachment and solidify the relationship"* Icons evolve over time, and not created. The icons weave themselves into fabric used in everyday life. The proximity of early childhood to an icon was a way to create emotional

closeness and deepen the relationship with the icon. This was an opportunity that could be used by researchers to teach literacy to children of an early age because children would enjoy learning close to their daily lives.

In general, literacy learning is done traditionally. Children were introduced to the letter A to Z and asked to memorize it. It was true that the child can memorize the letters, but they had difficulties in arranged the letters into a word so that when the child was shown a card with a shark image and there was a writing "shark" underneath, the child automatically reads "fish".

Based on the problems above, easy and enjoyable literacy learning was needed to make learning literacy more meaningful and easy for children to do.

The whole language approach made learning literacy more meaningful because children were not required to memorize the letters A-Z, but they were invited to play with real objects and symbols of images according to the theme running. For example, when learning about fruits, the first-day children will learn about the apple, its kind, shape, and texture. For example, when learning about fruits, the first-day children will learn about the apple, its kind, shape, and texture. Then the child will be given an apple card, accompanied by the letters that compose the word, imitate the sounds of the letters, draw apples, and compose the letter cards and other interesting activities associated with apple.

The next day the child will be invited to learn about other fruits. And so on, so children could understand literacy in a fun way. Literacy learning using iconic images as icons could draw children's attention if the teacher presents them in an interesting and fun way, without being asked, children would participate.

The whole language approach to developing literacy had been used in kindergarten Aisyiyah 22 and received a positive response from the children. The data shows an increase in the number of children who were interested in learning to know the letters through pictures of commonly consumed foods and items used in their homes. Children feel enthusiastic in learning with different ways. Making real things and pictures as a learning material were fun and easy to do. Children feel proud because they could "read" the pictures correctly even though they could not read in the real meaning. This could not be separated from the real thing and symbol images that had been seen by children, and recorded in his memories.

II. RESEARCH METHODS

This research is quantitative research done by describing data in the form of numbers. This research is used to test a hypothesis of the relationship between research variables[3].

The research method used in this study is an experimental method. According to [4] experimental method is a research method used to find the effect of certain treatment against others in controlled conditions. The design in this study uses experimental Quasi where this design has a control group, but it could not fully function to control the external variables that influence the experiment implementation. There are two forms of quasi-experimental design, namely Time Series Design and Nonequivalent Control Group Design.

This research uses Nonequivalent Control Group Design, where at the time of this experiment research, the group was divided into two groups of objects that have the same characteristics or similar characteristics, ie experimental group, and control group[4]. The following is an illustration of the research design using the Nonequivalent Control Group Design:

$$R \quad O_1 \ X \ O2$$
$$R = O3 \quad O4$$
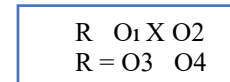
Chart 3.1
Research Design (Sugiyono, 2014)

Information

R : Random sampling

O_1 : The results of preliminary observations of groups treated by Whole Language (introducing literacy through symbols)

X : *treatment*

O2 : The results of the final observations of groups treated by Whole Language (introducing literacy through symbols)

O3 : Results of preliminary observations untreated group

O4 : Results of the final observation result of untreated group

Based on the explanation above, before the treatment begins, the researcher did some observation on the language development especially literacy for children in grade A which were selected as the sample to measured their early condition (O1). After that, the experiment group would be given the whole language approach (X) otherwise in control group they do not have treatment (-). After treatment, both groups, experiment, and control re-observed to measure the presence or absence of change (O3). Given the above scheme, it could be seen that the effect of treatment was shown by the difference between the experiment group (O1, O2) towards the control group (O3, O4).

In the implementation of this experimental research, the researcher will divide the two groups that had properties and characteristics equal to or close to the same, which consists of the experiment group and the control group. In the experimental group (treated) the application of the whole language approach 1 time per week for 4 weeks. While the control group (not treated) followed regular learning as usual[5].

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control group (not treated) followed regular learning as usual[6].

The concept of research design was done in general with the following stages:

1. The first stage, observe both groups (experiment and control) to measure the development of literacy and symbolic thinking of children. In the study code:

O1: Initial observation value of the experimental group (given the literacy recognition through image)

O3: The initial observation value of the control group (not treated)

2. The second stage, the experimental group was given the introduction of literacy through pictures through the whole language approach, whereas in the control group was not treated, in other words using learning as usual.

3. The next stage is the third stage, the two groups are re-observed to measure literacy development and symbolic thinking, coded as follows:

O2: The final observation value of the experimental group (treated)

O4: The ultimate observation value of the control group (not treated)

4. Stage four. This stage is the comparative stage of the score, which will compare the mean score of the experimental group and the control group by using the statistical differentiation test.

5. The last stage is to draw a conclusion whether there is a difference between the experimental group and the control group.

The population in this study is all children of kindergarten Group A in Cluster IV Sawahan Surabaya, which include four kindergartens and two PPT (Pos PAUD Terpadu). In this study researchers only include the number of Kindergarten children. In Kecamatan Sawahan, since the academic year 2016/2017, PPT is also included in the cluster to maximize coaching. Therefore, the number of clusters that had been only 8 turned into 20. Each consists of 3 or 4 Kindergarten and 2 PPT or 3 Kindergarten and 3 PPT. Cluster IV and V is a splinter group from cluster III. Here is the data kindergarten children in cluster IV Sawahan Surabaya:

Table 3.1
Data of Kindergarten Students Group A Gugus IV Sawahan Surabaya

No	Name of Institution	Number of Students Group A
1	TK Harapan Kita	42
2	TK Matahari Terbit	75
3	TK PWRI	32
4	TK Baptis	38
	Total Students	**187**

Sample

The population in this study has a large number of research subjects that require the selection of respondents or data sources that adequately represent the population. This process is called the sampling technique [7]. Researchers

drew 4 kindergarten names and take 2 names of kindergarten that will be the subject of research. The outcome of the draw was the name of TK Matahari Terbit and TK PWRI. This research use Proportional Random Sampling technique. According to [4] this technique is used when the population has members/elements that are not homogeneous and stratified proportionally. This technique is used by researchers because the number of subjects is too much. TK Matahari Terbit has a total number of students in group A are 75 children in 4 classes, as well as TK PWRI, the total number of students of group A is 32 children in 2 classes. In this research, each school took 2 classes only.

The research was held at TK Matahari Terbit with 47 children, 25 children in class A2 as experiment class and 22 children in class A3 as control class, and TK PWRI with 32 children, 16 children in class A1 as experiment class and 16 children in class A2 as control class. The time of this research was the second semester of 2017-2018.

Table 3.2
Amount of Sample

No	Name of Institution	Class	Number of Students	Group
1	TK Matahari Terbit	A2	25	Experiment
		A3	22	Control
2	TK PWRI	A1	16	Experiment
		A2	16	Control
	Total Students		**79**	

Instruments used for data collection in this study are observation guidelines, documentation, and research instruments developed based on indicators of each variable.

Observation guidelines in this study consisted of instruments to observe learning using the whole language approach to literacy development[8].

In order for the instrument to be used appropriately, the researcher needs to develop a drafting arrangement of instruments known as "lattice". The instrument grille is the basic plan of making a set of research instruments.

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The lattice guidelines [9]

Table 3.3
Lattices of Research Instruments Developing Literacy

No	Level of achievement	Indicator	Activities	Items	Item No
1	Getting to know symbols	1. Read pictures 2.Connect things with the letter	1. Mention pictures and color of fruits shown by the teacher 2.Connect beginning alphabet "apple" with the symbol which represent it	2	1, 2
2	Create meaningful scribbles	Make a scribble about the picture	3. Coloring the letters that make up the word "apple" 4. Draw an apple and write the first letter "apple"	2	3,4
3	Imitate (write and pronounce A-Z)	Pronounce the letters A-Z are exemplified by imitation	5. Imitate pronouncing the letters that make up the word "apple" in sequence 6. Write the word "apple"	2	5, 6

Source: Ministry of Education RI Number 146 Year 2014 about Curriculum 13 Early Childhood Education

Terms of Assessment

Based on the observation method used, the measurement in this study using the assessment rubric.

III. RESEARCH RESULT

Validity is a measure that indicates that the variable being measured is really the variable to be investigated by the researcher. The validity of the item was indicated by the correlation or support of the total item (total score), the calculation was done by correlating the item score with the total score of the item. If we use more than one factor, it means testing the validity of the item by correlating the item score with the factor score, then continuing to correlate between the item score and the total factor score (sum of several factors). Based on the results of correlation calculations will be obtained a correlation coefficient used to measure the level of validity of an item and to determine whether an item is feasible to use or not. Determining whether or not an item to be used, carried out by the correlation coefficient significance test at significance level of 0.05, which means that an item is considered valid if correlated significantly to the total score.

The validity test of this research was using SPSS program for Windows version 24. The testing technique often used by researchers to test the validity is using Pearson bivariate correlation (Pearson Product Moment). This analysis was done by correlating each item score with a total score. The total score was the sum of all items. Items questions were significantly correlated with the total score shows the items able to provide support in revealing what they wanted to reveal. If r count ≥ r table (2 sided test with sig 0.05) then the instrument or question items correlate significantly to the total score (declared valid). Here's the calculation:

To get the value of r_{table} as a comparison of r_{count} the way is to look at table r by looking for degrees of freedom (degree of freedom - df) through the number of respondents (N) = 42, and look at 5% significance column, so that r_{table} value = 0, 3044.

Table 4.1
Test Result Validity of Literacy Development

Indicators	r-count	r-tabel	Correlation Probabilities sig. (2 tailed)	Description
Literacy 1	0.876	0.3044	0.000	Valid
Literacy 2	0.836	0.3044	0.000	Valid
Literacy 3	0.753	0.3044	0.000	Valid
Literacy 4	0.564	0.3044	0.000	Valid
Literacy 5	0.600	0.3044	0.000	Valid
Literacy 6	0.587	0.3044	0.000	Valid
Literacy 7	0.747	0.3044	0.000	Valid
Literacy 8	0.579	0.3044	0.000	Valid

Based on the data table above, the value in the total column in each item referring to the Pearson Correlation line there was not a value below 0.3044 which means that all items in the literacy development instrument were valid.

Here is the exposure of literacy instrument reliability test data processing using SPSS version 24 for Windows.

Table 4.2
Reliability Test Results of Research Instruments

Variable	Cronbach Alpha Value	Minimal Standart	Description
Literacy	0.841	0.600	Reliable

Based on table 4.3 above it was known that the value of Crocbach's Alpha for literacy variables over 0.600 was 0.841 which means the literacy development instrument had a good degree of reliability.

This research uses the Quasi-Experimental design with Nonequivalent Control Group design pattern. The samples in this study were divided into two groups, namely the control group and the experimental group, and both groups had the same or similar characteristics. The first activity in this research was to make initial observations about the development of language in terms of literacy development. The preliminary observations of this study were conducted on two classes, namely control class, and experimental class. The assessment technique used in this activity is an observational assessment technique. The researchers also documented the activity in the form of photographs and video recordings. After the initial observation activity was completed, followed by the implementation of treatment or treatment process on the research subject. The experimental group was given the treatment of literacy learning using a whole language approach according to the theme of the plant, which includes the introduction of fruits, vegetables, flowers, and herbal

plant. At one school, the learning process using a whole language approach was given once a week for 180 minutes starting from opening of learning, core, until closing, for 4 weeks, as well as another school, so the total treatment or treatment was 8 times, while control class (which is not given treatment) follow the usual learning as scheduled by the teacher.

The next step was to conduct final observations. Final observations were conducted with the same activities as in the preliminary observation, observing the development of language in terms of literacy development. The final observation in this study was conducted in two classes, namely control class, and experimental class. This final observation aim was to determine the development of language in terms of literacy for children after the treatment for the experimental class, while the final observation for control class aims was to determine the development of language in terms of literacy for children when the research subject was not given treatment. Results of preliminary observations were ignored by reason of the research subjects in the experimental class have the same characteristics or nearly the same, and both had never received treatment in the form of learning using the whole language approach. Furthermore, based on the data obtained from the observations compared to test the hypothesis.

Table 4.3
Comparison of Average Grades of Control and Experiment Classes on Literacy Development Variables

Variable	Average Class at the End Observation	
	Control	Experiment
Literacy	26.36	28.87

In the untreated control class, the mean value for literacy development was 26.36, lower than the mean grade of the experimental class of 28.87. This was because the experimental class got the learning treatment with whole language approach, while the control class did not get the treatment of learning with whole language approach.

Before performing a hypothesis test using Multivariate Analysis Of Variance (Manova) test, normality data was tested first. If the data to be tested was already scattered normally then it was worth continuing to test the hypothesis with Multivariate Analysis Analysis Of Variance (Manova). The normality test used was the Kolmogorov-Smirnov (K-S) test. The test criteria were data from the normally distributed population if the t count <ttable and the probability significance value (p> 0.05) and the population was not normally distributed if the t value> t table (p <0.05).Here is the output of data processing normality test with SPSS version 24 for Windows.

Based on the output table, it was known that the degree of significance in the literacy learning outcomes for both classes of experiments and control classes all exceeds 0.05 which means the distribution of data was Normal.

Homogeneity test was a test of whether the variance of two or more data distribution similar or not. Homogeneity test used in this research was Levene's test. This homogeneity test aims to find out the homogeneity of variance for each class compared to both the experimental class and the control class. The test criterion is the variance is homogeneous if the significance value is more than 0.05. (p> = 0.05), then if the value of p <significance value (p <0.05), it is declared not homogeneous. Here's the output of SPSS version 24 for Windows

Table 4.4
Result of Homogeneity Data
Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Literacy	Based on Mean	0.108	1	77	0.744
	Based on Median	0.098	1	77	0.755
	Based on Median and with adjusted df	0.098	1	76,278	0.755
	Based on trimmed mean	0.104	1	77	0.748

Based on the data above, the data distribution assessed was from a homogeneous group because the significance value is more than 0.05. Conclusion: Homogen.

Hypothesis Test with Manova

The requirement that data be allowed for Manova testing is that the data must be normally distributed, homogeneous and the variant of the dependent variable under test must be the same. Regarding normality and homogeneity, it has been discussed earlier and the results show that the data were normally distributed and homogeneous. Next is the analysis of variant homogeneity on the dependent variable of research (literacy ability). Here is the descriptive output of SPSS for processing with Manova method globally.

Table 4.5
Variance Homogeneity Analysis On Research-Related Variables
Descriptive Statistics

	Class	Mean	Std. Deviation	N
Literacy	Control	26.3684	1.66719	38
	Experiment	28.8780	1.58422	41
	Total	27.6709	2.04890	79

Manova requires that the variant/covariance matrix of the dependent variable be the same. The homogeneity test of variance/covariance matrix can be seen from Box's M test result, with criterion if Box's test result has sig value. > 0.05 then H0 is accepted so that the dependent covariance can be inferred equally. Box's M test results with SPSS are shown in the following table:

Tabel 4.6
Uji Box's M

Box's Test of Equality of Covariance Matrices[a]

Box's M	2.615
F	0.847
df1	3

df2   1318750.011
Sig.   0.468

Table 4.11 shows the output of Box's Test of Equality of Covariance Matrices. The Box's M test obtained Box's M value of 2.615 with sig 0.468 which means greater than 0.05 then H0 is accepted, so it can be concluded that the dependent variable has the same covariance variant matrix, therefore the Manova analysis can be continued. Manova test was used to decide whether the research hypothesis was accepted or rejected. the decision-making criteria on output for the Manova test was based on p-value: If the value of p-value (sig.) <, 05 then H0 was rejected, accept Ha (there was an effect) If the p-value (sig.)> 0,5 then H0 is accepted, reject Ha (no effect).

The result shows that (1) Based on Manova (Multivariate Analysis of Variance) test that gain F count 47,061 and significance value 0,000, while r table 0,3044 with 5% or 0,05 significance degree. F count more than r table, 47,061 so H0 rejected and Ha accepted. Meaning that hypothesis of the influence of the whole language towards literacy for Kindergarten Students A class was accepted.

Based on the result above, it can be concluded that : (1) the whole language approach was influential significantly towards the development of literacy for kindergarten students A class.

Learning using a whole language approach can develop children's language skills, especially on children's literacy skills. This is also in accordance with the research [10] which states that early childhood literacy learning is done top down that is to know the learning materials as a whole first, then introduced the details later, supposing when we explained about the house, we first introduce the whole house building, after that the parts of the house itself. Likewise, teaching the language, especially literacy in early childhood, the whole language approach that is rooted in constructivism learning theory put forward the learning of language as a whole and integrated, not separated. One of the objectives of this whole-language learning approach is to develop language skills, especially literacy skills[11]. Children learn literacy through instructional media designed specifically in accordance with learning materials such as mentioning the picture and color of the fruit shown by the teacher, connecting the first letter of the word apple with the symbol of the image symbolizing it, coloring the letters that compose the word apple, drawing apples and writing the letter of the front said apple, imitate uttering the letters that compose the word apple sequentially and mimic the apple writing[6].

The description above illustrates various activities undertaken in learning using the whole language approach. Through these activities, the child was given the opportunity to obtain a complete, integrated, enjoyable and meaningful learning, as it presents concrete things according to the child's thinking stage. Thus all aspects of child development will develop optimally, especially aspects of language development.

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