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Improving Ability To Know The Concepts Of Early Children's Patterns Through Differentiate Learning

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Abstrak

Penelitian ini bertujuan untuk meningkatkan kemampuan mengenal konsep pola pada anak usia dini melalui pembelajaran berdiferensiasi di Pembina State Kindergarten Mojokerto city Kota Mojokerto. Jenis penelitian ini adalah penelitian tidakan kelas (*action research*) dilaksanakan selama dua siklus. Subjek dalam penelitian ini adalah anak usia 5-6 tahun dengan jumlah 16 anak yang terdiri dari 10 perempuan dan 6 laki-laki. Teknik pengumpulan data dalam penelitian ini menggunakan unjuk kerja, sedangkan analisis data pada penelitian ini menggunakan analisis statistik deskriptif. Hasil penelitian ini menunjukkan bahwa terdapat peningkatan kemampuan mengenal konsep pola melalui pembelajaran berdiferensiasi, yaitu persentase ketuntasan pada siklus I sebesar (33,3%) dengan keterangan anak masih bingung dan sering bertanya mengenai urutan pola yang telah dijelaskan oleh guru. Peningkatan pada siklus II sebesar (85,42) %, dengan keterangan anak lebih cepat, tepat, tuntas, dan mandiri dalam menyusun pola. Kesimpulan dari penelitian ini adalah kegiatan model pembelajaran berdiferensiasi dapat meningkatkan kemampuan mengenal konsep pola pada anak usia dini.

Abstract

This study aims to improve the ability to recognize the concept of patterns in early childhood through differentiation learning at Pembina State Kindergarten, Mojokerto City. This type of research is action research carried out in two cycles. The subjects in this study were children aged 5-6 years with a total of 16 children consisting of 10 girls and 6 boys. Data collection techniques in this study used performance, while data analysis in this study used descriptive statistical analysis. The results of this study indicate that there is an increase in the ability to recognize pattern concepts through differentiated learning, namely the percentage of completeness in cycle I is (33.3%) with information that children are still confused about and often ask about the sequence of patterns that have been explained by the teacher. The increase in cycle II was (85.42) %, with information that children were faster, precise, thorough, and independent in drawing up patterns. The conclusion from this study is that the activities of the differentiated learning model can improve the ability to recognize the concept of patterns in early childhood.

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Introduction

The golden age of early childhood is in the range 0-6 years according to Laws of the Republic Indonesia Number 20 of 2003 concerning the National Education System. This period is a sensitive period or a sensitive period for children. This is in accordance with the opinion of Maria Montessori (in Irmawati, 2020) who explains that "during the golden age, children are ready to receive stimulation from various stimulants". The environment is very influential in helping children's physical and psychological maturity is the definition of a sensitive period. At this time children experience very rapid development starting from the development of religious moral, social emotional, cognitive, physical motor, language and art. This situation makes it important to provide early support in the form of optimal stimulation to maximize the six aspects of development, especially in the cognitive aspect.

The cognitive aspect is a person's self-control center because it is directly related to the human brain. Individuals go through a thought process to relate, calculate, and estimate something is the definition of cognitive ability. Cognitive abilities can be interpreted as the process of creating ideas during the period of receiving information by connecting a person's intelligence to his various interests and needs (Eliwarti in Tarsono, et al, 2021). Cognitive abilities also mean as a result of individual adaptation processes through interactions between individuals and the environment by functioning the nervous system and brain along with the experiences gained.

The cognitive abilities of early childhood that can be developed are the ability to think from the abstract to the complex, solving simple problems using their own thinking logically and flexibly, and knowing how to think symbolically (Nur, et al, 2020). One aspect of child development at the early childhood education level that pays great attention to its achievement in preparing them for the next school level is math skills. The introduction of mathematical concepts in early childhood is done by learning while playing. Following are the mathematical concepts that are packaged through fun play activities and are usually introduced to children, namely determining, analogizing, counting, sorting, grouping, measuring, numbers, patterns, geometry, graphics, and solving problems (Suyanto in Tarsono, et al, 2021).

Introducing mathematics to early childhood requires varied and interesting activities so that children can learn happily. Innovative fun activities to train one of the mathematical concepts by playing in sequence patterns. The activity of compiling a series of colors, sounds,

movements, parts and objects that are repeated is called sequencing patterns (Sujiono in Tarsono, et al, 2021). Children's basic math skills can be improved through activities that train skills in recognizing, grouping, recognizing relationships between objects and collaborating on sequences of patterns on a regular basis.

Teaching mathematics in an easy and fun way can make children love mathematics more and everything related to thinking. Today, not all children like math because it is difficult and boring. This is supported by news from kompas.com written by Fransisca Andeska Gladiaventa on February 14, 2023 at 17.01 WIB which explained that "math is not of interest to children and efforts to make learning mathematics more fun". This condition occurs because children have different interests and abilities in understanding the material conveyed by the teacher so they need to think about the right way to overcome these differences so that learning goals can be achieved.

The description of different characteristics of children can be seen from differences in learning styles, profiling, interests, stages of development and learning readiness. The teacher's ability to understand models, methods, techniques and accuracy in selecting learning materials can lead children to successfully carry out their learning process. One strategy that can be implemented to overcome the challenges of meeting the needs of children with a variety of these characteristics in order to achieve effective learning is differentiated learning (Pebriyanti, Diantika, 2023).

Differentiated learning is an effort made by educators to meet the needs of students whose learning activities have been adjusted to their interests, profiles, learning styles, and readiness of the material delivered with outputs in the form of products that can develop children's abilities (Herwina, 2021). Differentiation can be interpreted as giving children the freedom to explore, be creative and express according to their abilities without outside intervention. There are three differentiated learning elements, namely content or content, which is about what students learn, process, namely how students obtain information and generate ideas according to what is learned, and products, namely how students display what they have learned.

The application of a differentiated learning model is beneficial for teachers and students, namely teachers can assess and evaluate students according to their respective abilities without having to compose and impose results while students receive treatment according to their needs. Santos in (Herwina, 2021) argues that "a tool that helps develop

creativity, gives meaning to failure, supports students in adapting the learning process according to their abilities and plays a role in changing behavior for the better".

Observation data conducted by researchers showed that the results of learning in group B children at Pembina State Kindergarten Mojokerto city in knowing the concept of patterns were still developing. The resulting data were obtained from learning activities carried out on March 16, 2023, namely out of 16 children, only 3 children were able to arrange the patterns correctly, 12 other children were still confused, imitating the work of their friends and making mistakes in making patterns. This situation occurs because children are less interested in the media and activities that have been prepared by the teacher. In addition, children's learning interests on that day differed in choosing learning activities. Recognizing the concept of patterns in early childhood requires a method that is in accordance with the principles of learning in early childhood. One way that can be done by the teacher is to use real or concrete objects in learning. This is done to make it easier for children to understand the concept of patterns according to their age stages.

Real objects can provide direct experience in the child's learning process. Introducing something new does not necessarily have to facilitate expensive media and buy it. Children can learn to use the media around them. This can provide opportunities for children to learn directly with real objects. The real media meant is realia media (Sudarna in Aisyah, 2019). Realia media can be found easily in the environment around children and many people already know about it because it is often encountered in everyday life. In Gange's opinion, media in the surrounding environment can increase children's learning motivation (Sanjaya in Aisyah, 2019). The real experience provided by the environment helps the child's development to be stimulated properly.

According to previous research conducted by Bujak, et al (2013) explained that real objects or concrete objects are media that help children to understand abstract concepts. Another study conducted by Fyfe, McNeil, Son Ji Y, and Goldstone (in Aisyah, 2019) states that children's ability to predict and develop patterns is better done by using real objects than not using them. Based on the description of the results found in the field, it is important to conduct research entitled "Improving the Ability to Recognize the Concept of Early Childhood Patterns through Differentiated Learning Models"

Method

This research is a type of classroom action research (PTK) or action research that describes and describes a process and results of treatment to improve practice and the quality of learning in the classroom. The research approach used is a quantitative and qualitative approach. Quantitative is obtained from the calculation of the percentage results of the performance appraisal, while qualitative is obtained from the description of the performance appraisal during the pattern recognition activity process. This action research design uses a simple model design according to Kurt Lewin which has steps in each cycle which include planning, action, observation, and reflection. The following is a picture of the implementation cycle of classroom action research according to Kurt Lewin.

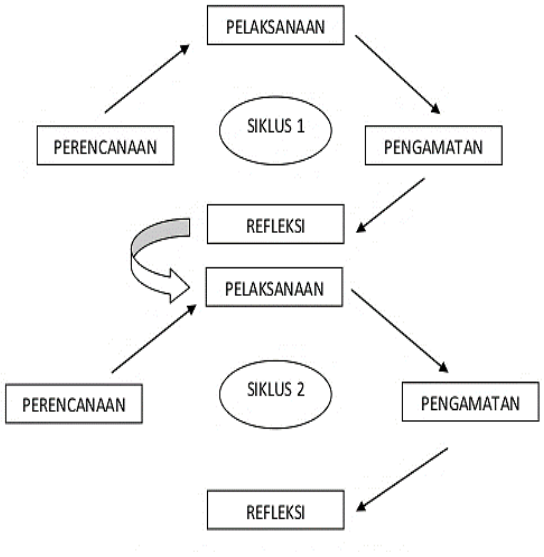


Figure 1 The implementation cycle of PTK according to Kurt Lewin

The time of this research was carried out in March 2023 semester II or even semester of the 2022/2023 school year. The research subjects in this study were group B children, totaling 16 children, consisting of 10 girls and 6 boys. This research took place at Pembina State Kindergarten, Mojokerto City, located on Lawu street III Perum Wates Magersari District, City of Mojokerto.

The data collection technique of this research is performance. Malawi (in Iftitah, 2019) says that "performance is an assessment technique based on observations of children's activities in doing something". This is also in line with the opinion of Hasibuan, et al (in

Irmawati, 2020) who said that "performance is an assessment that requires children to perform tasks in observable actions, for example: practice singing, sports, and demonstrating something". So, performance appraisal is an assessment that is carried out by observing the child's activities in doing something or tasks in observable actions.

The performance in this study used an instrument in the form of a rating scale with a rubric explanation. A range scale or rating scale describes a value about an object of assessment based on judgment and this scale is in the form of a numerical scale and a graphic scale (Yusuf in Irmawati, 2020). Completion of the performance instrument in the form of a rating scale with a rubric explanation is carried out by placing a check mark (√) on the number provided in the table. A rubric is a guideline for giving a score that is used to assess a child's performance based on the total score of several criteria and not just using one score (Malawi & Maruti, in Irmawati, 2020). Based on this opinion,

Table 1
Pattern Recognition Instrument Grid

No.	Indicator	Rated aspect
1.	Ability to recognize ABCD – ABCD patterns	Mimic pattern
2.		Estimating the Next Pattern Sequence
3.		Pattern Making

Based on the instrument grid, the scoring rubric used in this study can be described in the following table:

Table 2
Pattern Recognizing Ability Assessment Rubric

No.	Observed aspect	Description	Score
1.	Mimicking Patterns	Children have not been able to imitate patterns even though they have been assisted by the teacher	1
		Children are able to imitate patterns according to the example from the teacher, until they are finished, even if they are reversed or with the help of the teacher	2
		Children are able to imitate patterns according to the example from the teacher, until they are finished, according to the allocation, and independently	3
		Children are able to imitate patterns according to examples, until they are finished, quickly, and independently	4
2.	Estimating the Next Pattern Sequence	Children have not been able to predict the next pattern sequence even though they have been assisted by the teacher	1
		The child is able to predict the next pattern	2

		sequence after seeing 1 pattern shape, until it is finished, even if it is upside down or with the help of the teacher	
		Children are able to predict the next pattern sequence after seeing 1 pattern shape, until it's finished, according to the time allocation, and independently	3
		Children are able to predict the next pattern sequence after seeing 1 pattern shape, until it's finished, quickly, and independently	4
3.	Pattern Making	Children have not been able to make patterns even though they have been assisted by the teacher	1
		Children are able to arrange patterns, until they are finished, even though they are still upside down or with the help of the teacher	2
		Children are able to arrange patterns, until they are finished, according to time allocation, and independently	3
		Children are able to arrange patterns, to finish, quickly, and independently	4

Furthermore, based on the observation method used to observe the development of the child's pattern recognition ability, several assessment criteria are used as follows:

Table 3
Provisions for Assessment of Research Instruments

Score	Criteria
1	Not Developed (BB)
2	Noble Develop (MB)
3	Growing As Expected (BSH)
4	Very Well Developed (BSB)

The data analysis technique used in this research is descriptive statistical analysis technique. According to Sugiyono (2014) explained that "descriptive analysis is a statistic that is used to analyze data by ribing data from the results of observation assessments in accordance with the child's performance process". Quantitative descriptive data analysis, namely by finding the average score from the results of observations on the ability to recognize patterns, namely in the form of percentage descriptive analysis. Therefore, the analysis of the data obtained in this study uses the step of finding the percentage of the data that has been obtained. The formula used by researchers is the percentage formula according

to Haryadi (in Rukajat, 2018), namely:

$$P = x\ 100\% \frac{f}{N}$$

Information:

P = Percentage

f = Scores obtained by students

N = Total maximum score of students

After the percentage of result data is obtained, the next step is to analyze the data from each indicator of the ability to recognize patterns based on basic criteria according to Yoni (in Irmawati, 2020) as in the following table:

Table 4
Basic Criteria

No.	Percentage	Criteria
1.	80% - 100%	Very good
2.	61% - 80%	Good
3.	41% - 60%	Enough
4.	20% - 40%	Not enough
5.	0% - 20%	Very less

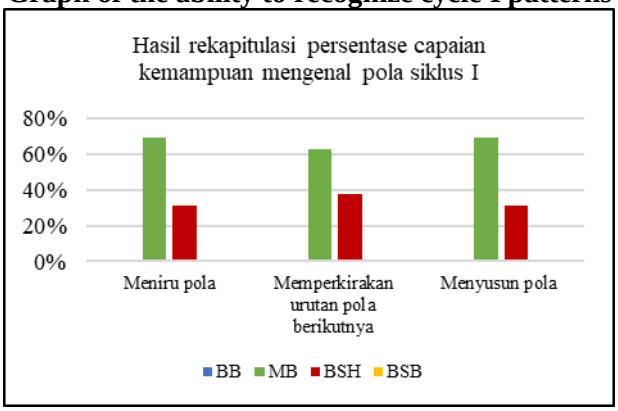
Results and Discussion

Based on the results of observations on the implementation of classroom action research at Pembina State Kindergarten in Mojokerto City with 16 students consisting of 6 boys and 10 girls. The target of this study was group B children with an age range of 5-6 years. The class used as research has one class teacher and researcher collaborating in the data collection process. The researcher conducted an initial assessment in the form of classroom observations with assistance and interviews with class teachers to obtain data on learning outcomes, abilities and difficulties of children in learning. This classroom action research was conducted from March 13 to 17 2023 with the topic of learning my favorite food. The ability to recognize patterns in early childhood through differentiation learning at Pembina State Kindergarten in Mojokerto City uses three assessment indicators consisting of the ability to imitate patterns, predict the next pattern sequence and construct patterns. The following tables and graphs show the results of the percentage assessment of indicators recognizing patterns in children aged 5-6 years.

Table 5
The results of the percentage recapitulation of the ability to recognize cycle I patterns

Rated aspect	BB	MB	BSH	BSB	Amount
Mimic pattern	0%	68.75%	31.25%	0%	100%
Predict the next pattern sequence	0%	62.5%	37.5%	0%	100%
Pattern making	0%	68.75%	31.25%	0%	100%
Average Percentage	0%	66.7%	**33.3%**	0%	100%
Amount	0	11	5	0	16
Criteria	Not enough				

Figure 1
Graph of the ability to recognize cycle I patterns

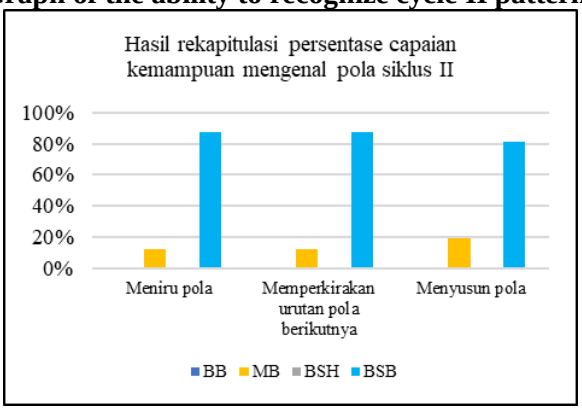


Based on the data in the tables and graphs of cycle I above, it is known that the ability to recognize patterns in children at Pembina State Kindergarten Mojokerto City Kota Mojoekerto, namely 0% of children with the criteria not yet developed (BB), is 66.7% of children with the criteria starting to develop (MB), equal to 33.3% of children with the Expected Developing criteria (BSH), and 0% are included in the Very Good Developing criteria (BSB). The results of this study obtained an average percentage of children's ability to recognize patterns that is equal to 33.3% or as many as 5 children with a score of 3 so that it is included in the less criteria.

Table 6
The results of the percentage recapitulation of the ability to recognize cycle II patterns

Rated aspect	BB	MB	BSH	BSB	Amount
Mimic pattern	0%	12.5%	0%	87.5%	100%
Predict the next pattern sequence	0%	12.5%	0%	87.5%	100%
Pattern making	0%	18.75%	0%	81.25%	100%
Average Percentage	0%	14.58%	0%	**85,42**%	100%
Amount	0	2	0	14	16
Criteria	Very good				

Figure 2
Graph of the ability to recognize cycle II patterns



Based on the data in the tables and graphs of cycle II above, it is known that the ability to recognize patterns in children aged 5-6 years at Pembina State Kindergarten Mojokerto City, namely 0% of children with the criteria of Not Yet Developed (BB), is 14.58% of children with the criteria of Starting Developing (MB), 0% of children with the criteria of Developing According to Expectations (BSH), and 85.42% are included in the Very Good Developing criteria (BSB). The results of this study obtained an average percentage of children's ability to recognize patterns that is equal to 85.42% or as many as 14 children with a score of 4 so that it is included in the very good criteria.

One of the cognitive developments of early childhood that is important to note is the ability to recognize patterns as a preparation for children entering elementary school. In Hartini's opinion (in Irmawati, 2020) reveals that "the ability that needs to be stimulated or stimulated, especially in children aged 5-6 years, is the cognitive aspect which consists of the child's ability to think logically, knowledge, concepts of shape, size, color, pattern, symbols and numbers". Referring to the guidelines for the National Standards for Early Childhood Education in Regulation of the Minister of Education and Culture Number 137 of 2014 it states that a child's ability to recognize ABCD-ABCD patterns is included in the scope of cognitive development of logical thinking. The pattern is a sequence that repeats, while the ABCD-ABCD pattern is four series of sequences that repeat (Pratiwi in Irmawati, 2020).

This research on the ability to recognize patterns focuses on three assessment indicators, namely the ability to imitate patterns, predict the order of the next pattern and construct patterns. This is supported by the opinion expressed by Reys, et al, (in Irmawati, 2020) that "the achievement of early childhood ability to recognize patterns is when children are able to imitate exemplary patterns, predict patterns according to the next sequence, are

able to construct patterns and are able to develop pattern. The activity of compiling patterns given to children is a compilation of compiling patterns based on colors, shapes and objects. In line with Aisyah's research (in Irmawati, 2020), argues that "a child's ability to arrange a series of colors, objects, parts, movements, repeated sounds is the ability to recognize patterns".

The three assessment indicators that are used as a guide in measuring the level of children's ability to recognize patterns have the following descriptions: (1) imitating patterns is measured based on aspects of accuracy in sorting patterns according to the example, completeness, independence, and timeliness of children in completing imitating patterns. (2) estimating the next pattern sequence is measured based on the aspects of the accuracy of the pattern sequence, completeness, independence, and timeliness of the child in completing the prediction of the next pattern sequence. (3) compiling patterns is measured based on the accuracy of the pattern sequence, completeness, independence, and timeliness of the child in completing the pattern arrangement.

This classroom action research was conducted in the second semester of the 2022/2023 school year in March 2023 offline at Pembina State Kindergarten Mojokerto City with four steps in each cycle, namely (1) planning, (2) implementation (3) observation (4) reflection. Before conducting research, the teacher asks the children first, "what interesting things have you never done at school?". "Would the child want to play patterns with the activity of making fruit satay?". Then the teacher asks "what fruits are used as ingredients in the next activity?". The teacher and the children agree on the fruits that have been selected. In cycle I, the first stage was carried out by making a learning plan, scoring rubric, preparing class designs, tools, and materials to be used including skewers, containers, plates, plastic, plastic gloves, pads, rags, tissues, trays, and various kinds of fruit consisting of melon, watermelon, pineapple, papaya. The fruit prepared for pattern recognition play activities is selected based on the child's preferences.

The teacher directs the children to wash their hands first. Then the child chooses the desired seat with the rules, if they line up neatly they can enter first and may choose a seat. Learning activities carried out classically. The teacher begins the activity by explaining and inviting the children to ask questions by connecting previous experiences about the types of fruit, benefits, color, shape, texture, taste and how fruit differs from one another. Then the teacher invites the children to feel the texture of the skin and flesh of the fruit alternately.

After that, the teacher introduces the tools and materials that will be used in pattern recognition activities. Then the teacher gives an example of how to use plastic gloves, be careful when sticking fruit on a skewer,

In the second stage, children begin to carry out pattern recognition activities independently after being given instructions by the teacher. In the third stage, the teacher observes the accuracy of the pattern sequence, completeness, independence, and timeliness of the children in completing the activity of compiling patterns through differentiation learning to make fruit skewers. The fourth stage, the teacher reflects on cycle I activities by obtaining data on the results of the ability to recognize children's patterns of 33.3% with information as many as 5 children getting a score of 3 so that they fall into the less category. Therefore, researchers reviewed and rearranged strategies to improve the ability to recognize patterns in early childhood through differentiation learning in cycle II.

In cycle II, the first stage that the teacher did was to make a learning plan, assessment rubric, prepare class designs, tools, and materials to be used including HVS paper, double-sided tape, toy eyes, fingerpainting paint, tissues, pallets, and straws with various kinds color. Selection of activities and types of food that are preferred based on the results of discussions with the class at the previous meeting. Determination of the activities of compiling patterns into fish shapes according to a mutual agreement between the teacher and the children. Before the activity, the teacher conducts questions and answers about the experiences the children have and previously known things about fish, such as the way fish live, the characteristics of fish, fish food, why is it considered healthy food, why do you like to eat fish. Then proceed to tell the story using a book entitled "Mia and Fried Fish". After that, Children are given an explanation that fish is healthy food and good for the body. The teacher invites the children to eat fish. Then the teacher explains the tools and materials that will be used in compiling the ABCD-ABCD pattern to form fish using red, yellow, green and blue straws. The teacher explains the various colored straws to make up the body of the fish and explains the parts of the fish. Then the teacher gives an example of how to attach and peel off the double-sided tape, the order in arranging the pattern to form a fish, completing the fish parts, and decorating his work using sunflower paint using the figerpainting technique. green and blue. The teacher explains the various colored straws to make up the body of the fish and explains the parts of the fish. Then the teacher gives an example of how to attach and peel off the double-sided tape, the order in arranging the pattern to form a fish, completing the fish

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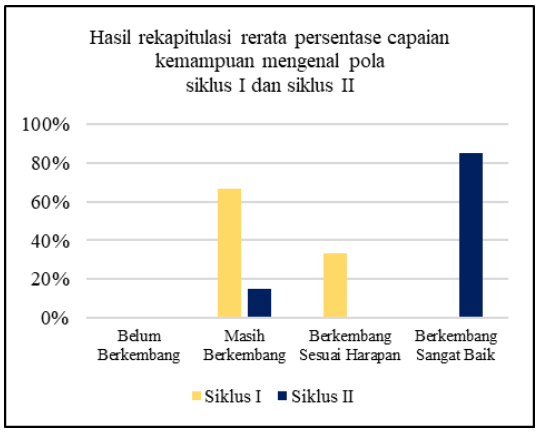
In the second stage, children begin to arrange patterns after receiving instructions from the teacher. Children are free to choose the color of the straw that is placed at the beginning of the fish skeleton. Children are also free to start compiling from the head or tail first. In the third stage, the teacher observes the accuracy of the sequence of patterns, completeness, independence, and timeliness of the children in completing the patterns through differentiation learning to make fish shapes. In the fourth stage, the teacher reflects on the activity which shows that in cycle II activities the result is 85.42% with the statement that there are 14 children who get a score of 4 so that they are included in the very good category. So that the researchers' efforts to improve the ability to recognize patterns in early childhood through differentiation learning in cycle II can be said to be as expected.

Table 7
The results of the recapitulation of the average percentage of ability to recognize patterns cycle I and cycle II

Assessment criteria	Ability to recognize the concept of the ABCD-ABCD pattern	
	Cycle I	Cycle II
Undeveloped	0%	0%
Still Developing	66.7%	14.58%
Growing As Expected	**33.3%**	0%
Very Well Developed	0%	**85,42**%
Amount	16	16

Figure 3
The graph of the ability to recognize patterns through a differentiated learning model



Success in obtaining an increase in children's abilities is influenced by the accuracy in choosing a learning model. One learning strategy that suits the diverse needs of students is implementing differentiated learning. This model of learning can provide freedom and opportunities for children to develop their values and potential. Differentiated learning is an effort or process to adapt the learning system in the classroom to the learning needs and abilities of different children. The principle of differentiated learning accommodates every child who has uniqueness, abilities, and different ways of understanding a science or material presented.

The application of differentiated learning is a way of creating a children's learning environment, defining learning objectives, a continuous assessment process so as to create an effective class (Fitra, 2022). The first step in carrying out differentiated learning is to determine the learning needs of children. The learning needs of these children can be categorized into three aspects, namely: learning readiness, learning profile, and children's interests and talents (Herwina, 2021).

Readiness to learn or readiness is a child's ability to learn and understand new material. The teacher gives equal rights to children in giving understanding according to the child's abilities. For children who take a long time to do activities and there are also those who are very fast at doing it. The teacher provides special assistance for children who experience difficulties in carrying out activities but also gives children the freedom to be creative according to their abilities. Meanwhile, children who work faster will be given additional activities that are not coercive and give freedom for children to carry out activities.

The child's learning profile relates to the child's learning style in understanding the learning theme. Children have different learning styles, there are children who prefer to do group activities rather than individuals and vice versa. Teachers can provide individual activities but can also be carried out in groups so that children can experience both learning styles. The learning style at the early childhood education level is through a variety of fun games and uses habituation methods that are repeated to help children easily remember what they learn.

Interest is an activity that children like to encourage their involvement in the learning process. Identification of children's interests can make it easier for teachers to provide interesting teaching materials and encourage children's learning enthusiasm. For example, in the introduction of mathematics, especially in indicators of recognizing the concept of patterns, repetition methods are given to stimulate the ability to use teaching materials and a variety of fun activities so that they can attract children's interest. The application of differentiated learning gives children the freedom to learn according to their abilities without coercion, they have to understand quickly, but seen from the learning process according to the characteristics of the child. The teacher is in charge of making interesting teaching materials as a form of strategy in motivating children's learning interest.

Differential learning or differential learning is a learning model that aims to support the diversity of children's learning needs based on aspects of learning readiness, learning styles and children's profiles. It is important for a teacher to identify children's needs based on interests, profiles, learning styles and learning environment. Children also play a role in assisting teachers in determining activities, developing learning tools and facilitating child-centered learning needs.

In Trias' research (2022) revealed that "in the application of differentiation learning the teacher must pay attention to three important elements during classroom learning activities, including the following: (1) Differential Concepts relate to teaching materials prepared to be taught to children in accordance with the child's abilities both in learning readiness, children's interests and children's learning profiles combined with these three aspects. The researcher's implementation is by giving freedom to children in choosing the type of fruit they like when arranging fruit in the activity of making fruit skewers and choosing what color straws to use in making patterned fish shapes. (2) Differential processes are meaningful activities in the learning process in the classroom. Learning activities can be carried out individually or in

groups. The researcher's implementation is by giving freedom to children in the process of arranging straw patterns in the activity of making fish and fruit satay. (3) Differential product is an assessment of learning through products made by children to measure the achievement of learning objectives. Products made by children can be taken into consideration in the stages of child development in terms of their abilities. The resulting products in this study were patterned fruit skewers in cycle I, and fish work from patterned straws in cycle II. Products made by children can be taken into consideration in the stages of child development in terms of their abilities. The resulting products in this study were patterned fruit skewers in cycle I, and fish work from patterned straws in cycle II. Products made by children can be taken into consideration in the stages of child development in terms of their abilities. The resulting products in this study were patterned fruit skewers in cycle I, and fish work from patterned straws in cycle II.

Conclusion

Based on the results of the research that has been done, it can be concluded that the ability to recognize patterns in early childhood through differentiation learning at Pembina State Kindergarten Mojokerto city shows a very good category with a percentage of 85.42%. These results were obtained from the data recapitulation of three indicators, namely the ability to imitate patterns, predict the order of the next pattern, and compose patterns. The average percentage of the ability to recognize patterns in cycle I and cycle II at Pembina State Kindergarten Mojokerto city has increased from a percentage of 33.3% or as many as 5 children with a score of 3, increased to 85.42% or as many as 14 children with a score of 4 including in very good category. Suggestions that can be proposed based on this research is that the time allocation for pattern recognition activities in children still needs to be added considering the importance of the ability to recognize patterns in early childhood, especially aged 5-6 years. The activity of getting to know the pattern given by the teacher needs to be carried out with a variety of activities, media and learning models. Teachers can continue and add to the stimulation given to children so that the ability to recognize patterns develops even more optimally. A well-differentiated learning model is applied to make it easier for teachers to meet the learning needs of children with various characteristics. Teachers can continue and add to the stimulation given to children so that the ability to recognize patterns develops even more optimally. A well-differentiated learning model is applied to make it easier for teachers

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