

CHAPTER II

LITERATURE REVIEW

Preschool is a good time to learn English vocabulary. It causes them are easy to understand and remember many things. But, to support it, we need a good way. It causes they are in the playschool era and we need such a game to support their enthusiasm. And now, many games support English skills for children, and one of them is E-dictionary. It does not only consist of words but complete with pictures, sound, animation, etc that makes English learning more effective and fun.

A. Preschool

Preschools are very concrete and literally. They learn through their experiences at home or their environment. They are enjoy being told stories and read to repetition an important way to learn. And based on their social characteristic, they are egocentric that see the world through their own eyes. They are also self-centered that significantly influenced by others, especially mom, dad, teacher, and other significant adults¹. So, the parent, teachers, and others should understand preschool's intellectual and social development. In supporting preschool's development, teachers need 12 characteristics that should apply well to their students in preschool will interest to follow their instruction, they are² :

1. Passion

In many of the studies referenced in the literature, participants singled out “enthusiasm for children” as a key attribute. For the teachers in this study, however, something stronger than enthusiasm makes a truly effective teacher; it is closer to drive. Being an early childhood educator is not always easy. There may be physical and financial challenges, for example. But if you feel that what you are doing makes a difference, that sense of accomplishment can sustain and motivate you.

2. Dedication

¹ Howe, Jolanda. *Characteristic of Preeschool Children*, <https://network.crcna.org/sunday-school/characteristics-preschool-children/2019/08/28/> accessed on May 18th 2020 at 06.30

² Colker, Laura. *Twelve characteristic of effective early childhoodteachers*, https://www.researchgate.net/publication/292062700_/2018/11/21/ accessed on May 15th 2020 at 19.30

Teachers have to be willing to be long-term advocates for improving the lives of children and their families. Respondents in this study believe children need and deserve teachers who can overcome bureaucracy and handle red tape.

3. Willingness to take risks

Successful educators are willing to shake up the status quo to achieve their goals for children. Great teachers are willing to go against the norm. Taking a risk means not settling for no answer if a yes will improve the quality of a child's education. For example, one teacher reports wanting to team-teach her preschool class with a self-contained special education program adjacent to her room. Integration of programs had never been done before at her school, and faculty and administration alike looked at the idea with skepticism. To secure administration approval, the teachers had to conduct research, do a parent survey, and bring in outside experts.

4. Pragmatism

Pragmatism is the flip side of perseverance and willingness to take risks. Pragmatists are willing to compromise. They know which battles are winnable and when to apply their resources in support of children. The important point respondents felt, is that effective teachers understand that by temporarily settling for small wins, they are still making progress toward their goals.

5. Patience

In line with pragmatism is the characteristic of patience. It causes not every child to learn quickly. Some behaviors can challenge even the most effective teacher. Children need a reminder for everything they learn.

6. Flexibility

This is the sixth characteristic linked by study participants to successful teaching. Because teachers have to know about what should they do among their students. We don't know what happens at the next moment in the class. Whether it remains good and conducive or otherwise becomes uncontrollable. So, it is one of the successful ways to be a good teacher.

7. Respect

Respect for children is basic to being a good early childhood teacher. Some identified this characteristic as an “appreciation of diversity.” They described it as not only respecting children of all backgrounds but also as maintaining the belief that everyone’s life is enhanced by exposure to people of different backgrounds who speak a variety of languages. Good teachers create this environment naturally.

8. Creativity

Teachers have to know about creativity. They should have creativity in supportive conditions or lack of learning media. They have to be creative to teach children from diverse backgrounds who might not approach education in the same way. They have to be creative to teach children with differing learning styles who think and learn in different ways. And most of all, they have to be creative to make learning fun.

9. Authenticity

Being authentic means knowing who you are and what you stand for. It is what gives you integrity and conviction. Young children are shrewd judges of character; they know whether a teacher is authentic, and they respond accordingly.

10. Love of learning

Respondents also singled out love of learning. To inspire children with a love of learning, they said, teachers, themselves ought to exhibit this characteristic. Teachers who are lifelong learners send children the message that learning is an important part of life. Several participants felt that being an effective teacher involves seeking out knowledge about recent research on teaching.

11. High energy

Most children respond positively to teachers with high energy levels, valuing their enthusiasm. It causes the class atmosphere to depend on the energy the teacher gives the students. The more positive energy the teacher gives, the more active the class becomes.

12. Sense of humor

Learning should be fun. Children will love their teachers and respect them and be willing to laugh when they are funny and have a good sense of humor. And based on that characteristic, to stimulate preschool intellectual development in language use, we can

apply some strategies to support them, such as teach them some jokes and humor. Because vocabulary understanding is the standard for children to measure their language understanding.

B. The Principle of Teaching Vocabulary

In teaching vocabulary, a teacher has to know about the principle of teaching vocabulary because it can be really helpful to the ESL and EFL program. Some principal in teaching vocabulary that may help the teacher in the teaching and learning process as follows³:

1. Promote Meaningful Talk

Meaningful talk is crucial to language development and children's ability to speak, think, understand, read, write, and communicate. Children learn words by hearing them used in diverse contexts, by asking adults questions about words to clarify their understanding, and by discussing them with peers and teachers.

2. Situate Words in Various Contexts

Providing model sentences that show students how teachers use a new and related word in a specific situation can help them craft their sentences as well as gain additional insights into how a word functions.

3. Use New Vocabulary in Writing

Students can write using words and pictures to demonstrate their knowledge of words' meanings, of figurative language, and connotations, of how words work in diverse situations, and to show relationships and connections between and among words.

4. Build Concepts

Learning words involves more than knowing a definition and how to use a word to show understanding. Effective word learning includes being able to categorize or group words to show the relationship between words and a concept.

5. Make Connections

³Ferlazzo, Larry, *Response: Ten Principles for Vocabulary Instruction*, (http://blogs.edweek.org/teachers/classroom_qa_with_larry_ferlazzo/2015/03/response_ten_principles_for_vocabulary_instruction.html 2015) accessed december 28th 2020

Connections can help learners remember new words. This strategy is especially helpful for English language learners. Encourage students to make as many connections as they can because these connections will construct deeper understanding and support recall.

6. Tap Into Technology

Since technology is an integral part of students' lives, students should use technology to learn words and their multiple meanings, for example Playing word games. Playing word games deepens their knowledge of how specific words are used in texts and nudges students to move beyond contextual meanings to understanding words' multiple meanings and relationships.

C. Teaching Vocabulary

The teaching and learning process usually is an integrated activity.⁴ It means that the teacher can teach vocabulary in context using a certain sentence pattern structure to train speaking skills. So, the teacher can make some simple ways to teach vocabulary, for example: introducing, Modeling, Practicing, and Applying. But, on the other hand, a teacher also has to consider several things in teaching vocabulary, some of them are:

1. Listening Carefully

Listening carefully to the words may be a good option in teaching vocabulary items in a heterogenic classroom. And let the students hear the word in isolation and a sentence. If the sounds of the word have been mastered, the students will hear it correctly with two or three repetitions.

2. Pronouncing the Word

Pronouncing the word enables the students to remember it longer and identify it more readily when they hear or see it.

3. Self-defining Context

The context makes the situation clear, and this, in turn, illuminates the meaning of the new word. This practice saves time and develops an intensive reading habit and better understanding.

4. Antonyms

⁴ Thornbury,S, *How to Teach Vocabulary*, (London: Longman, 2002). P. 13

When one member of a pair of opposites is understood, the meaning of the other can be easily comprehended. This helps the student to understand the different shades of meanings of a word.

5. Synonyms

A synonym may be used to help the student to understand the different shades of meaning if the synonym is better known than the word being taught. Synonyms help to enrich a student's vocabulary bank and provide alternative words instantly.

6. Dramatization

This method can be practiced at ease. It can win the favor of the students as learners like dramatizations and can easily learn through them. Many situations can be dramatized or demonstrated such as Sing a song.

7. Pictures and Drawings

Pictures of many types and colors can be used successfully to show the meaning of words and sentences. Handmade pictures can also be used as there is no need to be very artistic.

8. Conclusion

An efficient language teacher can use selected vocabulary activities or can use integrated activities. All this depends upon the ability and level of understanding and interest of the learners. There is no sure-fire remedy or method to enhance vocabulary in a day or two. A student's vocabulary bank can be enriched on a gradual basis and one should always show keen interest and enthusiasm in finding, learning, and understanding new words.⁵

D. Principles of Educational Media Development

More awareness of the importance of media that assist the learning is already being felt. Management of learning media has been very necessary. Growth in the world of education is very high. Changes from the library that emphasizes the provision of print

⁵ Mehta, K. *Vocabulary Teaching: Effective Methodologies*, (India: TESL Journal, 2015)

media and books that sometimes cannot solve the problems that often occur in education, make demands on the media that is more practical and much-needed varied widely. Besides, with the ever-expanding advances in communications and technology, as well as the discovery of the dynamics of the learning process, the implementation of educational activities and teaching are increasingly demanding, and obtaining media education varies widely as well.⁶

Because that learning is an internal process in humans, then the teacher is not the only source of learning, but it is one component of learning resources according to AECT (Association for Educational Communications and Technology) six types of learning resources can be used in the process of learning⁷, that is:

1. Curriculum and subjects
2. Persons; also includes teachers, parents, experts, and as his.
3. Material; A format used to store the learning message, such as textbooks, textbooks, modules, video programs, movies, OHT (overhead transparency), program slides, props, and so on (so-called software).
4. Tool; Hardware to present the material in item 3 above. In it covers projector OI-IP, slides, film tape recorder, and so forth.
5. Technique; The procedures that people use in providing learning to achieve learning objectives. In it includes lectures, games/simulations, discussion, role play, and so forth.
6. Background (setting) or the environment; including the arrangement of space, lighting, and so on. Materials and tools that we know as software and hardware are nothing but media education.

E. Teaching Preschool's Vocabulary

Vocabulary learning is one of the major challenges for many learners as it is an essential part of foreign language learning. Vocabulary has a role that is related to phonology and grammar to help the students master the English language skills (Listening, Reading, Speaking, and Writing). Here, a student's vocabulary can divide into two kinds, namely

⁶ Haneefa, Mohamed and Syamili, *Use of Information and Communication Technology by Visually-Impaired Students*, (Kerala: Journal of Library and Information Technology, 2014). P.344

⁷ AECT (Association for Educational Communication and Technology). *Evaluating Media Programs District and School*, (Washington, D.C : The Association, 1976.)

active vocabulary and passive vocabulary⁸. Active vocabulary refers to the word which the students can understand and pronounce correctly and can use them in speaking or writing used by a person to encode their ideas. Passive vocabulary refers to the words in which the students can recognize and understand while they are reading or listening to some speaking, but they do not use the word in speaking or writing.

Related to vocabulary, Learning English vocabulary is one of the most important tasks facing English learners, and that learners with limited knowledge of words are likely to experience failure in their professional and academic settings⁹. On the other side, if Preschool does not understand to a good extent the language is spoken, they may lose the confidence they need to continue with their studies enthusiastically. The reason is clear, because it is fact that vocabulary is the heart of language¹⁰, and vocabulary has been one of the most commonly taught language areas through technology in recent years. So, vocabulary learning is undeniable¹¹.

1. Principles of Vocabulary Instruction

So, in line with the importance of Teaching vocabulary for Preschool, I tried to search and find in many respected researchers in literacy from Blachowicz & Fisher (2010), Graves (2009), Marulis & Neuman (2010), Neuman (2011), Stahl & Kapinus (2001) and Vacca et al (2012) that identify several principles of effective vocabulary instruction, and they provide insight and direction to teachers to use effective practices that improve students' vocabulary development. A careful examination of the various principles reveals several common principles of effective vocabulary instruction:

a. Vocabulary should be taught directly.

To ensure success in learning to read, instruction should include direct teaching of vocabulary¹². And, after reviewing a considerable number of studies related to

⁸ M, Finnocchiaro, *English as a second language (from theory to practice)*, (New York: Publishing Company, 1974). P.73

⁹ Nushi, Musa and Homa Jenabzadeh. *Teaching and learning Academy Vocabulary*. (California Linguistic Notes, 2016), Vol 40 (2)

¹⁰ Eslahcar, M. & Khodareza, M. *The effect of using vocabulary flashcard on Iranian pre-university students' vocabulary knowledge*. (Iran: International Education Studies, 2012). P. 134-147.

¹¹ Mansouri, Vahid, *Vocabulary Instruction: Software Flashcard vs Word Clouds*, (Iran: Australia International Academic Center, 2015). P. 41

¹² Kamil et al. *Improving adolescent literacy: Effective classroom and intervention practices: A practice guide*. (Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education, 2008)

teaching vocabulary, that direct vocabulary instruction has a positive impact on reading achievement¹³. And in another research, Marulis and Neuman (2010) found that direct and explicit instruction fosters vocabulary knowledge in students better than implicit vocabulary instruction¹⁴.

b. Vocabulary instruction should be enriched with a word-rich environment.

A high-quality language environment is an environment that provides opportunities to children to expand their vocabulary knowledge¹⁵. It is fact that vocabulary is the first skill that children need for their language.

c. Vocabulary instruction should be meaningful and engaging.

Teaching vocabulary must be related to students' experiences and real lives because it helps students to appreciate the vocabulary they study. The key feature of vocabulary instruction has relation with new words in the students' background knowledge to make learning vocabulary meaningful. Besides, vocabulary instruction must be planned carefully to be interesting and meaningful to students to keep them engaged.

d. Vocabulary instruction should introduce useful words to students.

The type of words teachers select is as significant as the methods that teachers use to deliver the words¹⁶. And also, based on Neuman (2011) on his research indicates that identifying the words that are useful to children is important to achieve high-quality vocabulary instruction¹⁷.

e. Vocabulary instruction should draw on several teaching strategies.

¹³ Butler, et al. *A review of the current research on vocabulary instruction*. (National Reading Technical Assistance Center, RMC Research Corporation, 2010)

¹⁴ Marulis, L. M., & Neuman, S. B. *The effects of vocabulary intervention on young children's word learning: A meta-analysis*. (Review of Educational Research, 2010), 80, 300-335.

¹⁵ Jackson, et al. *National evaluation of early reading first: Final report to Congress*. (Washington, DC: Institute of Education Sciences, U.S. Department of Education, 2007).

¹⁶ McKeown, et al. *Direct and rich vocabulary instruction needs to start early*. In E. J. Kame'enui & J. F. Baumann (Eds.), *Vocabulary instruction: Research to practice*. New York, NY: Guilford Publications, 2012) pp. 34-50

¹⁷ Neuman, S. B. *The challenge of teaching vocabulary in early education*. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research*. (New York, NY: Guilford Press, 2011) pp. 358-374.

There is no guaranteed strategy or a single effective method of teaching vocabulary. Therefore, to ensure the growth of vocabulary development during vocabulary instruction time, teachers have to use various effective strategies of vocabulary instruction suggested by literacy experts and have to use strategies that fit the needs of all students.

f. Vocabulary instruction should be enhanced by using technology in classrooms.

Using technology to teach vocabulary is one of the features of effective vocabulary instruction. Many researchers indicate that using technology in classrooms increases positive response in children and improves their vocabulary knowledge, comprehension, and other literacy skills¹⁸.

g. Vocabulary instruction should assess students' vocabulary progress frequently.

Assessment is the process of gathering, synthesizing, and interpreting information about the student's performance and progress to aid classroom decision making¹⁹. Assessing students helps teachers to form suitable instruction that meets the students' learning needs and provides more realistic feedback about students' successes and challenges, and Assessment must be implemented to serve as guidance for vocabulary instruction²⁰.

These principles are provided as guidelines for effective vocabulary instruction. Therefore, teachers must be aware of the various vocabulary instruction principles and they must consider them as a foundation to provide effective practices for their students. Especially for preschool, we believe that it is hard to understand and remember the vocabulary even though they apply it every day, especially in English. It causes preschool age are egocentric. According to Neuman in her book "The Magic Word: Teaching Vocabulary for Early Childhood Classroom" said that Children learn new words by predicting relationships between objects and sounds²¹.

¹⁸ Cohen, V. & Cowen, J. *Literacy for children in an information age: Teaching reading, writing, and thinking.* (Scottsdale, AZ: Holcomb Hathaway, 2011)

¹⁹ Epstein, et al. *Preschool assessment: A guide to developing a balanced approach.* (New Brunswick, NJ: National Institute for Early Childhood Research, 2004)

²⁰ Blachowicz, C., & Fisher, P. *Teaching vocabulary in all classrooms (4th ed.).* (Columbus, OH: Pearson-Merrill Prentice Hall, 2010).

²¹ Neuman, Susan and Tanya S. Wright, *The Magic Word :Teaching Vocabulary for Early Childhood Classroom.* (America Educator, 2014) P.7

2. Practices of Vocabulary Instruction

The practices used by teachers should ensure the delivery of instruction that enhances children's vocabulary growth. It can be seen from several recent research that focuses on the practices of vocabulary instruction, such as from Blachowicz & Fisher (2011), McKeown et al (2012), and Stahl & Stahl (2012). They emphasize the importance of delivering vocabulary instruction in primary grades explicitly and directly, selecting words that benefit students' learning, using various strategies to teach vocabulary, and assessing children's vocabulary knowledge to plan effective instruction that meets their learning needs.

a. Explicit Vocabulary Instruction

Recent experimental from Goodson et al. (2010) examined a vocabulary instruction program to see whether it improves the expressive vocabulary of kindergartners and the result is the research provides evidence that rich and explicit vocabulary instruction increases children's vocabulary learning. This program was planned to be built around three components: (a) Explicit Vocabulary Instruction by choosing target words that align with the curriculum being taught in the school; (b) Interactive Book Reading by encouraging teachers to ask questions while reading aloud; and (c) Adult-Child Conversations through using or introducing new words. After implementing this program with 1,300 kindergarten students in 64 schools, Goodson and his friends found that the kindergarten students who received the program gained more vocabulary and performed better on expressive vocabulary tests than students in control schools.

Another recent study conducted by Coyne et al. (2010) demonstrated the efficacy of direct vocabulary instruction in early primary grades. In this study, kindergarten children were provided with 36 half-hour lessons over 18 weeks. In each lesson, three words were selected to be directly taught during storybook reading and extended discussion with rich activities. The results from the study showed that children who received direct vocabulary instruction had a greater gain in listening comprehension and receptive vocabulary compared to a control group who only received implicit instruction.

These findings clearly show that implementing explicit vocabulary instruction supports the growth of vocabulary in kindergarten and primary grade children. The evidence from these findings encourages teachers and educators to understand the significant role that explicit instruction plays in fostering students' vocabulary growth.

b. Selecting Words Worth Teaching

Teachers know that children need to learn several new words that enhance their reading achievement; however, some teachers might not know which words they should introduce²². To provide guidelines for teachers to select appropriate words to be taught, researchers in literacy provide productive strategies to select words by classifying words into levels or groups. And on his research, He found that all words that students encounter tend to fall into three categories, and these categories can provide guidance for teachers to determine which words to teach. The first category includes the basic and high-frequency words such as cat, red, and house; the second category includes low-frequency words that are used with specific applications, such as crustacean or nova; the third category includes sophisticated words frequently encountered by informed language users, such as consistent and representative. So, He recommends English and Language Arts teachers focus on sophisticated words, while content area teachers should focus on low-frequency words.

Another widely used strategy to select the most productive words to be taught in his research was proposed by Beck et al. (2002). The authors categorize words into three tiers. Tier one contains words that are more frequent and familiar to children. Tier two represents complex concept words that are essential when using mature and academic language and frequently appear in spoken and written language. Tier three words are less frequent and limited to specific fields of study. Beck et al. (2002) recommend that teachers focus primarily on tier two words since those words are most likely to be ones with which students need help and which students should be taught directly. Additionally, Armbruster et al. (2006) classify children's knowledge of word meanings into three levels. The first one is "unknown" which includes words

²² Alenezi, Huda, *Vocabulary Instruction Practices of Highly Effective Kindergarten Teachers*. (University of Arkansas, Fayetteville, 2014) p. 18

that are completely unfamiliar to the child; the second is “acquainted” which refers to words that children have some basic ideas about; the third one is “established” which includes words that children can recognize immediately and use frequently. He expressed the view that for children to fully understand the vocabulary, they need to acquire an established level of word knowledge.

Besides, Biemiller (2010) found and suggested a strategy that helps teachers to find the words to teach during vocabulary instruction. He divided the meanings of words into three categories: (a) word meanings known by most children by the end of second grade, which would not require instruction in the primary grades; (b) word meanings known by few children by the end of second grade, which is not worth teaching because they are not useful to children, and children may not encounter them in their future reading; and (c) word meanings known by some children by the end of second grade, which are worth teaching in primary grades and more likely known by children with large vocabularies, while less likely known by children with smaller vocabularies. This strategy helps teachers to focus on the high-priority meanings for children that promote their vocabulary growth and decrease the gap in vocabulary size among children. So, teachers should select a challenging book that contains words at least half of the class does not know. He believes that these kinds of challenging books enhance children’s vocabulary learning.²³

c. Strategies for Vocabulary Instruction

Teachers have to provide students with a variety of vocabulary experiences by using different strategies that foster students’ reading and writing skills. Research has identified many strategies to teach vocabulary. For example, teachers can implement reading aloud to enhance children’s vocabulary growth. According to the International Reading Association (IRA) and the National Association for the Education of Young Children (NAEYC) (1998), reading aloud to children is considered the best strategy teachers can use to improve language and vocabulary knowledge. Reading aloud to children has many benefits, such as expanding children’s vocabulary, developing their knowledge, engaging them in active

²³ Biemiller, A. *Teaching vocabulary in the primary grades: Vocabulary instruction needed*. In E. J. Kame'enui & J. F. Baumann (Eds.), *Vocabulary instruction: Research to practice*. (New York, NY: Guilford Publications, 2012). pp. 34-50

processing of the text, developing phonemic awareness and knowledge of letter names and sounds, and increasing their motivation in reading²⁴. This suggests teachers of young children should focus on reading aloud as a powerful method to teach vocabulary.

Another strategy teachers can use to foster children's vocabulary knowledge is repeated reading. Literacy experts encourage teachers to read the book aloud multiple times because of its benefits to children's vocabulary growth. In their experimental research, Biemiller and Boote (2006) clearly state that "kindergarten children gained 23% of instructed word meanings when stories were read four times but only 16% when stories were read twice" (pp. 50-51). Moreover, Graves (2008) notes that reading the book several times provides an opportunity for children to use the words actively with more understanding.

Besides, Carnine et al. (2010) identified three procedures to teach vocabulary during the beginning reading stage. The first procedure is modeling. The teachers use modeling when it is difficult to use language to explain the meaning of a new word. Modeling works to convey the correct names for everyday actions and items with which students are likely already familiar, even if they do not know the right word. Modeling is considered the simplest and most powerful approach that kindergarten teachers can use to teach vocabulary²⁵. The second procedure is synonyms. The teachers can use synonyms when students know words that can explain the meaning of a new word. For example, the teacher can explain the word "observe" with a known word like "see." The third procedure for teaching vocabulary is definitions. The definitions are used when students have adequate vocabulary size to understand long explanations for new words and when it is difficult to explain the words using a synonym.

Teachers also can provide examples of the new vocabulary, use context clues, present pictures of new words, support learning with wordplay, and provide

²⁴ Coyne, et.al. *Vocabulary instruction for young children at risk of reading difficulties: Teaching word meanings during shared storybook readings*. In E. J. Kame'enui & J. F. Baumann (Eds.), *Vocabulary instruction: Research to practice* pp. 51-71 (New York, NY: Guilford Publications, 2012)

²⁵ Lane, H.B., & Allen, S. *The vocabulary-rich classroom: Modeling sophisticated word use to promote word consciousness and vocabulary growth*. (*The Reading Teacher*, 2010), 362–370.

opportunities to use newly learned words²⁶. Teachers must be aware of a variety of strategies that can be used to enhance children's vocabulary development.

d. Technology and Vocabulary Instruction

Technology tools such as computers, iPods, interactive whiteboards, electronic games, the Internet, and electronic books can promote effective learning and development when they are used intentionally by educators (National Association for the Education of Young Children [NAEYC], 2012). Today many classrooms in the United States are provided with technology tools available for students' use (Rief & Heimburge, 2007). According to the National Center for Education Statistics (NCES) (2010), in 2009, 97 % of teachers had one or more computers located in the classroom every day and access to the Internet had increased from the previous years to include 93% of the classroom computers. Also, an increasing number of teachers reported having different technology devices, such as projectors, interactive whiteboards, and digital cameras, available as needed or in the classroom every day (NCES, 2010). With the increase of technology access in the classrooms, teachers have begun to integrate technology in their lesson plans and are more aware of the importance of technology to create meaningful learning for children (NAEYC, 2012). Besides, research indicates that using technology to teach reading and writing specifically makes a powerful difference in children's literacy development (Vacca et al., 2012), and, particularly, enhances their vocabulary learning (Blachowicz, Fisher, & Ogle, 2006). Several different technologies support teaching vocabulary in the classroom; some examples include:

1. Electronic books

An electronic book or e-book is a digital version of a book that is being displayed on a computer or handheld device such as a laptop or cell phone. The use of ebooks has increased in recent years and there are many advantages of using them in the classroom: (a) the information in an e-book can be searched easily; (b) e-books take up little space; (c) hundreds of e-books can be stored on one device or CD-ROM, and (d) many e-books are available for free on the

²⁶ Christ, T., & Wang, X. *Bridging the vocabulary gap: What the research tells us about vocabulary instruction in early childhood*. (Young Children, 65(4), 2010) p. 84-91.

Internet. Many ebooks provide color illustrations and audio features that enhance children's motivation to read or listen to text more, thus supporting their vocabulary knowledge.

2. Software programs

In recent years, publishers have provided many innovative software programs that support the reading and writing skills of children. Today, teachers can enrich the classroom by using highly interactive multimedia CD-ROM software that meets their learning goals. According to McManis and Gunnewig (2012), when teachers support children's learning with appropriate software programs in literacy, children will make greater gains in learning and literacy development. Many software programs are based on motivation and interaction that engage students with new vocabulary, concepts, and literacy skills where students can practice and reinforce new word meanings

3. Educational games

Play is central to children's development and learning; play in learning enhances children's creativity and imagination (NAEYC, 2012). Using educational games is fundamental in the classroom. The educational games help students to practice new skills, review word meanings and reinforce literacy skills in a fun way. Many commercial programs for wordplay are available; for example, some educational games ask children to associate the vocabulary words with visual images and create a crossword or semantic mapping for vocabulary²⁷.

4. Internet

The Internet is a powerful resource for teachers to look at recent research on vocabulary instruction. Many lesson plans, activities, and teaching ideas are available on the Internet for free. Also, teachers can download many educational games and software programs and use them in the classroom.

5. Video

Many studies provide evidence of the importance of using videos as visual tools to promote literacy and vocabulary instruction in classrooms. For example,

²⁷ Cohen, V. & Cowen, J. *Literacy for children in an information age: Teaching reading, writing, and thinking*. (Scottsdale, AZ: Holcomb Hathaway, 2011).

Xin and Rieth (2001) investigate the use of video to enhance vocabulary knowledge and comprehension. The researchers divided participant students into two groups. One group received word meanings instruction with video while the other group was taught using traditional instruction without using video technology. The findings show that students in the video instruction group made significant gains in the number of vocabulary words learned compared to those in the nonvideo instruction group.

6. Smartboard

Smartboard is a flexible teaching and learning tool. Teachers can use a Smartboard with educational software programs and activities to share them with students. With a Smartboard, teachers can reach students with different learning styles and engage students in learning.

Technology can be used as a powerful learning tool to enhance students' literacy skills. Educational technology plays an important role in children's learning of literacy when it is based on recent research, appropriate to children's age and ability, and aligns with lesson plans and activities' goals. So based on that reason, We need a different model to give a good understanding of vocabulary to the Preschool. And one of the models is Waterfall.

3. Assessing Students' Vocabulary Development

Investigating students' strengths and weaknesses in literacy help teachers to plan appropriate whole-group, small-group, and individual instruction. Reutzel and Cooter (2011) identified five principles of literacy assessments that help teachers remain focused, systematic, and purposeful in their teaching of literacy²⁸.

First, literacy assessments should help teachers to discover where students are in reading development. Teachers must focus on what students can do, not what they cannot do; when the teachers gather the assessment information for a student, the teachers will be able to plan lessons and activities that meet the student's learning needs.

²⁸ Reutzel, D. R., & Cooter, R. B. *Strategies for reading assessment and instruction: Helping every child succeed (4th ed.)*. (Boston, MA: Allyn and Bacon, 2011)

Second, literacy assessment should inform instruction. Effective teachers cannot begin teaching until they have sufficient knowledge about the reading ability of students. Assessments must help teachers avoid teaching the literacy skills that students already know and avoid skills that are beyond their ability. This process will ensure not wasting instructional time.

Third, assessment tools should be prepared in advance. Teachers have to identify the appropriate assessment tools for students. There are many assessment tools to assess reading and writing, such as benchmark skills, audio recorder, and observation checklists; therefore, careful preparation of these different tools helps teachers to use them effectively.

Fourth, students' assessment results can be analyzed by involving an approach called "if-then thinking." After gathering the assessment results for each student, teachers can analyze the findings of the assessments by using if-then thinking. The purpose of this approach is to predict which reading skills the student will learn next. For example, if the results from the assessment of phonemic awareness indicate that the student can count the number of syllables in words, then he or she is ready to learn using the picture box sound counting strategy. This approach of analyzing helps teachers to translate the results of assessments into effective lesson plans.

Finally, assessment should be an ongoing part of instruction. Assessment should not be given only at the beginning of the year or at the end of the year; instead, assessment should take place in daily teaching and learning. The ongoing assessments help teachers gain more knowledge of students' progress in literacy development and plan effective instruction.

To plan effective vocabulary instruction in classrooms, the first step teachers need to implement is to determine students' vocabulary knowledge. There are four types of formal literacy assessments teachers can use throughout the school year: screening, diagnostic, progress monitoring, and outcome assessment²⁹. The screening assessment, usually done at the beginning of the school year, is a first step in identifying children who are at risk and need further support and intervention. The diagnostic assessment allows teachers to gain in-depth information about students' literacy skills. The progress

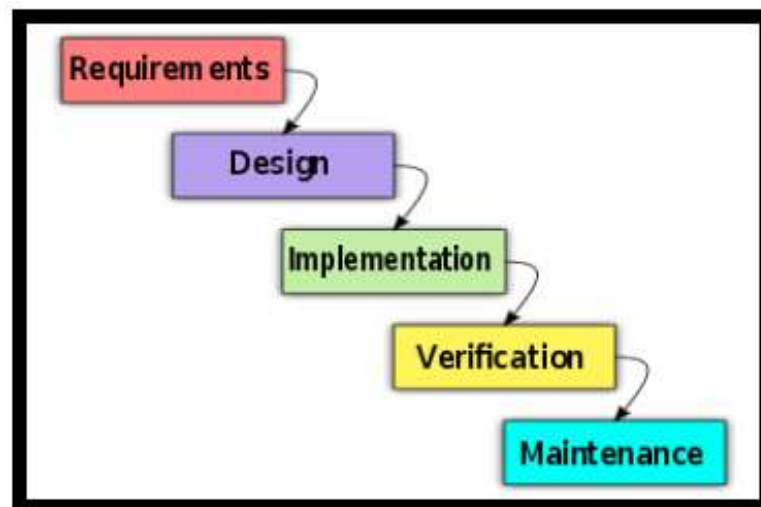
²⁹ Carnine, et. al. *Direct instruction reading. (5th ed.)*. (Upper Saddle River, NJ: Pearson, 2010)

monitoring assessment helps teachers to determine the students' ongoing progress and their learning levels. The outcome assessment is usually done at the end of the school year to determine the students' achievements and check for the effectiveness of the instruction provided.

Besides using formal assessments, teachers should use informal assessments to provide a complete picture of students' vocabulary knowledge (Schumm, 2006). A widely used informal assessment is observation; teachers should regularly observe students determine their reading, writing, speaking, and listening skills and document their progress during the year. For example, during observation, teachers can use running records or checklists to record a student's understanding of the words while reading by asking questions about the meaning of the words in the passage context (Rog, 2011). Assessments enable teachers to demonstrate their students' growth over time and develop a better sense of what students need to succeed (Tomlinson, 2003).

F. Waterfall

The Waterfall model is a software development process sequentially, where the process continues to flow from top to bottom (like water plunge) through the Requirements phases, Design (design and modeling), Implementation (implementation), Verification (testing), and Maintenance³⁰.



³⁰ Wahyu, Putra Dian. *Game edukasi berbasis android sebagai media pembelajaran untuk anak usia dini*. (JIMP - Jurnal Informatika Merdeka Pasuruan, 2016) Vol.1, No.1.

Figure 2.1 Waterfall models

1. Requirement.

This step is an analysis of system requirements. Data collection at this stage can do a study, interview, or literature studies. Some researchers will dig up as much information as the number of users that will create an application/program that can do the tasks desired by the user.

2. Design

The Design Process will translate the requirements to a requirement software design that can be estimated before it is implemented. This process focuses on procedural details (flowcharts & diagrams), architecture software, interface representation.

3. Implementation (Application)

This stage is a real step in working on it a system. In the sense that the use of computers will be maximized in this stage. That is the stage where the overall design is converted into a coding program. the program code generated is in the form of the following modules will be integrated into a complete system to ensure that Software requirements have been met.

4. Verification (integration & testing)

This stage might be said to be final in the process of making a system. That is the verification phase by the user. The user will test whether the application that has been made is by the wishes of the user. This stage is final in making the program, but not the development method program.

5. Maintenance

The final stage of system development in the Waterfall model is maintenance which includes installation and repair processes according to the system the wishes of the user or by the employment contract.

G. MIT App Inventor

MIT App Inventor is a web application integrated development environment originally provided by Google and now maintained by the Massachusetts Institute of Technology (MIT). It allows newcomers to computer programming to create application software(apps) for two operating systems (OS): Android (operating system)|Android, and

iOS, which, as of 8 July 2019, is in final beta testing. It is free and open-source software released under Multi-licensing dual licensing: a Creative Commons Attribution ShareAlike 3.0 Unported license, and an Apache License 2.0 for the source code³¹.

It uses a graphical user interface (GUI) very similar to the programming languages Scratch (programming language) and the StarLogo, which allows users to drag and drop visual objects to create an application that can run on mobile devices. In creating App Inventor, Google drew upon significant prior research in educational computing, and work done within Google on online development environments.

App Inventor and the projects on which it is based are informed by constructionist learning theories, which emphasize that programming can be a vehicle for engaging powerful ideas through active learning. As such, it is part of an ongoing movement in computers and education that began with the work of Seymour Papert and the MIT Logo Group in the 1960s and has also manifested itself with Mitchel Resnick's work on Lego Mindstorms and StarLogo. This app so interesting because from this app, we can make some applications Android-based. We can make a reminder, E-dictionary, game quiz, etc.

H. E-Dictionary

A good dictionary has some criteria, such as it can stimulate the children to widen their vocabulary proactively and sometimes contain the example sentences related to children's activity. A good dictionary especially for preschool, they have a variety of format design, theme, pictures, grammatical rules, some jokes, anagram, and rhyming words.³² And on the other hand, it is in line with the usefulness of EDs. E-Dictionary also offers audio and visual information and exercises in multimedia format. Audio aids stimulate students' vocabulary acquisition in E-Dictionary to improve students' pronunciation which is usually neglected especially when they engage in self-studying. On the other word, the rich information offered by these dictionaries is such that it makes them a reference tool which not only provides information on various aspects of vocabulary knowledge but also serves as a language learning device. E-Dictionary can potentially contribute to language learning

³¹ https://en.wikipedia.org/wiki/App_Inventor_for_Android accessed on May 11th at 06.30.

³² (<https://home.oxfordowl.co.uk/blog/children-dictionaries-how-to-find-the-right-dictionary-for-your-child/> accessed on September 8th 2020 at 21.13

and instruction. And from the fact above, electronic dictionaries play a significant role in vocabulary learning, they also have positive effects on the motivation of language learners. It is more useful than the use of paper dictionaries due to the following reasons: Visual information helps learners to understand complex concepts, and they help the learners visualize the words in the minds and developmental images. But, it is not an easy way to make an E-dictionary. We have to see and follow some steps in building a good dictionary through the Lexicography theory.

I. How to develop a Dictionary?

In developing Dictionary, we need to practice the Lexicography theory. Lexicography itself has some definitions from three categories of sources. They are General sources (including general language printed dictionaries and results from random Google searches), LSP dictionaries dealing with lexicography, and, thirdly, scientific discussions in the field of lexicography³³.

The definition from general sources still has a general meaning that lexicography is the practice of compiling dictionaries³⁴. On the other sources, Practical lexicography is the art or craft of compiling, writing, and editing dictionaries or discipline of analyzing and describing the semantic, syntagmatic, and paradigmatic relationships within the lexicon (vocabulary) of a language, developing theories of dictionary components and structures linking the data in dictionaries, the needs for information by users in specific types of situation, and how users may best access the data incorporated in printed and electronic dictionaries³⁵.

The second source is Dictionary. Based on the Dictionary of Lexicography, Lexicography is the professional activity and academic field concerned with dictionaries and other reference works. It has two basic divisions: lexicographic practice, or dictionary-making, and lexicographic theory, or dictionary research³⁶.

And the last sources came from Scientific Discussion based on researchers. There are different lexicographic theories but they all acknowledge the fact that the lexicographic

³³ Bergenholtz, Henning and Rufus H. Gouws. *What is Lexicography*. (Lexikos 2 (AFRILEX-reeks/series 22: 2012, 2016), p.31-42.

³⁴ The New Oxford Dictionary of English

³⁵ (<http://en.wikipedia.org/wiki/Lexicography>) accessed on May 11th at 06.30.

³⁶ Hartmann, R.R.K. and Gregory James. *Dictionary of Lexicography*. (London/New York: Routledge. 1998)

practice is complemented by a theoretical component and that lexicography, with dictionaries as its subject matter, should be regarded as an independent discipline³⁷.

According to Brumfit in his book about Dictionaries, Lexicography and Language Learning, there are two steps in practicing how to make a good dictionary, there are Planning and Implementation steps. Planning is the design phase, for creating both the text specifications and the way the whole text will be written. A rule-of-thumb for the division of resources between Planning and Implementation is to give 5% to Planning and 95% to Implementation. And you must have established your chief objective: to provide a better dictionary for a specified group of readers. This implies that you understand well the important features of this group: the reading materials which they need to understand, and their performance level in writing/reading (since the dictionary will be little consulted for the spoken form, except as written in novels, plays, newspapers). for example, you mean to write a new dictionary comparing Indonesian and English for Preschool, with 20 entries plus translations in the French-English part and 20 entries with translations in the English-French part. Then you split each of these into two according to the language: so in the Indonesian-English half, you distinguish the Indonesian entries (which you might call collectively the Indonesian source-file) from their English translations (in the aggregate, the English target-file).³⁸

J. Word Relation

To some extent, we can 'define' a lexeme by telling what 'set' it belongs to and how it differs from other members of the same set.³⁹ Some obvious sets of this sort are sports (tennis, badminton, golf, soccer, basketball...), creative writings (poem, novel, short story, biography, essay...), manual occupations (electrician, plumber, welder, carpenter, painter...), colors (red, blue, black, green, yellow ...). It is not difficult to say what the members of each set have in common. And it can be specified in Hyponymy. In language learning, Hyponymy is included in semantic relations besides synonyms, antonyms, polysemy, etc. It can be used to present meaning and semantic relations among words. In another word, Hyponymy is

³⁷ Tarp, S. 2012. *Do We Need a (New) Theory of Lexicography?* (Lexikos 22: 321-332, 2012)

³⁸ Brumfit, *Dictionaries, Lexicography, and Language Learning*. (British Council: Pergamon Press, 2009)

³⁹ Kreidler, Charles, *Introducing English Semantics*, (Newyork:Routledge, 2002)

another relationship which defines the meaning of words to each other⁴⁰. And we can find in other sources that hyponymy is a relationship whereby one word includes others a hierarchy, so we have superordinate words and subordinate words⁴¹. Here, I give an example to express the Hyponymy relationship :

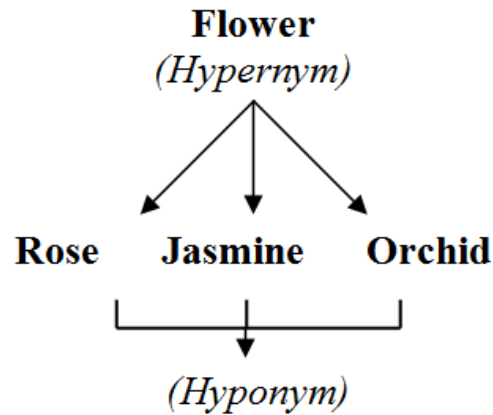


Figure 2.2: Example of Hyponymy
(Adapted from *The Study of Language* by Hedge)

From the explanation above, it can be concluded that hyponymy is the lexical relation for describing nouns that are important for learning vocabulary. The students can learn about the words by making a relation between four words, for example, Rose, Jasmine, Orchid, and Flower, which means that Rose, Jasmine, and Orchid are kinds of Flower.

So, based on the theories, this research will apply the concept of hyponymy word relation to developed E-Dictionary, and it will be more helpful for preschool because Children at the Preschool level will be predicting the relationships between the object of vocabulary with the sound. And this E-Dictionary completing with sound, pictures, and a reminder to increase their vocabulary skills.

⁴⁰ Harmer, Jeremy. *The Practice of English Language Teaching*. (New York: Longman, 2001)

⁴¹ Hedge, T. *Teaching and Learning in the Classroom*. (Oxford : Oxford University Press, 2000)