Using Mind Mapping Learning Methods for Children's Language Skills

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ABSTRACT: Language skills are significant predictors of early academic and social-emotional outcomes of children and are important predictors of school readiness. This study aims to improve children's language skills through the application of mind mapping learning methods. This classroom action research used Kemmis and Taggart's cycle model. The research subjects were 12 children in group B consisting of eight boys and four girls. The data was collected through observation, interviews, and documentation with the validity of the data using source triangulation and method triangulation. This research uses data analysis techniques in the form of data condensation, data presentation, and drawing conclusions. The results showed that the children's language skills through the application of the mind mapping method in the first cycle were 75%, and in the second cycle had increased to 92%. Based on the results of teacher observations in the implementation of cycle I, the children's language skills obtained a percentage value of 61.5%, and in cycle II increased to 92.3%. While the results of observations of children's activities in the implementation of the first cycle obtained a percentage of 54%, and in the second cycle, it increased to 85%. This study found that the teacher's assessment of this mind mapping method was an easy method to understand so that it was easy to apply in classroom learning. The implication of this research is that it is necessary to carry out further research on the application of the mind mapping method for other aspects of development.

Keywords: *Early Childhood, language Skills, Mind Mapping Learning Methods*

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1 INTRODUCTION

One of the most common challenges over the childhood years was language deficits and difficulties. Such issues are first discovered by one of two methods: referral or screening. When an infant is accused of having a language problem or problem, thorough tests should be conducted after the initial identification. Neuromotor disability, hearing loss, common learning disorders, and particular language and speech problems may also be detected by language (Whitehurst & Fischel, 1994). Failure to meet traditional language and communication trajectories is both a risk factor for subsequent language challenges and a predictor of possible problems with reading, numeracy, and sociobehavioural facets of growth (Whitehurst & Fischel, 1994). Prospective surveys of children with speech and language disorders have shown that this group has a high degree of ongoing communication problems (Botting & Conti-Ramsden, 2000).

Bad language skills in the early years may have a far-reaching and long-lasting effect on an infant, according to research (Pace et al., 2019). Children who start kindergarten with strong language skills have a greater chance of succeeding in school, further education, and economic achievement as adults. Children with impaired language skills at the age of five, on the other hand, are more than twice as likely to be unemployed at the age of thirty-four than children with naturally learning language at the Age of Five (Law et al., 2009). According to research, language delay rates are related to socioeconomic status, with higher rates for children from low-income families. Differences in vocabulary size and language learning skills can be seen in children as young as 18 months depending on their family's socioeconomic status (McGillion et al., 2017). Over the childhood years, this social gradient in language learning becomes more pronounced. Locke et al., (2002) discovered that more than half of children beginning nursery school in deprived areas of England had delayed language skills despite having normal cognitive ability for their age. Given the important influence that inadequate language skills may have on a child's life, as well as the connection between rates of language delay and socioeconomic status, language strategies that are affordable and efficient across all socioeconomic groups are critical.

Language skills are essential for many facets of formal education, not least because language is used to provide most instructions. They also play an important role in learning to read and developing numeracy (Chow & Jacobs, 2016; Hulme et al., 2015). As a result, it's maybe surprising that differences in oral language skills assessed early in childhood are predictors of educational achievement measured several years later (Duff et al., 2015). Children with language problems are at risk for not only bad academic performance, but also for social-emotional and behavioural issues that may last into adulthood (Clegg et al., 2015). The impact of inadequate language on educational attainment and well-being begs the question of whether early interventions will help children develop their language skills. We examine evidence that services provided in school environments will help children develop their oral language skills. This research has significant consequences for

educational policies since it shows that language-enrichment services for young children will help them achieve academic success.

Choosing the right method in teaching children is one of the right strategies in improving children's speaking ability. The method applied by researchers in this study is the mind mapping method. Mind mapping is a method to maximize the potential of the human mind by simultaneously using the right brain and left brain. In addition, it can help children to remember, get ideas, save time, concentrate, get better grades, organize thoughts and hobbies of playing media, have fun in pouring out their imagination that gives rise to creativity. Several studies (Arimbi et al., 2018; Budyawati, 2016; Hapidin et al., 2019; Hendarwati, 2015; Indriyani et al., 2013; Lestari, 2020) reveal that the application of the mind mapping method can improve aspects of child development such as cognitive abilities , language skills and creativity of early childhood.

Based on the results of interviews with class teachers in pre-research, that the problem of children's language skills is still low. So that children can achieve language skills, especially speaking skills optimally, they must pay attention to the methods used in learning, this is due to factors that hinder children's language development, namely the lack of practice in language development and the limitations of learning media that will be used in the learning process. In addition, the response of children during the learning process while in class is considered by the teacher to be still low, so that most children have difficulty expressing their ideas and feelings, children do not have a variety of vocabulary, children tend to be shy about socializing and cannot say part of a word with words. True, like a word that has the letters "R" and "T, so it can be said that the child's speech development has not developed properly. Therefore, the researcher aims to solve problems related to children's language skills using the mind mapping method in learning activities.

2 THEORITICAL STUDY

2.1 *Early Childhood Language Skills*

Language is used in a communicative sense (pragmatics) and represents collaborative phonological, semantic, and grammatical processes. Language disorders do not segregate into clear subtypes, and there is overlapped among problems in voice, vocabulary, and communication, although some children have difficulties that specifically involve one system of language (Bishop et al., 2017).

Since scores on multiple languages test load together on a single factor, individual variations in language abilities in children are well represented by a multidimensional model. Tomblin and Zhang (2006) discovered that in 6-year-old girls, a single language factor accounted for scores on a variety of tests testing receptive vocabulary (picture identification), expressive vocabulary (providing meanings for spoken words), receptive grammatical abilities, and expressive language usage (grammar completion and sentence imitation).

Klem et al. (2015) discovered that a unidimensional language latent factor (defined by sentence repetition, vocabulary knowledge, and grammatical skills) offered an outstanding match to their data and was highly stable over time. These results are significant because, although language is a dynamic structure, they show that differences in children's language skills can be well represented by a single construct.

Language content is mostly aural in the early years, but as reading instruction starts in the early school years. It is augmented by written forms. As children advance through education, print provides a growing amount of language feedback. While early oral language skills forecast reading progress, later, reading and spoken language form a mutual relationship in which reading experience becomes a source of both new vocabulary and increasingly sophisticated syntactic structures (Hoff, 2013) (Hoff, 2013). Language skills are fine-tuned throughout the school years and continue to evolve during middle childhood and adolescence (Berman, 2007), along with different levels of meta-linguistic awareness.

Dhieni (2008, p. 36) argues that there are several factors that can be used as a measure of a person's language skills which consist of linguistic and non-linguistic aspects. The linguistic aspects include the accuracy of speech, the placement of pressure, appropriate tone, joints, and duration, choice of words, and accuracy of target speech. Early childhood teachers need to know language skills in early childhood. Language in children includes the ability to hear or listen, speak, read, and write. Talking and listening or listening is direct two-way communication activities and face-to-face communication (Patmonodewo, 2000). To develop children's language skills to develop optimally, teachers in schools must be willing to open their horizons and develop creativity in order to create stimulation and appropriate learning activities for children. Before the teacher creates activities to develop children's language skills, the teacher must first have knowledge of the child's growth and development. Planning appropriate language arts activities for young children must begin with understanding children's literacy growth and development. This explains that an understanding of children's language development is important for teachers to develop early childhood language skills (Jalongo, 2014, p. 355).

2.2 *Mind Mapping*

Mind mapping were created by Buzan, Tony Buzan (Tony Buzan, 2007) states that mind mapping is the easiest way to place information into the brain and take information out of the brain. Mind mapping is a way of taking notes that are creative, effective, and will literally "map out children's thoughts. This program is also a natural expression of the workings of your baby's brain, and indeed all the human brains (Tony Buzan, 2005, p. 71). DePorter and Hernacki (2015) add that mind maps are a technique of utilizing the whole brain by using visual imagery and other graphic infrastructure to form spoken. Mind mapping made using words, colors, lines, and pictures make make mind mapping an easy way to dig up information from inside and outside the brain, new way to learn and practice that is fast and powerful, how to take notes that are not boring, and the best way. To come up new ideas and plan projects (Tony Buzan, 2007, p. 4).

Mind Mapping uses two-dimensional graphics, not a list format that is usually used to take notes and is a display in the form of images of ideas that are displayed from the central theme and how these ideas are related to each other. Mind map is a tool used to stimulate the mind (Tony Buzan, 2005). Mind mapping is concept mapping (Novak, J. D., & Gowin, 1984), mapping information to represent ideas in diagrams using the links between the nodes of those ideas. Mind mapping focuses on student perspectives (O"Donnell et al., 2002). Mind mapping is a type of graph that can help organize facts and ideas in a map format that includes the central image, the main themes that emanate from the central image, branches with main images and keywords, and branches that form a related node structure (T. Buzan, 2005).

Mind mapping is a form of graph arrangement characterized using labeled nodes that show concepts and links that show the relationship between concepts (Nesbit, J. C., & Adesope, 2006, p. 415). The middle topics are then linked to important concepts and phrases through branches that can branch into other concepts and phrases. In addition, photos can be used to complement the text, and colors can be used to emphasize points or facilitate ideas displayed in mind mapping (Jones et al., 2012). The way to make mind mapping is to write down the core concepts and then come up with new and similar concepts from the center of the idea. Mind mapping techniques can be used to research a variety of topics and can be applied to all types of writing, including narrative, descriptive, recounting, convincing, and argumentative writing (Riswanto & Putra, 2012).

Mind maps are based on the awareness that the education system focuses on brain power and the left, which includes the use of language, logic, numbers, sequences, seeing details, linear, symbolic and characteristics. This is also a technique that can help learning more effectively, improve how to record information, and support and improve creative problem solving (Alamsyah, 2019). Students who complete a concept map in an educational setting usually position the concept or idea in an oval (or whatever form), arrange the ovals in a logical way that shows the relationships between ideas and connects concepts with lines that do not need to be numbered (Novak, J. D., & Gowin, 1984).

Mind Map or also known as Concept Map involves writing a central idea and thinking of new and related ideas that emanate from the central idea. By focusing on key ideas written in words, they understand themselves, then looking for branches and relationships between those ideas. Furthermore, mapping knowledge in a way that helps to understand and remember new information (Riswanto & Putra, 2012). To use a Mind map effectively, make sure to list words using different colors to add visual impact, and combine symbols and images to stimulate further creative thinking.

Having an organized display of information from the start of the writing process can help some students, because it is easier to convert into drafts, whereas in brainstorming, randomly jotting ideas can cause problems with the structure of the students' text. Mind maps well because their visual design allows students to see the relationships between ideas, and encourages them to group certain ideas together as they continue a story (Alamsyah, 2019). Mind maps work when created in a group, because through discussion, they can generate ideas and make assignments more enjoyable (Riswanto & Putra, 2012).

This mind mapping strategy has been shown to increase student achievement scores (Horton, P. B et al., 1993) and information retention when used as part of instruction (Nesbit, J. C., & Adesope, 2006). The use of mind mapping strategies can help students develop their writing skills while also helping teachers in their writing lessons. This progress not only increases the average score of students, but also increases their enthusiasm, motivation, and ability to express themselves in writing (Padang & Gurning, 2014). Students benefit from a mind map because it forces them to organize information and add images and colors to it. The results of research by Nesbit, J. C., and Adesope (2006) show that since students create two-dimensional images to connect ideas and related concepts, this map has been shown to reduce the cognitive load.

Children can use mind maps to build visual images to aid their learning, but it can also be used as a metacognitive method to help students make concrete connections with material. Mind maps have been used as a reflective instrument, allowing the creation of broader associations with content (Budd, 2004). Teachers can also use mind maps to help vary their teaching strategies and can help attract students' interest better (Nesbit, J. C., & Adesope, 2006). Padang, et al., (2014) research show children develop their ideas using mind mapping, which is an efficient visual design that allows students easily to see the relationships between ideas and, as a result, helps them group ideas linked together. Mind mapping can help people improve memory, brainstorming, learning, and creative skills (San Risqiya, 2013).

Children can use a mind map to strengthen their thinking before writing (Saed, H. A., & AL-Omari, 2014). the ability of children to transfer contexts to write summaries increases rapidly, enabling them to write more thorough and well-organized summaries (Yunus & Chien, 2016). Students' writing ability can be improved by combining mind mapping and organizational patterns (Warsidi et al., 2014). To improve writing includes deaf-sand content, organization, vocabulary, and language use (Yunus & Chien, 2016). The use of collaborative mind mapping and organizational patterns can help students develop healthy attitudes by motivating and assisting them in writing essays (Yunus & Chien, 2016). Mind maps allow students to construct visual images to help them learn more effectively, and they can be used as metacognitive tools to help them make concrete connections between ideas (Jones et al., 2012).

Buzan's mind mapping technique (Williams, 2012) is a technique that uses verbal and symbolic elements to present the relationship between ideas, emotions, and knowledge through non-linear networks or diagrams (Dhindsa et al., 2011) This technique, which started as the method of note-taking, has recently gained popularity due to certain characteristics that aid in the discovery of prior information by promoting successful imagination, retention, and learning. Individuals usually use the left hemisphere to represent their thinking and the right hemisphere to use visual elements in their maps when using this technique (Balim, 2013) as stated in the study (Aykac, 2014), learning is easier and experiences are sustained when all hemisphere is used. The aim of this technique is to

assist understanding by incorporating characteristics such as interpretation and memorization into the diagram (Davies, 2011). It varies from a note-taking approach in that it has no clear boundaries and shows how to encourage natural thought processes (Meier, 2007). As a result, this map is referred to as an associative map (Davies, 2011). In this case, it is known that mind mapping differs from note-taking because of its visual consistency, and explains the relationships and relationships between ideas (Batdi, 2015).

To start creating a mind map, start with a central theme or a picture that illustrates a theme. The basic theme is expanded with sub-branches relevant to the subject, and the relationships between ideas are represented visually. For an effective mind map at this stage, words rather than sentences should be used, and colors can help with visual effects (Riswanto & Putra, 2012). For the most efficient mind mapping, (Paxman, 2011) says that words, colors, and visual displays can be added to help in the conceptualization and contextualization of the brain's ideas with other ideas. As a result, a developed figure can be compared to a colorful tree, because it connects all the ideas. These maps, which have a tree-like or hierarchical appearance, are designed to account for a variety of issues, such as story flow, main topics, cause and effect relationships, or the direct relationship of ideas to one another. More space is given for core ideas in this structure, while less space is given for supporting ideas (Madu & Metu, 2010). The fact that ideas are placed this way means that the mind map emphasizes the more important ideas. In addition, mind maps provide an opportunity to approach problem solutions holistically, and are considered a learning tool that enables the right and left brains to work (Somers et al., 2014).

3 METHOD

This research is a classroom action research using the Kemmis and Taggart cycle model (Kemmis et al., 2014). This research was conducted at TK Tunas Harapan, Sonai Village, Puriala District, Konawe Regency, Southeast Sulawesi. The subjects of this study were 12 children of TK Tunas Harapan Kindergarten Group B, consisting of eight boys and four girls, and a classroom teacher as an observer. The factors studied and observed in this study were teachers, students, and children's learning outcomes. This research was conducted by providing action or treatment in the form of the application of the mind mapping method to improve the speaking ability of children in group B.

3.1 *Ethical considerations*

Before conducting research on this action, the researcher asked permission from the head of Tunas Harapan Kindergarten first. This is done as part of research ethics so that conflicts do not occur in the future. Furthermore, the researcher was directed by the principal to communicate directly with the group B class teacher, because the research that would be actively involved as collaborative in the research was the class B teacher. At the time of making initial communication with the group B teacher, the researcher explained the mind mapping method as an action to be performed in class. In addition, the researcher also provides an overview of the action research procedures to be carried out, including the timing of the action. This is done so that the implementation of the research does not interfere with

the ongoing learning process. The validity of the data in this study used source triangulation and method triangulation.

3.2 *Classroom Action Research Stages*

This study only achieved the target of learning success after going through two cycles using the stages of the Kemmis and Taggart cycle model. The researcher conducted the research in two cycles, each of which was consisted of four steps: planning, implementation, observation, and reflection.

3.2.1 *Planning*

The activities carried out at the planning stage followed the pattern in Cycles I and II which were discussed with the teacher.

(1) Creating a learning scenario in the form of a Weekly Learning Program Plan and a Daily Learning Implementation Plan for the first cycle at the first meeting, second meeting, third meeting and fourth meeting, referring to the child's speaking ability through mind mapping.

(2) Prepare the tools and materials needed in class.

(3) See sheet for teacher and child activities as a reference to see the level of effectiveness of the learning process as planned.

(4) Providing an evaluation tool to see the improvement of children's spoken language skills through mind mapping.

3.2.2 *Actions / Implementation*

This stage is an implementation that has been made in the form of implementing learning according to the concepts and scenarios written in the Daily Learning Implementation Plan which is contained in the planning stage.

3.2.3 *Observation and Evaluation.*

Observation activities are carried out at every meeting while evaluation activities are carried out at the fourth meeting using the observation sheet that has been prepared.

3.2.4 *Reflection*

Things obtained in the observation and evaluation stage are collected and analyzed to find out the weaknesses or deficiencies that occur at each meeting in a cycle that will be corrected in the next cycle.

3.3 *Data Collection Technique*

The data in this study are quantitative data and qualitative data obtained through guidelines in the form of teacher and observation sheets in learning and obtained through student instrument / evaluation sheets during learning. Sources of data in this study were

children of Tunas Harapan Kindergarten, who was registered in the even semester of the 2019/2020 Academic Year. So that the primary data source in this study were students of Tunas Harapan Kindergarten who was involved in the research. This study is voluntary, so that participants in the study may resign at any time, in this case if the child is not allowed by the parents to be involved in the study, they may resign from this study.

The technique of collecting data uses observation sheets, to see the learning implementation process carried out by the teacher and uses an assessment in the form of a checklist and comments by the teacher. Observations were made directly by the researcher during the research implementation. The researcher observed the behavior displayed by the children, both in the classroom during the process of implementing the action or when the children were playing outside the classroom with their friends.

Observations are focused on the application of the mind mapping method and the development of language skills that appear in each research cycle. Interviews with teachers were conducted by questions and answers to obtain information about the child's speaking development. The interview technique was carried out to gather information from the group B teacher regarding the child's speaking ability, before the implementation of the action, during the implementation of the action and after the implementation of the class action. Document studies are conducted to study and retrieve teacher documents in learning activities, namely curriculum documents, annual programs, weekly learning program plans and a daily learning implementation plan for teachers in Tunas Harapan Kindergarten. Researchers studied documents owned by the teacher as part of the learning tools used as guidelines when the teacher taught in class. This document study was conducted so that this action research was in accordance with the applicable curriculum and could be carried out in line with the learning that had been previously designed by the teacher.

3.4 *Data Analysis*

The data analysis technique used in this study is to use descriptive analysis which is intended to provide an overview of improving children's speaking skills through storytelling methods using mind mapping media. In analyzing data and assessing each indicator of performance aspects, the researcher refers to the guidelines for granting assessments in Kindergarten education units, namely by qualitative assessment or by giving a value in the form of symbols such as: * = Not Developed, ** = Beginning Developing, *** = developing according to expectations, **** = developing very well.

4 RESULT AND DISCUSSION

4.1 *Result*

4.1.1 *Cycle 1*

The analysis of the results of observations on teacher teaching activities consists of 13 observed aspects that must be achieved by the teacher. In cycle I, the aspects achieved by the teacher reached 61.5%, with details of 13 aspects, only eight aspects of the activities

were carried out, such as (1) the teacher prepares children to learn. (2) The teacher conveys the theme and lessons. (3) The teacher awakens children's learning motivation by showing the media to be used. (4) The teacher introduces learning themes / sub-themes using mind mapping. (5) The teacher gives the opportunity to children to express their opinions through the mind mapping lesson that is delivered. (6) The teacher monitors and provides guidance to children during learning activities. (7) The teacher provides conclusions on the activities undertaken. (8) The teacher directs children to sing and chant before returning home. There were five aspects of activity implementation with a percentage of 38.5%, such as (1) The teacher gave appreciation related to the teaching / learning sub-themes. (2) The teacher asks each student to give their ideas about mind mapping learning. (3) The teacher asks the child to tell the theme / sub-theme that has been learned. (4) The teacher provides an evaluation or reflection. (5) The teacher provides further action to the child. More details can be seen in the chart in figure 1.
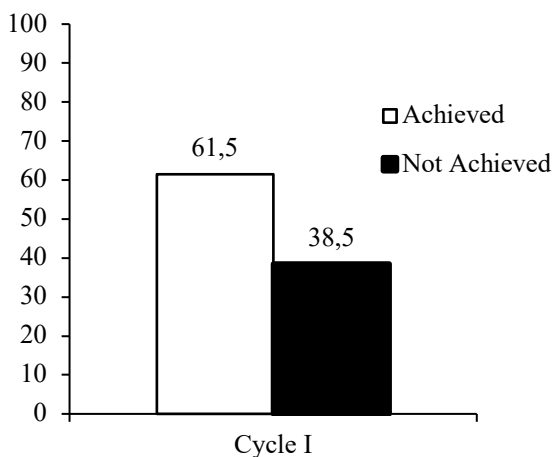

Figure 1. Graph of Results of Cycle I Teacher Teaching Activities

There are six aspects that are not implemented with a percentage of 46% with details such as (1) Children pay attention to the teacher when giving appreciation related to learning themes / sub-themes. (2) Children can express their opinions through mind mapping learning that the teacher brings. (3) Children can give their ideas about mind mapping learning. (4) The child can tell the learning theme / sub-theme that has been learned. (5) The child conducts evaluation and reflection with the teacher about the learning activities that have been carried out. (6) Children pay attention to the follow-up actions that the teacher gives.

Observations from the results of learning activities using the children's observation sheet consist of 13 aspects that are observed and must be achieved by the child. However, only seven aspects or 54% was achieved, such as (1) Children prepare to learn. (2) Children pay attention to the teacher when delivering learning themes and objectives. (3) Children are enthusiastic when the teacher provides motivation to learn using mind mapping. (4) The child pays attention to the teacher when introducing the-ma / sub-theme learning using mind mapping. (5) Children can learn quietly. (6) The child listens to conclusions

about the activities that have been carried out. (7) The child hears the teacher's instructions to sing and chant before going home. More details can be seen in the graph in figure 2.
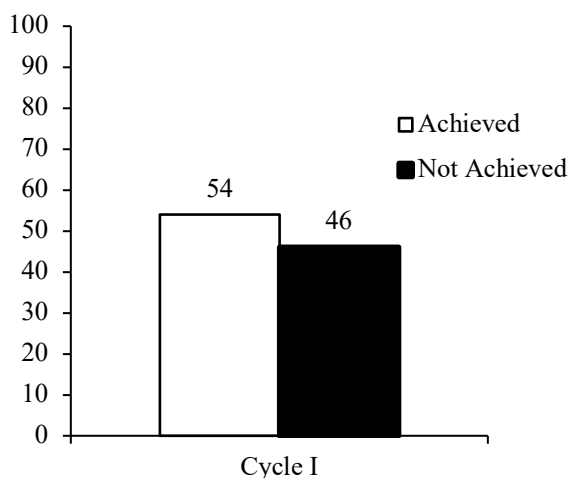

Figure 2. Graph of Learning Activity Results of Cycle I Students

Based on the results obtained (in Table 1), classically activities to improve children's speaking skills through the application of the mind mapping method, most of the children could carry out activities well, namely 66.6%. The child gets a score of 'developing very well' and 'developing according to expectations' has not yet reached the set performance indicator, namely 85%. Therefore, teachers and researchers discuss what deficiencies are the implementation of the first cycle of action to be implemented in cycle II.

Table 1. Classical Value in Cycle I

Category	Amount	(%)
Very Well Developed	5	41,6%
Develop according to expectations	3	25%
Start Developing	3	25%
Undeveloped	1	8,4%
Amount	12	100%

4.1.2 Cycle II

The analysis of the results of observations on teacher teaching activities consists of 13 observed aspects that must be achieved by the teacher. The second cycle of the aspects achieved by the teacher reached 92.3%, with details of 13 aspects, there were 12 aspects that were carried out, such as (1) The teacher prepares children to learn. (2) The teacher conveys the theme and lessons. (3) The teacher gives appreciation related to the learning theme / sub-theme. (4) The teacher awakens children's learning motivation by showing the media to be used. (5) The teacher introduces learning themes / sub-themes using mind mapping. (6) The teacher gives the opportunity to children to express their opinions through the mind mapping learning that is delivered.

(7) The teacher asks the child to tell the theme / sub-theme that has been learned. (8) The teacher provides an evaluation or reflection. (9) The teacher provides further action to the child. (10) The teacher monitors and provides guidance to children during learning activities. (11) The teacher provides conclusions about the activities carried out. (12) The teacher directs the children to sing and say prayers before going home.

There is only one aspect that is not implemented with a percentage of 7.7%, the teacher asks each student to give his idea about mind mapping learning. More details can be seen on the chart in figure 3.
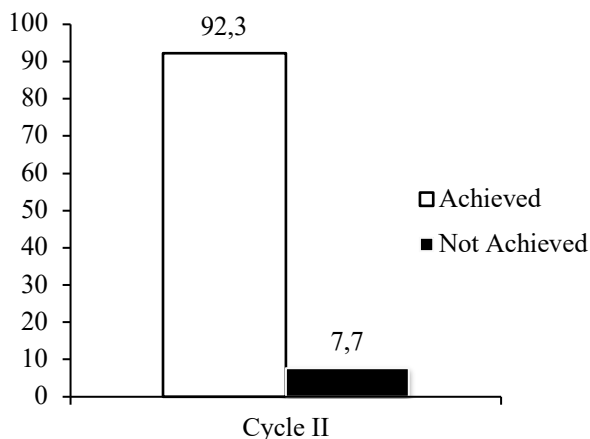

Figure 3. Graph of the Results of Cycle II Teacher Teaching Activities

In the learning process of cycle II, the children's learning activities were observed using the sheet of children's learning activities consisting of 13 aspects that were achieved, but what was achieved was 85% with details of 13 aspects, there were 11 aspects that were carried out such as, (1) Children prepare to learn. (2) The child pays attention to the teacher when delivering learning themes and objectives. (3) The child pays attention to the teacher when giving appreciation related to the learning theme / sub-theme. (4) Children are enthusiastic when the teacher provides motivation to learn using mind mapping.

(5) The child pays attention to the teacher when introducing learning themes / sub-themes using mind mapping. (6) Children can learn quietly. (7) Children can express their opinions through mind mapping learning that the teacher brings. (8) The child can provide ideas about mind mapping learning. (9) The child listens to conclusions about the activities that have been carried out. (10) The child evaluates and reflects with the teacher about the learning activities that have been carried out. (11) The child hears the teacher's instructions to sing and chant before going home. The graph of learning activities can be seen in the graph in Figure 4.
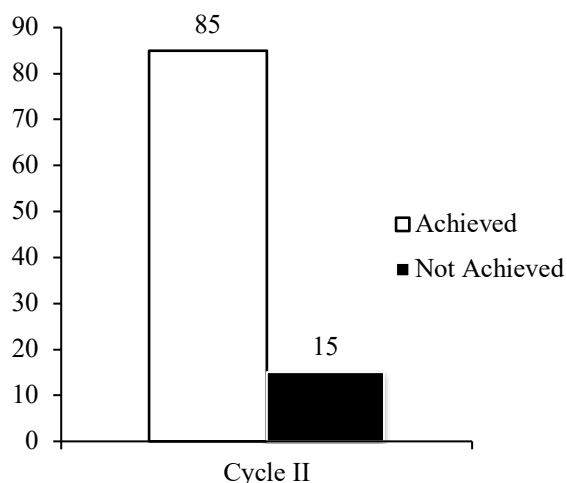
Figure 4. Graph of Learning Activity Results for Cycle II

There were two aspects that were not implemented with a percentage of 15% with details such as (1) the child could tell the learning theme / sub-theme that had been learned, and (2) the child paid attention to the follow-up actions the teacher gave.

Table 2. Classical Value in Cycle II

Category	Amount	(%)
Very Well Developed	5	41,7%
Develop according to expectations	6	50%
Start Developing	1	8,3%
Undeveloped	0	0%
Amount	12	100%

Based on the data on the acquisition of students 'scores shown in Table 2, it can be concluded that classically the acquisition of students' scores in activities to improve the children's speaking skills through the application of the mind mapping method has increased, because the success rate of students is 91.7%. Obtaining develops values according to expectations and 'Very Well Developed', it can be said that most students are considered to have been able to complete the tasks that have been determined according to the assessment indicators in this study, especially in the implementation of cycle II actions.

4.2 Discussion

The things are revised in the research process are the researcher must immediately carry out the preparation and planning carefully, everything is done in the first cycle of action must be examined and corrected again. The indicators to be achieved are that children can ask questions about learning the mind mapping method that the teacher delivers, children can express opinions about the learning. Children mind mapping learning can give ideas to their peers in the form of various sentences. This is because mind mapping requires converting knowledge into a diagrammatic representation of the most relevant key-

words related to the main idea (Farrand et al., 2002). So, information is sorted hierarchically, with the most general information being the center of Mind idea related Mind as the branches. Mind mapping is a tool that can make it possible to develop an understanding of knowledge through the active involvement of children (Willis, C. L., & Miertschin, 2006).

When viewed from the understanding of students starting from the implementation of cycle I of 66.6% when compared to the initial observation stage of research, which only reached 42% and in the action cycle II. It reached a percentage of 91.7%, indicating better results than before, because the determined performance indicators have been achieved, namely at least 85%. So, researchers and teachers agree that this research can be stopped until the second cycle. This is in line with the literature review research conducted, by Chang, et al., (2010) from 1990 to 2007 found that in the changes, process most studied conceptual changes and the mapping of ideas represented in mind mapping. Many teachers believe that the mind-mapping method increases the effectiveness of student learning, so it has broad support.

Based on the results of interviews and preliminary observations, Tunas Harapan Kindergarten teachers show that the children's speaking ability is still relatively low, at the levels of 'starting to develop' and 'not developing' so that it needs to be improved again. Lack of children's language skills is caused by a lack of supporting learning media. Based on the problems faced, the researchers tried to design an activity that was interesting and fun for children to improve children's speaking skills, applying the mind mapping method. Furthermore, researchers together with the kindergarten teacher of Tunas Harapan agreed to collaborate and become partners in this research activity. After that, referring to the semester program, compiling a Weekly Lesson Plan which is then translated into a Daily Learning Implementation Plan. Teachers believe that using mind maps helps them to prepare lessons better and makes them more attractive to students (Keles, 2012).

This research was conducted in two cycles of learning activities, where each group consisted of four meetings with indicators of improving children's speaking ability through the application of the mind mapping method. The indicators to be achieved are children can ask about the types of vehicles that the teacher conveyed. Children can express opinions about the types of vehicles. Children can give ideas to their peers in the form of sentences, children can tell various kinds of vehicles that have studied in the form of an event. In the latest research, children can be strategically involved in learning strategies to process the material to be obtained. Children can learn to make graphs, including concept maps and knowledge maps through pictures that represent interrelated ideas (Karpicke, J. D., & Blunt, 2011). This way of organizing knowledge is considered to help students to learn meaningfully and independently (Chiou, 2008) because it is related to knowledge processing at a deeper level (Nesbit, J. C., & Adesope, 2006). In the initial experiments conducted to test the effectiveness of concept maps (Holley, et al., 1979). Psychology students were trained to transform geological texts into maps following a predetermined structure with nodes (concept) and link (relation). On the knowledge test,

the experimental group outperformed control group participants who were instructed to use their usual way of learning to acquire and organize main ideas but not on retention of details.

The child should learn the text using either self-selected techniques (such as exercises, repetition, and summary elaboration) or mind maps. Withdrawals are measured immediately and a week later. The results showed that memory was comparable in the two groups on the direct test, but that memory was a strong one week later only in the mind map group. The author suggests that these results be a good indicator of the effectiveness of mind mapping in memorizing written material (Farrand et al., 2002). Abi-El-Mona and Adb-El-Khalick (2008) study found the use of mind mapping allows participants to achieve significant results in conceptual understanding and practical reasoning. In addition, mind mapping has been shown to improve children's achievement (Chiou, 2008) dan and in foreign language learning (Chularut, et al., 2004). In real class conditions in different environments Merchie, E., and Van Keer, (2016) investigated the potential of the mind map to stimulate children to learn text and improve performance, finding the same improvement results.

The mind map method can improve learning by ensuring that knowledge is retained and remembered more easily, and to increase creativity (Batdi, 2015). Individuals who try to find fresh ideas about a topic will be able to generate new ideas, which will increase their creative results. On the other hand, it must be remembered that the visual consistency of this map affects retention, a well-prepared mind mapping can work together with visual and verbal intelligence (Mona & Khlaick, 2008). The visual dimensions, key concepts and ideas found on the map allow for the visual of visual and verbal intelligence. Additionally, in terms of individual or group assignments, mind mapping and brain-storming strategies are similar. Serig (2011) defines brainstorming as the process of thinking about ideas that have sensory connections, which is also called mind mapping. Mind Mapping with brainstorming where individuals have more freedom and flexibility in expressing their thoughts when building a mind map. The main difference is that in brainstorming, ideas are articulated orally, whereas in a mind map, ideas are expressed verbally and visually (Batdi, 2015). Mind maps can be defined as a visual and versatile learning tool in these situations. Mind map is a unique method that can help various methods of educational environment.

The purpose of mind mapping is to help children learn, organize, and store as much information as they want, and classify it in a natural way, giving easy and direct access (perfect memory). Olivia (2013, p. 11) notes some of the benefits of mind mapping for children. It helps to concentrate (focus attention) is better at remembering and improves visual intelligence and observation skills. It is trains critical thinking and communication skills and trains initiative and curiosity. It is increase creativity and creativity, make notes and better, summaries better, and help get or come up with brilliant ideas or stories. It is increase thinking and independent speed and save time as best as possible. Help develops yourself and stimulates expression of thoughts, help deal with tests easily and get better grades, organize our thoughts, hobbies and lives, and trains hand-eye coordination. It is

getting more opportunities to have fun, keeps focusing on the main idea as well as all the additional ideas, and helps uses both hemispheres of the brain which makes the child want constantly to learn.

The benefits of the mind mapping method from some of the opinions above are activating all parts of the brain. It helping to show the relationship between separate pieces of information and allowing grouping concepts. It is helping to concentrate (focus attention) and better remembering, improving intelligence visual and observation skills. It is increase creativity and creativity, thinking speed and independence, and train hand and eye coordination. This study has provided new findings and complements previous findings, that the application of the mind mapping method in learning activities can improve children's language skills. Language skills are fine-tuned during the school years and begin to grow through middle childhood and adolescence (Berman, 2007), along with different aspects of meta-linguistic understanding, before adult language stages are achieved.

5 CONCLUSION

Learning activities by applying the mind mapping method to improve children's speaking skills that are designed, compiled, implemented properly and optimally by the teacher at each meeting in the cycle, I and cycle II provide benefits to students in the form of direct and concrete experiences, as well as children's speaking skills. -show very good results. In the implementation of learning, teachers should consider appropriate materials, media, and strategies for students, and teachers are required to always be creative and innovative in carrying out activities that can increase the potential of students. The teacher also assessed that the mind mapping method is very easy and fast to understand so that it is believed that it can be applied to other themes to improve children's language skills.

After carrying out research actions, namely improving children's speaking through the application of mind mapping and seeing the learning process during the research and the results obtained, the researchers suggest the following, (1) Teachers are expected in implementing learning that aims to improve children's speaking abilities done by applying mind mapping. (2) For schools, it is hoped that educators will become creative and innovative teachers in carrying out learning activities for children and paying attention to children's development and needs so that aspects of development children's develop can develop properly as expected. (3) The next researcher is expected to be able to pay attention to the same problem again but with different methods, strategies, and actions to provide new experiences to students.

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