SCHOOL READINESS OF EARLY CHILDHOOD AGE 5-6 YEARS BASED ON THE *NIJMEEGSE SCHOOLBEKWAAMHEID TEST (NST)*: A SURVEY IN 3 KINDERGARTENS OF MALANG

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ABSTRACT

School readiness is the achievement of children's maturity in aspect of development which include physical and motor development, social emotional development, cognitive development, language and communication development, and motivation and work attitude so that they can continue their education to the elementary school level. This study aimed to know the school readiness of early childhood age 5-6 years based on the *Nijmeegse Schoolbekwaamheid Test (NST).* This study uses quantitative research using a survey method with a target of number 43 early childhood age 5-6 years from 3 different kindergartens of Malang. The instrument using in this study is the *Nijmeegse Schoolbekwaamheid Test (NST)* which the result test is divided into 3 stages of school readiness called mature, hesitant, and immature. The findings from this study are that early childhood age 5-6 years in Malang kindergartens have school readiness to continue to elementary school level based in the results of the the *Nijmeegse Schoolbekwaamheid Test (NST).*

Keywords: school readiness; nijmeegse schoolbekwaamheid test; early childhood age 5-6 years

INTRODUCTION

School readiness has become one of the goals of early childhood education in several countries such as the United States, Poland and New Zealand (William & Learner, 2019). This is evidenced by the implementation of the slogan *"Ready to School"* since 1991 in several developed countries. Developing countries such as Indonesia are also not inferior in realizing this school readiness goal. In its implementation, the Directorate General of Early Childhood Education (Dirjen PAUD) issues a guidebook on school readiness for early childhood (Prianto, 2011). Then participate in realizing the *Sustainable Development Goals* (SDGs) since 2015, where the benchmark for the success of a nation is seen from the fulfillment of people's rights, especially in the field of education. In line with the obligatory basic education, especially elementary school for all children in a certain age range, it is an obligation for parents, teachers and the community to be able to fulfill this.

School readiness is a concept that is the answer to educational problems that are often faced by parents, schools and the community. The concept of school readiness in early childhood which is often used as a reference is a concept issued by *The National Education*

Goals Panel (Nurhayati, 2018) where in this case school readiness is divided into three main components, namely, *children readiness for school, school readiness for children),* and *family and community support and services.*

There are several kinds of measurement instruments related to school readiness that are used by several kindergarten in Malang. Among them are questionnaires for early detection of growth and development, assessment based on age, height, weight, head circumference and other measuring tools. When viewed in general, this measuring tool is not in accordance with the standards for measuring school readiness from *The National Education Goals Panel (NEGP)* which should measure aspects of child development as a whole, not only based on certain aspects. Therefore, we need a school readiness measurement tool that can answer the need for measuring school readiness data in accordance with the NEGP which measures every aspect of child development as a whole.

The Nijmeegse Schoolbekwaamheid Test (NST) is one of the assessments of children's readiness to enter elementary school that has followed the standard 5 dimensions of child development in accordance with *The National Education Goals Panel (NEGP).* The purpose of this test is to determine the maturity level of children who are about to enter elementary school, as a prognosis or predicting a child's achievement when they will attend elementary school and to be able to find out certain abilities of children who are considered mature or still immature so it needs more training, coaching, development, or improvement related to the child's school readiness.

STUDY LITERARY

School Readiness

School readiness can be interpreted as one of the characteristics that are attached to aspects of development in early childhood. Therefore, one theory that is considered relevant to school readiness is *The Maturational Theory* by Gesell which uses chronological age as the main indicator for determining a child's school readiness. Gesell revealed that school readiness will mature as children get older (Nurhayati, 2018). However, citing Lewit dan Beker (Setiawati dkk., 2017) regarding the concept and how to measure school readiness there has been no agreement made by experts. One of the strongest reasons why experts argue that chronological age cannot be used as an indicator of a child's readiness to attend school is because every child has different developmental stages even though they are in the same age realm.

On the other hand, Kagan and Rigby (2003) argue that there are two main constructs in school readiness, namely *readiness to school* and *readiness to learn*. The difference between the two is that if it is related to the ability to meet academic demands, then it is related to

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cognitive and language so it is included in the construct of school readiness. While learning readiness is related to stage of child development where the child has been able to achieve the capacity to be able to learn in school.

This agreed upon by Wesley and Buysse (2003) where children with different backgrounds and growth and development also need to be seen as an indicator of school readiness. This is because the child's adjustment process at school also has an influence on children's school readiness, especially if the child is in a transitional age. The common thread why school readiness in many studies is considered to be related to a child's learning achievement is because when a child is in a transitional period of education, he or she has sufficient school readiness, he or she can adapt to his or her new learning environment.

With various exposures from experts regarding the concept of school readiness above, the researchers then concluded that school readiness is the achievement of children's maturity in aspects of development which include physical and motor development, social emotional development, cognitive development, language and communication development, and motivation and work attitude so that they can continue their education to the elementary school level.

Nijmeegse Schoolbekwaamheid Test (NST)

Nijmeegse Schoolbekwaamheid Test (NST) is a measuring tool to be able to determine the maturity of aspects that support children's readiness to enter elementary school. This test was prepared by Prof. F. J. Monks, Drs. H. Rost and Drs. N. H. Coffie and conducted in Nijmegen, The Netherlands. The purpose of this test is to determine the maturity level of children who are about to enter elementary school, as a prognosis or predicting a child's achievement when they will attend elementary school and to be able to find out certain abilities of children who are considered mature or still immature so it needs more training, coaching, development, or improvement related to the child's school readiness.

METHOD

Types of Research

This research is quantitative research using survey method. This type of research was chosen because in the process the researcher will take data using a test tool, namely the *Nijmeegse Schoolbekwaamheid Test* (NST) where in the exposure the data is in the form of

scores. Apart from the test kits, the researcher also uses other instruments such as questionnaires, interview sheets, and documentation where the data is presented in the form of a description with the aim of complementing the quantitative data that the researcher has.

Subject and Research Setting

This research was conducted at several kindergarten in Malang which are spread over 3 different sub-districts. The kindergartens are BA Restu 2, RA Al-Jihad, and TK Nada. Meanwhile, the time of the research conducted by the research is starting from November 24th and ending on December 24th, 2021. The researcher conducts research and collects data periodically at the research location. The population of this study were all of the children age 5-6 years in kindergartens of Malang. While the research sample is children age 5-6 years in 3 kindergartens taken by random sampling method.

Data Collecting Technique

This study used test and documentation techniques. To find out if a child is ready for school, the child is asked to complete the entire test, then score. Then the scoring results are consulted with the table so that it can be seen whether early childhood age 5-6 years at kindergartens of Malang already have school readiness or not. As for the technical tests in this study, researchers used test sheets in the form of paper and color markers to assist students in the process of administering the test. The researcher gave instructions using a *manual book* where the child being tested carried out the instructions according to the instructions from the researcher.

Data Analysis Technique

This research uses a quantitative approach with a survey method in which the form is in the form of a test. The technique used in the analysis of the data obtained in the study is descriptive statistics. This technique was chosen by the researcher because this study aims to analysis the data by describing or describing the data collected as they are with the intention of making conclusions that apply in general. This descriptive statistic is also used by the researchers to describe the basic characteristics of the research results by providing a summary of the data accompanied by a simple analysis from the researcher.

RESULT

Based on the data below, it is known that *Nijmeegse Schoolbekwaamheid Test (NST)* is contains 10 subtest which each subtest has different purposes of measurement. Subtest 1 is measure observation of shape and ability to distinguish. Subtest 2 is measure fine ability. Subtest 3 is measure understanding of size, number, and comparison. Subtest 4 is measure sharp observation. Subtest 5 is measure critical thinking ability. Subtest 6 is measure concentration. Subtest 7 is measure memory ability. Subtest 8 is measure understanding the object and assessing the situation. Subtest 9 is measure understanding the story and subtest 10 is measure drawing people. In there are several early childhood developments that tend to be dominant to non-dominant. It is measured based on the subtests contained in the NST and is associated with developmental orientation in children based on *National Education Goals Panels (NEGP).*

So, if sorted based on the dominance of the maturity level of school readiness, early childhood age 5-6 years at the 3 kindergartens of Malang are the dominant children who have the first developmental maturity, namely in subtest 4, namely sharp observations. Then followed by subtests 1, 2, 10, and 3 which indicate that children have a tendency to maturity in their cognitive and fine motor development. Then at the lower level, the child is dominant in subtests 5, 6, and 9. Being at a level close to basic indicates that the child's cognitive understanding is also still not fully mature. It is proven by children who still have difficulty in solving problems related to concentration, critical thinking skills, and understanding this story. In addition to cognitive abilities, these three subtests are also oriented towards language and communication skills, social emotional and children's motivation and work attitudes. The most basic level in the NST subtest that is tested is that the child is not dominant in subtests 8 and 7, namely understanding objects and assessing situations and memory abilities.
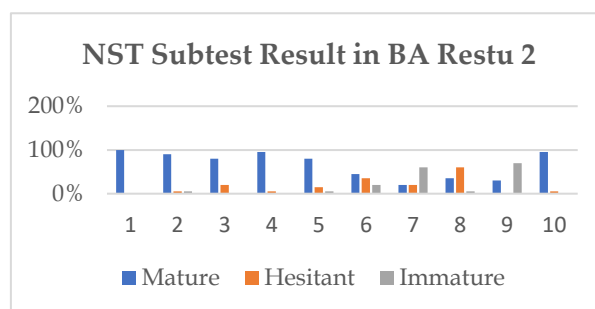

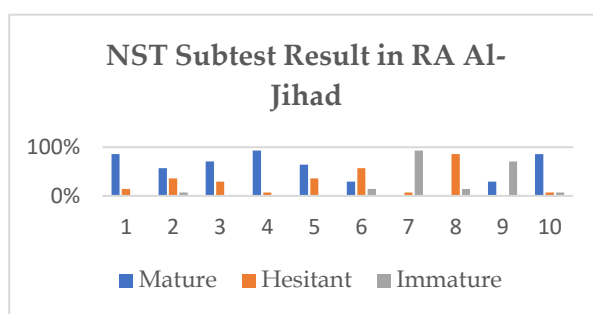**Figure 1. NST Subtest Result in BA Restu 2**

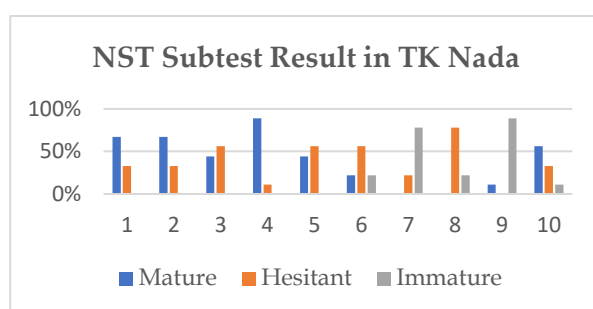**Figure 2. NST Subtest Result in RA Al-Jihad**

Figure 3. NST Subtest Result in TK Nada

DISCUSSION

Based on the results of data analysis conducted by researchers on the results of the NST test, the school readiness of early childhood age 5-6 years at kindergartens of Malang is still classified as varied, which can be seen from the internal factors that influence students. Based on indicators of school readiness referring to *The National Education Goals Panel (NEGP)*, the internal factor of children's readiness for school is based on *children's readiness for school*.

Children's readiness for school is known based on several aspects of development that are measured including physical and motor development, social emotional, cognitive, language and communication, as well as motivation and work attitude. *The Nijmeegse Schoolbekwaamheid Test (NST)* accommodates the measurement of these 5 aspects of child development. This can be seen from those tested on children. The indicator that a child is declared ready is based on the accumulated test achieved by each child after undergoing the test. **Of the 43 children who took the test, 5 of them with details of 1 student (BA Restu 2), 2 students (RA Al-Jihad), and 2 students (TK Nada) were declared not ready while 38 others were ready to continue to the next level of education.**

First, a detailed explanation of the indicators of physical readiness and motor development of children, measured based on subtests 2 (fine motor) and subtests 10 (drawing people). The results of the measurements that have been carried out are 74,4% of

children already have physical readiness and motor development. This indicates that the child already has the ability and readiness in carrying out tasks which require smooth hand movements such as writing, coloring, drawing, etc. Therefore, it is important to measure this aspect. Meanwhile, for children who are still at hesitant level and immature **(Look at Figure 1-3)** based on the results of the analysis from the researchers, it is necessary to provide training and capacity building by schools, such as by providing a new program or including it as additional training in children's learning time scheduled. This can also be the one of the things that become a note for parents when accompanying children to study at home so that they know for sure what aspects of development need to be improved for their children.

Second, with regard to aspects of children's social and emotional development contained in subtests 8 (Understanding the object and assessing the situation) The results of the measurement of this one aspect are 16,2% of children who have readiness. This indicates that some students do not yet have the maturity to do understand social rules and judgments which include right-wrong, good-bad, and so on, where this ability is one of the things that they need to have and are declared ready to go to elementary school. Based on existing data, it can be seen that it is necessary to develop and evaluate this aspect of child development in the hope that later the child will really be able to manage themselves and understand in assessing the rules around them and adjust well to it. Because the number of children who are not ready is counted more than children who are ready, the researcher suggests that this is certainly one of the things that need to be considered important by both schools and parents. The inculcation of the value of the rules that apply in the environment around children needs to be taught and emphasized to children through habituation both at school and at home.

Third, children's cognitive development is measured based on subtests 1 (observation of shape and ability to distinguish) and subtest 3 (understanding of size, number, and comparison) and subtest 7 (memory ability). The details of child development maturity in subtest 1 are 79,1%, subtest 3 are 69,7%, and 7 are 9,3%. Based on this data, children already have the ability to observe, distinguish and understand size, number and comparison but still do not have a strong memory of something. Children who are still at hesitant level and immaturity in each of the above subtests need to be given development and improvement. The ability of children's memory is how children can remember learning material when later in elementary school. This, of course, researchers consider important, because some subjects in elementary school require children to be able to memorize things and have a mature memory to be able to absorb and follow learning optimally. One of the subjects at school that requires a mature child's memory is Mathematics. Due to the demands of children to be able to recognize, distinguishing, and remembering the formulas given by the teacher, the researcher analyzed that it was necessary to make efforts to increase these abilities by teachers and parents as well as using a fun method which makes it easier for

children to remember things, always invites children to recall things whatever he had been taught, or something else.

Fourth, aspects of language development and communication are measured based on subtests 9 (understanding the story) The maturity of this developmental aspect is only 25,5%. This indicates that there are still a lot of children who do not have mature readiness when given enough explanation or information at a certain time. Children who are still at hesitant level and immature regarding language and communication development **(Look at Figure 1-3)** also have poor memory subtests results. Therefore, the researcher analyzed that increasing the vocabulary and the ability of children to be able to understand and explain the story or information given to them is very necessary to be given. Teachers and parents here have the same obligation to pay attention and look for alternative ways that can improve children's abilities in learning both at school or at home with parents.

Fifth, children's motivation and work attitude. This development is measured in subtest 5 (critical thinking ability) and subtest 6 (concentration). The readiness of children to go to school seen in this aspect is 67,4% in subtest 5, and 34,8% in subtest 6. These two aspects have the aim of knowing how far the child can focus on the instructions given to them. Based on the analysis of the researchers, this ability is very much needed when children enter elementary school due to the existence of different subjects, more assignments, and, longer study time than when attending early childhood education will require learning motivation and mature work attitude in the child. If this is not mature in the child, what will happen is that the child will be burdened and not ready for an elementary school life which is much different from the early childhood education earlier. Then, for children who are still at hesitant level and immature regarding the two subtests, once again schools and parents need to prepare children's readiness to go to school.

In general, early childhood age 5-6 years in Malang kindergartens already have maturity of school readiness and can continue their education level. This can be seen based on the results of the *Nijmeegse Schoolbekwaamheid Test (NST)* which was tested on students and measurements with different indicators found in each kindergarten. If you look at the school readiness theory proposed by Kagan and Rigby (Kagan, 2003) where school readiness includes two main areas, namely *readiness to school* and *readiness to learn*, then based on the research results obtained, so that it can be fulfilled in this study. It is known that each of the subtests tested in the *Nijmeegse Schoolbekwaamheid Test (NST)* is indeed used to determine the maturity level of children who are about to enter elementary school, the prognosis or forecasting of a child's achievements when they are in elementary school, as well as to determine the child's certain abilities those who are considered mature or immature so that they require training, coaching, development, improvement more related to the child's school readiness.

Meanwhile, based on the theory of social development that underlies the concept of readiness put forward by Learner (1997) it is written that school readiness of early childhood age 5-6 years is measured by covering the development of maturity and experience that children have had before, so that children are needed to learn skills more specifically. We can all know that in elementary schools, teachers are no longer teaching children things that children should have prepared when attending early childhood education level. These things include the ability of children to read, write, count, how children interact with peers and the environment and how children must be ready to adapt to the learning environment in elementary school. That is why, it is important to know for sure about the extent of children's school readiness in this area. The measurement of this is facilitated by measuring the school readiness of early childhood age 5-6 years using the *Nijmeegse Schoolbekwaamheid Test (NST)*.

There is another theory that is considered relevant to school readiness, namely *The Maturational Theory* proposed by Gesell which uses chronological age as the main indicator for determining a child's school readiness (Nurhayati, 2018). However, based on the results of this study, chronological age can no longer be used as a determining indicator in knowing and measuring school readiness for early childhood age 5-6 years better than younger children and vice versa. This can also be the basis for equal treatment of students in improving their school readiness.

So, it can be concluded that early childhood age 5-6 years in kindergartens of Malang already have school readiness both measured by the measurement scale used by each kindergarten, based on the *Nijmeegse Schoolbekwaamheid Test (NST)* and is in accordance with the other theories that are directly related to the theory of school readiness in early childhood, especially early childhood age 5-6 years who will continue their education to the elementary school level.

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