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Linguistics Approach as Teacher Pedagogy in Inculcating Cognitive Aspects of Preschool Children

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ABSTRACT

Cognitive levels of preschool children are the most important stages of development and should be given a full attention, especially in the aspect of cognitive potential in their language acquisition. In the context of the document recording, pre-school teachers usually provide a checklist, a list of anecdotes or portfolio behaviour to detect cognitive achievement of these children. However, the recording of the cognitive development of preschool children is also limited by the environment and stimulation obtained. Some teachers also record the children's cognitive aspect from thinking ability standpoint and the management of emotion and mastery of their skills. Some are recorded in terms of the ability to think and give some examples of situations. There are also teachers who assess the cognitive abilities of the language and gave the idea. The question is how or whether the platform in testing the cognitive aspects of language. Arising from this study, preschool teachers need to know the relevant language method in assessing the cognitive potential of these children. This study examined the cognitive potential of children against 75 respondents aged three to five years in selected nurseries in Perak. This study using interviews, teacher observations and questionnaires through Planned Skill Instruments as research methodology. The study found that teachers did not assess the cognitive abilities of children using relevant language approach. Cognitive preschool children should be scrutinized based on a theory and more practical language approach.

KEYWORDS: Preschool Children, Cognitive Potential, Stimulation, Thinking Ability, Skill.

INTRODUCTION

Curriculum models are usually constructed through curriculum program containing management and planning pedagogical education components. Therefore, many studies done to strengthen the children education curriculum in order to ensure the critical components required in the education of children especially preschool are not ruled out [21]. As stated in LPPKN (2009), every child has the right to the holistic development of physical, cognitive, language, social-emotional and spiritual character Hence, all responsible parties need to mobilize expertise and resources, provides programs, services, education and training, protection and facilities which can stimulate the positive development of children.

This policy is also aligned with the National Education Philosophy that emphasize the methodology used to interpret the student by using a portfolio, in which records a learning process experienced by children. The learning process can be recorded through the portfolio as its content is capable to show what the children have learned, how they learn and how they interact with others in completing their assignments. The timely implementation of the portfolio is vital to ensure the child's development is supported and judged effectively.

According to [10], in another study, children have a limited repertoire of behaviours to be interpreted and are unable to use language to describe their experiences. Other methods such as norm references or grading through a written test was not used as these methods are unsuitable for pre-schools who are unable to use precise language to describe their experience or learning experience and limited repertoire of behaviours. It is inappropriate for a preschool teacher to give an essay test to the students as essay assessment is not helping in stimulating ideas, and is it feared to put the children into pressure. Such circumstances should be avoided to inhibit the development of ideas and language of the children.

Portfolio is seen more acceptable and practical approach for preschool children. A study by [13] demonstrated that teachers do not have time to make a formative assessment of students in the course of Islamic and Moral Education in preschool. Since teacher emphasized on the preparation and activities in the classroom, observation, check list and individual record is done only for student's psychomotor development. This situation clearly shows

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that the cognitive development of students is overlooked since focus are given to the development of behavioural, but not cognitive, particularly in terms of language.

According to [17], many studies show that teachers of early childhood education has a limited knowledge of the aspects of child development assessment due to pre-service training approaches that are theoretical and excluding and ignoring the application of theory. In-service teachers need to be exposed to input that can realized the objective of assessment implementation which include requirements of holistic development, consist of physical, emotional, spiritual and intellectual. If a child's development can only be measured in terms of behavioural repertoire, implementation of JERI (Physical, Emotional, Spiritual and Intellectual) will not be achieved in a holistic manner. Thus, the goal of the evaluation should focus on each of these aspects in order to meet the National Education Philosophy.

Generally, children have a limited repertoire of behaviours to be evaluated, even their growth is based on the cognitive aspects of their indirect evident from the use of their language. Hence, teachers should be exposed to various aspects of cognitive assessment tools of observation theoretically and practically. Arising out of this problem, another approach is believed to be able to examine the cognitive development of children other than using a portfolio approach which is observation of lexis used when children interact amongst them in time of learning and activity. The development of this lexis can determine the linguistic understanding that exists within the student.

Lexis is referred to a word used to the realization of the social process or text [4]. Every lexis item is a base for form and meaning of a language. In [6] asserted that the meaning of a word or lexis is based on the action or behaviour that has three elements namely the stimulus speakers, word or utterance and the response of the audience. A stimulus will lead to someone talk and the response may be a response that arises using the word. According to [3], a response is mostly in the form of action. However, this study aims to examine the linguistic aspects of understanding based on lexis through the children's response in every speech made to them systematically. Admittedly, linguistic systems will be dominated quickly by individual children although without having exposed to formal teaching.

> "…learning a first language is something every child does successfully, in a matter of a few years and without the need for formal lessons." (Language Acquisition)

Even though language stimulus received by children is unorganized and limited, they have the ability to comprehend linguistics system of their first language before the age of five. This remarkable phenomenon has occurred and continues to occur in every society and culture at all times. Research related on lexis may also be benefitted as the basis and guidelines for evaluating the education curriculum of children, especially pre-schoolers to achieve cognitive assessment.

Research Problem

There are several studies discuss related topics and identified a number of gaps in terms of methodology, the use of data and elaboration. The studies are related to Evaluation, Linguistics and Pedagogical Study.

Evaluation Study aims to evaluate cognitive ability of preschool children in various methodology, whereas Linguistics Study focusing at linguistics aspects of preschool children. Meanwhile, Pedagogical Study investigates methodology progress as well as teaching and learning techniques of preschool teachers. All three studies are vital in order to investigate the problem and flaw from the point of elaboration, methodology, data analysis and theory application.

Amongst the researchers in Evaluation Study are [1, 7, 8, 19, 22, 24, 26]. For instance, a study by [24] found that teachers collected the children's work in a portfolio without going through the selection process. Revisions are directly or spontaneously where teachers commented orally on the work of errors directly to children. Portfolio's contents include observations on children's activities and interactions with children other than the information from their work. However, this study involved portfolios writing that carried out without particular procedure as well as limited children's participation. In this case, it is obvious that children are not measured at the level of their age but rather the ability of peers and emphasized more on psychomotor aspects. Therefore, a further research is needed to focus on cognitive observation and to measure their linguistics ability based on their age.

In linguistics study, among the researchers are [9, 12, 3]. One of the example is a study by [3]. The subject of the study is a three years old native speaker of Iban from Dua-Betong. The data used in this study is authentic data obtained from audio recording. Data was analysed based on three main aspects of the syntax, which are the length of the sentence, the syntactic structure and the number of utterances per speaking turn. The Mean Length of Utterance (MLU) by Brown's Stages of Development was used to determine the level of language development of the child. However, this study examines syntax by using MLU as a measurement. The use of MLU is to measure the

development of children's language acquisition and language comprehension rather than the child. Thus, this study should be conducted to examine the child's language comprehension to measure his cognitive development.

Next, in pedagogical studies, among the researchers involved are [5, 11, 14, 15, 18, 20]. For example, research by [15]. According to their research, fostering creative thinking is essential to be implemented among preschool children because they are the future generation and human capital in the future. The study aimed to explore how everyday interactions between teachers and children in the development of creative thinking of children in Ministry of Education (MOE) preschools. The study employed qualitative design. Three MOE preschool teachers and all the children in the class observed were the subjects in the research. Six children were selected as sample intended. Interaction of teachers and children are observed in terms of learning style, questioning and teacher responses to the questions or the answers of children.

The results show that teachers' attitudes play an important role in determining the preparatory, preparation of stimulus material and teachers' emotion which will affect teaching styles, as well as emotional and learning styles of children. Stimulus material will affect the mood and ideas for teachers to ask question and cultivate creative thinking of children. However, this study merely reported the findings rather than analyse the findings or the student's response. Based on these limitations, my study will be done to improve teachers' pedagogical aspects in order to measure cognitive development especially in terms of language (linguistic) that suit their age level. Indirectly, this study provides guidance to preschool teachers regarding pedagogy that is effective in providing assessment to the children's cognitive development that is not simply measuring the capacity of the words produced and their ability to response to their teachers.

Research Objective

a. To identify methodology of linguistics recording in assessing cognitive potential of preschool children.
b. To identify the potential of lexis approach in assessing cognitive development of preschool children.

METHODOLOGY

This study was conducted in three districts in the state of Perak namely Kuala Kangsar, Sungkai and Ipoh. All three districts have been selected to cover all nurseries in the state. A total of five nurseries were selected to cover locations in Sungai Siput, Bercham, Padang Rengas, TelukIntan and Besout 1. A number of 15 respondents aged 3 to 5 years were chosen from each nursery.

Data was obtained from three sources namely interview, recording, and observation during teaching and learning. The interview is a technique employed to gain data and information in unstructured or semi-structured manner. Through this method, the researchers were able to listen and observe clearly and understand the information conveyed by the respondents systematically. The next step is the recording of teaching and learning of the nursery teachers. By recording and observation, researchers can identify and assess the teachers' mastery and application of linguistics during teaching and learning process and its relationship to the cognitive development of children.

RESULTS AND DISCUSSION

Measurement of Cognitive Aspect in Preschool Recording Practice

Preschool curriculum that examines children's cognitive aspect is traced through thinking activity and their knowledge through teaching and activities performed. The focus on cognitive aspect through language is generally identified based on communication ability which is the ability to utter several words or sentence, vocabulary mastery and clear pronunciation.

Teacher’s recording document generally prepared the check list, anecdote list or behavioural portfolio in order to track the children’s cognitive achievement. However, the recording of cognitive progress of the preschool children is restricted by the environment and stimulus given to them. Some teachers recorded the cognitive aspects of the children from the perspective of thinking skill and emotional management, and their mastery of skill. Some other teachers recorded the children’s thinking skill by giving situational examples. There were teachers who assessed thinking skill through language aspects and presenting of ideas. Below are several examples of the children’s cognitive progress report which focus on behavioural development and skill mastery.

Anecdotal record is a note regarding an event or a change in the children’s behaviour. Such event or behavioural changes are considered as important, unique and significant to be recorded by the teachers. Anecdotal record is written objectively in order to response to questions such as what, where, when and who. The anecdotal recording process displays cognitive potential through attitude or behaviour of the children. Anecdotal record is unsuitable to describe the potential of children’s language component.

Name: Muhammad Munir Mohtar
Age: 6 Years Old
Class: PraBestari
Date: 22 February 2009
Time: 8.35 a.m
Venue: Preschool Playground
Teacher: Madam ZailaniZakaria

Event observed:
During play activity at the preschool playground. There were Munir, Hazeem, Faris and Iskandar lining up to play the slide. Suddenly, Haikal ran towards the group of children and pushed Faris untill he fell down. Faris seemed to scold Haikal for scrambling to climb the slide. At the same time, his hand was in pain.

Munir immediately help Faris to get up. He told Haikal the act was misbehaved. He said that the teacher reminded them to take turns during play. Haikal nodded as if he agreed with Munir. Munir asked Haikal to shake hand with Faris and apologised. Haikal and Faris then shook hand.

Teacher's Comment:
Munir has empathy for someone. In addition, he also has some positive interpersonal and already understood that he has to follow certain rules while playing on the playground.

Recommendation:
Teacher should highlight the good character of Munir by retell the story in front of Munir's friends to be an exemplary to others.

Figure 1: Children's anecdotal record

There were schools that recorded the cognitive aspect through check list.

Code	Focus	Learning Outcome	Date: 04/08/2011			Date: 11/08/2011		
			TM	SM	BM	TM	SM	BM
1	Scientific Skills	Observe and identify shapes in the surroundings.			X		X	
		Observing objects in the surroundings and identifying the size (large, small, long, short, high, low, thick and thin).		X		X		
2	Investigate the nature of life	Identify body parts		X		X		
		Identifying the sensory organs (eyes, nose, ears, tongue, skin) and state the function of each of these sensory organs.	X			X		
		Collecting animals according to habitat.		X		X		
3	Numbering concept	Counting up 1-10 and counting down 10-1		X		X		
		Writing the numbers 1-10 in a proper manner		X		X		
4	Language component	Pronounce the word correctly Using one syllable word, two syllables, three syllables Construct simple sentences		X		X		

Figure2: Cognitive domain check list

Key of Figure 2:

Performance Standard		
Score (Level)	Symbol	Criteria
Have Mastered	TM	To know and to be able to do by himself (most of the knowledge, skills or value in the identified construct) properly
In Progress	SM	To know and to be able to do several knowledge, skills or value in the identified construct with guidance.
Not Mastered	BM	To know several basic thing (the minimum) related to the construct but unable to do (need guidance all the time)

This checklist is a tool to give guidance on the development and growth of a normal child. Teachers use this checklist to observe and record the development of the child periodically, but continuously. Teachers also need to ensure the appropriate use of the checklist according to the age of the child.

Next, there are schools that use the portfolio to record students' cognitive mastery. Portfolio contains all of the collection of information on aspects of learning and achievement of children, which is a clear evidence of the activities of children in nurseries. Portfolio is not only made up of the best, but all the work of the children during their stay in the nursery. The results of this work can be stored in folders, files, boxes or on CD. Based on the information below, it clearly demonstrates that aspects of language are separated in the cognitive domain.

SENARAI SEMAK

TARIKH :.....

NAMA MURID :.....

KELAS :.....

Arahan : tandakan (/) pada ruangan "MENGUASAI" atau "BELUM MENGUASAI" bersama aktiviti murid bersama rakan.

BIL	KEMAHIRAN DIUJI	MENGUASAI	BELUM MENGUASAI	CATATAN
1	**Kognitif:** - mengikut arahan dan peraturan dengan baik			
	-menyatakan jenis warna dengan betul			
	-menyuaipadankan warna dengan objek sekeliling			
2	**Bahasa** -bertutur dengan lancar dan jelas			
	-boleh bertutur dengan rakan dengan baik			
	-boleh bertutur dengan guru dengan baik			
	-menjawab soalan dengan jelas			
3	**Emosi** -mempamerkan perasaan gembira jika berjaya menjawab soalan dengan baik			

Figure 3: Children's cognitive portfolio

Recording Practice of Cognitive Aspect at Location

Generally, children have a limited repertoire of behaviors to be evaluated, even their growth is also based on the cognitive aspects of their indirect evident from the use of their language.

Apparently, the assessment should focus on aspects of the language to recognize their cognitive potential and not separated into individual components. Therefore, teachers should be exposed to various aspects of cognitive assessment tools of observation of theoretical and practical. Arising out of this problem, another approach that can be trusted to examine the cognitive development of children is through observation of lexis used when children interact amongst them in a time of learning and activity. The development of this lexis can determine cognitive potential that exists in these students.

From observations and interviews with teachers at the location of the research, the recording form of cognitive skills is identified. Figure 4 displays one of the portfolios used.

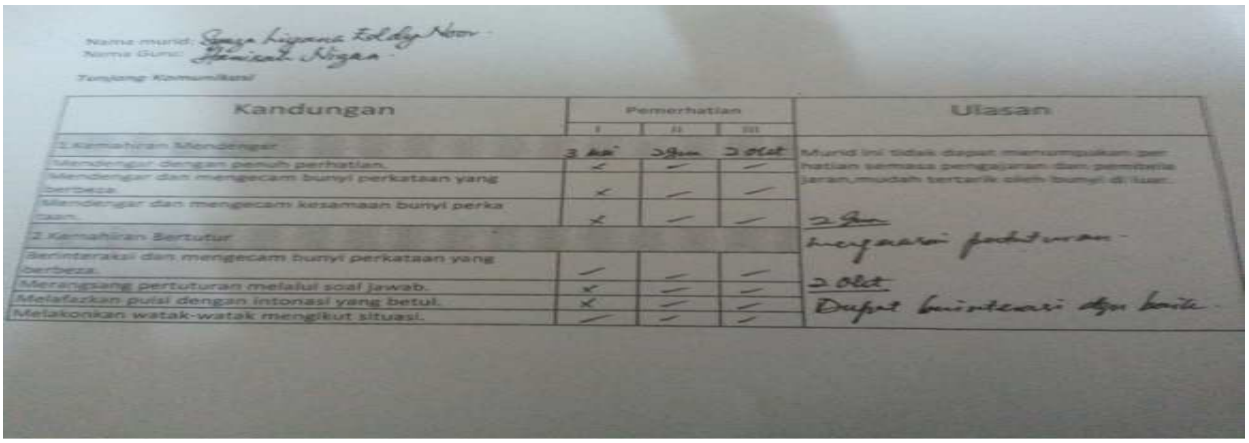

Figure 4: Children's development check list

Based on the checklist in Figure 4, it is seen that language aspects are isolated as the main cognitive components. In general, tests of cognitive skills were noticed only in listening and speaking components. In listening, the emphasize was on pronunciation skill and recognizing the sounds of phonemes and syllables while in speaking, the focus was on the form of question and answer, and gesticulate certain characters through the instructions. Although this document includes linguistics elements such as phonology and semantics, this recording type is not specific to measuring cognitive skills according to [2]. Supposedly, these cognitive skills were structurally tested to ensure teachers to track student's ability in various levels of cognitive skills.

In another case, cognitive skills are recorded as follow.

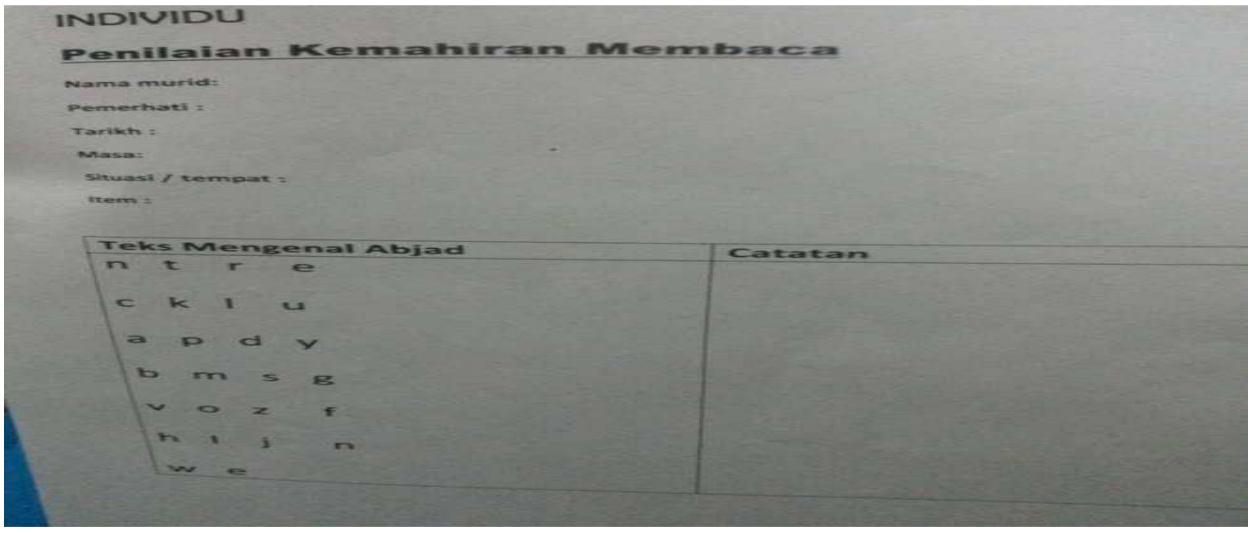

Figure 5: Portfolio of child

Based on the diagram in Figure 5, cognitive skills is observed through pronunciation and alphabet recognition. The cognitive domains are measured by portfolio that separating the components of the language. Cognitive domain is accordingly measured as a whole by identifying the mastery of language ability, together with mathematics and science. For that reason, the teachers are able to identify the balance between children's cognitive ability and the focus of their cognitive.

The analysis also showed that the cognitive skills of preschool children are also measured by the criteria of creativity and aesthetics. In [16] suggests that children learn through experience and hands-on activities. In other words, providing an attractive and stimulating learning is important. A conducive environment is important to enable children to create knowledge indirectly. To this end, the use of the interactive learning is very useful to encourage creative development of children. In contrast, memorization and drilling in learning is rejected by [16].

In [16] considered intelligence as a basis for active process where information acquired through objects, ideas and socializing. Thus, cognitive aspect is assessed such as activities regarding shapes and colours which employ assimilation concepts and relate the surroundings to shapes and colours. For example, when a teacher asked "which object is round" and the students responded "a ball".

Additionally, in [16] suggests that operation must be based on three important mental phenomena namely observation, memory and imagination. Observation is a process in which children concentrate fully to something seen. Meanwhile, memory is a process of constructing, collecting and recalling past events. Imagination is a process that leads to a static sensation in which vision and hearing frequently assembled in the mental. These three phenomena will take place when the reasoning process happened, while producing a new object from the new forms that have been constructed.

Though the importance of creativity and aesthetics could not be excluded, the recording of cognitive domain in nurseries is found to focus on creativity aspects only and ignoring the language aspects while testing the creativity may also be detected using the medium of language. Creativity and aesthetics need to be shaped through language activity in order to observe the preschool children's cognitive development.

Lexis Approach in Measuring the Potential of Preschool Children

Language potential is one of the potentials that need to be cultivated in preschool children as their academic potential could be developed as well as their social interaction if they have a good language capability. According to [16], using language is a primary method to express thinking, in which language supports the cognitive development. He added that a child is an active and adaptive creature but egocentric that has a different way of thinking compared to adult. Therefore, learning experience is tailored to their comprehension level. He further explains that language could be used to transmit information about different place and time. Meanwhile, in [25] argues that language development working together with cognitive development, indeed complementary each other and flourished in one social environment. Thus, as a means of communication, language is an important tool in a child's life.

Psychologists often say that the age of the child is a zone of "Creative age", because during these are the moments that a child develops his creativity which can be detected in the mastery of language. For instance, language development in 3 years old children is side by side with their cognitive development as they tend to query "why this", "why that", "what is this what is that". Children love to imitate certain sounds and utterances of people around. Language development of children aged 4 and 5 years old is made up of four to five words. They are also capable in using prepositions such as under, within, above and then. They use more verbs than nouns, while when the child's aged 5 to 6 years old; they've been able to build a word consisting of six to eight words. They are also able to capture and explain the meaning of a simple word, and also aware of the antonym of a word.

Analysis was carried out by studying responses of respondents to the questionnaire given to them during interviews in 5 selected nurseries. A total of 15 children aged 3, 4 and 5 years old were interviewed individually. The method is based on semi-structured interviews conducted with stimulus image which focus on 5 language aspects such as phonology, morphology, syntax, semantics and pragmatics.

Table 1: Checklist of distribution of questions based on detailed planned instruments for skills evaluation

Language Area Level	Types of Question	Bloom's Taxonomy Skill Level
phonology	Specify the name of the object in the picture 1, 2 and 3 with the correct pronunciation.	knowledge
	Read the sentences in picture1, 2 and 3.	application/ adaptation
morphology	Which one is correct for picture1, 2 and 3?	comprehension
syntax	What is the correct and appropriate sentence to describe the action in picture1, 2 and 3?	analysis
semantics	Show two objects that symbolize the word 'brother' and 'toys' in picture 1. Show two objects that symbolize the word 'I' and 'little brother/sister' in picture 2. Show two objects that symbolize the word 'mother' and 'milk' in picture 3.	synthesis
	Show objects which are red and blue in picture 1. Show facial expressions depicting the word 'love' in picture 2. Show facial expressions depicting the word 'drink' in picture 3.	application/ adaptation
pragmatics	Sister act in picture1. Why is sister hugging her brother in picture2? What is mother doing to the brother in picture3?	evaluation

Figure 6: Questionnaire's pictures 1, 2 and 3

Planned Skill Assessment Instrument refers to the hierarchical structure of thought based on inquiries. This means, there are various levels of questions ranging from low to high cognitive levels with different cognitive skills. Questions with multiple cognitive levels affect the organization as well as explaining the status of thinking. The Planned Proficiency Assessment Instrument focuses on phonology, morphology, syntax, semantics and pragmatics. Each field is represented by a series of questions covering several skill levels of the Bloom's Taxonomy. For example in phonology, the focus is given not only to knowledge but also application. The details of questions' level are presented in the following table.

Table 2: Checklist of distribution of questions based on detailed planned instruments for skills evaluation

Area	Skill Level					
	Lower Order		Medium Order		Higher Order	
	K	C	AP	AN	S	E
Phonology	√		√			
Morphology			√			
Syntax				√		
Semantics			√		√	
Pragmatics						√

Key: K-Knowledge
C-Comprehension
AP: Application
AN: Analysis
S: Synthesis
E: Evaluation

In order to create balancing in terms of the measurement of respondents' cognitive, the researchers have designed several levels of questions which include easy, medium and high. The distribution of the different levels of questions assisted in identifying the cognitive domain mastery of preschool children. It is important to ensure adequate language component obtained at their age level. Therefore, the stimulated pictures are processed in terms of the context and situation to test the cognitive mastery in terms of pronunciation or their responses. The distribution of questions as well as Detailed Instrument of Planned Skills Assessment is as follow.

Table 3:Analysis distribution of questions based on Bloom's Taxonomy

Level	Skill Level	Number of Question	(%)
Low	Knowledge	3	14.3
	Comprehension	3	14.3
Medium	Application	6	28.5
	Analysis	3	14.3
High	Synthesis	3	14.3
	Evaluation	3	14.3
Total		21	100

Key: N-Number of question
%-Percentage

In total, 21 questions were developed based on the levels of Bloom's Taxonomy includes questions on low level namely knowledge skills and understanding with 3 questions (14.3%), while for medium level questions which are represented by the application of skills consists of 6 questions (28.5%) and 3 questions (14.3%) for analytical skills. Next, the question is made up of high-level synthesis and evaluation skills, each of which contains 3 questions (14.3%). For example, application-level skills measured on the sequential of questions namely questions 1, 3 and 4 in each of the provided image.

In question 1, respondents were asked to state the name of the object contained in the image, thereby requiring respondents to produce sentences in the image. The questions were aimed to find out their mastery of the phonological and at the same time can be used as a form of measurement instruments at the level of knowledge and application skills. Similarly, question 4 requires the respondents to show two objects that symbolize the words appearing in the picture. Next, respondents were asked to indicate the object or facial expressions that symbolize the words in the picture to allow researchers to measure the level of application or respondents' ability to adapt the act shown in the image.

Overall, levels of Bloom's Taxonomy targeted cognitive achievement must start from the simple (knowledge) to the difficult (evaluation). However, analysis shows that the inverse retrieval. This is so because respondents' achievement was higher in the aspects that are more difficult than the easier aspect. Most respondents were unable to provide good answer for the low-level questions compared with the high-level questions. Details of the information are shown in Table 4,5 and 6.

Table 4: Overall achievement of respondents' cognitive level for 3 years old

Cognitive Level	3 Years Old			4 Years Old			5 Years Old		
	G1	G2	G3	G1	G2	G3	G1	G2	G3
Knowledge	3 4.0%	3 4.0%	3 4.0%	7 9.3%	7 9.3%	10 13.3%	17 22.7%	18 24.0%	17 22.7%
Comprehension	3 4.0%	3 4.0%	3 4.0%	10 13.3%	7 9.3%	8 10.7%	17 22.7%	14 18.7%	14 18.7%
Application (i)Making sentences	3 4.0%	3 4.0%	3 4.0%	7 9.3%	7 9.3%	10 13.3%	17 22.7%	18 24.0%	17 22.7%
(ii)Psychomotor	18 24.0%	19 25.3%	10 13.3%	21 28.0%	21 28.0%	18 24.0%	25 33.3%	22 29.3%	24 32.4%
Analysis	4 8.3%	1 1.3%	18 24.0%	10 13.3%	8 10.7%	23 30.7%	14 18.7%	15 20.0%	23 30.7%
Synthesis	18 24.0%	19 25.3%	10 13.3%	21 28.0%	21 28.0%	18 24.0%	25 33.3%	22 29.3%	24 32.4%
Evaluation	19 25.3%	13 17.3%	22 29.3%	22 29.3%	20 26.7%	25 33.3%	22 29.3%	25 33.3%	25 33.3%

Table 5: Overall achievement of respondents' cognitive level for 4 years old

Cognitive Level	4 Years Old		
	G1	G2	G3
Knowledge	7 9.3%	7 9.3%	10 13.3%
Comprehension	10 13.3%	7 9.3%	8 10.7%
Application (i) Making sentences	7 9.3%	7 9.3%	10 13.3%
(ii) psychomotor	21 28.0%	21 28.0%	18 24.0%
Analysis	10 13.3%	8 10.7%	23 30.7%
Synthesis	21 28.0%	21 28.0%	18 24.0%
Evaluation	22 29.3%	20 26.7%	25 33.3%

Table 6: Overall achievement of respondents' cognitive level for 5 years old

Cognitive Level	5 Years Old		
	G1	G2	G3
Knowledge	17 22.7%	18 24.0%	17 22.7%
Comprehension	17 22.7%	14 18.7%	14 18.7%
Application **(i) Making sentences**	17 22.7%	18 24.0%	17 22.7%
(ii) psychomotor	25 33.3%	22 29.3%	24 32.4%
Analysis	14 18.7%	15 20.0%	23 30.7%
Synthesis	25 33.3%	22 29.3%	24 32.4%
Evaluation	22 29.3%	25 33.3%	25 33.3%

Key:
G1-Picture 1
G2-Picture2
G3-Picture 3
%-Percentage

This result has created a number of assumptions or conclusions regarding the retrograde findings. Amongst them, the process of teaching and learning in school or learning institution mostly expose students directly to a high level without systematically educate their cognitive ability levels with emphasis on teaching in the hierarchy. Perhaps, this situation is due to unorganized teaching content from easy to more difficult levels. For example, at the level of knowledge, children need to master thinking skills namely connecting knowledge and memorization.

CONCLUSION

Language teaching based on diverse cognitive level can determine the level of thinking of children. This study has successfully demonstrated that cognitive performance of children available in various levels namely the level of comprehension, application, analysis, synthesis and evaluation. However, children were discovered to master the higher level of cognitive skills when they were able to answer higher level questions compared to lower level. In this situation, it could be concluded that children at ages 3 to 5 are already competent in generating ideas at a high level but requires an efficient method to ensure high levels of cognitive mastery. Preschool curriculum must ensure teaching language component incorporate linguistics elements, especially as a method to capture the ideas and thoughts of preschool children. Thus, the cooperation of all teachers as well as administrators is essential to refine language teaching in order to ensure cognitive skills are applied in various level, from low to high level.

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