The Effectiveness of Picture Mnemonics for Teaching Basic English Communication for Students with an Intellectual Disability

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Abstract ——This present study aims to find out whether or not there is a significant difference between the basicEnglish communication ability of the eighth grade students with an intellectual disability before and after being taught by using picture mnemonics.Picture mnemonics is one of the types of visual mnemonic classification which makes use of pictures or visualizations to create an association with the target concepts (e.g., symbolic, pictographic). This research is quasi experiment with one group pretest and posttest design. Based on the objective of the research, the instrument used was achievement test. The test consists of 5 items for speaking and 5 items for writing which were colorful with 16 font size in order to be interesting and readable for the special students.The participants involved in this study were 9 students with an intellectual disability of the eighth grade secondary Special School with 50-65 IQ. The results of this study revealed that there is statistically significant different between the students with an intellectual disability' basic English communication ability before and after being taught by using picture mnemonics. It can be seen from the results of Wilcoxon test that indicates that the p-value is 0.007. Because the p-value is lower than the significance value (α) 0.05,, that is the p-the p-value is 0.007 which is lower than the significance value (α) 0.05. Considering the benefits of that picture mnemonics which can help students with an intellectual disability remember better it is suggested that this mnemonics should be used by the teacher when teaching English, especially for special students.

Keywords: picture mnemonics, students with an intellectual disability, basic English communication

I. INTRODUCTION

According to the Indonesian National Education System Law No. 20 year 2003, Indonesian citizens who have physic, mental, intellectual or social impairment have the right to get special education. That is why there are not only regular schools but also special schools provided by Indonesian government. One of the subjects which is taught in the special schools, especially secondary and senior high schools is English. Teaching English for students who have special needs including students with an intellectual disability is not easy and challenging. One of the reasons is because English is a foreign language or a second language for those students. In addition, students with an intellectual disability have specific characteristics that may become obstacles during the teaching-learning process. An intellectually disabled students tend to have a lack of motivation, low memory ability, passive, easily distracted and have problems in language development(Shree and Shukla, 2016).

The challenge for teaching English for students with an intellectual disability is also faced by the English teacher at State Special School (SLB N) Purwosari Kudus, Central Java Province, Indonesia. According to her, one of the problems when teaching those intellectually disabled students is dealing with the memory of the students. Furthermore, the students tend to have difficulties while remembering what they have learned. They easily forget the material that has been taught by the teacherIt is in line with what has been stated by Shree and P. C. Shukla (2016) that the learning and memory capabilities of people with intellectual disabilities are significantly below average in comparison to peers without disabilities. In addition, Beirne-Smith, Patton, & Kim (2006) claim that people with intellectual disabilities develop learning sets at a slower pace than peers without disabilities, and they are deficient in relating information to new situations. Considering the students with an intellectual disability'problems in remembering what they have learned,an appropriate strategy which can increase students' ability to remember should be implemented by the teacher when teaching English to those students. One of the strategies is the use of mnemonics.

According to Amiryousefi&Ketabi, (2011) Mnemonic is a memory-enhancing instructional strategy that involves teaching students to link new information taught to information they already know. Meanwhile, Jurowski et al (2015) define mnemonics as systematic procedures for intensification of memory. Similarly, Bakken (2017) pointed out that mnemonic strategies are systematic procedures for enhancing memory and making information more meaningful. Furthermore, he explained that mnemonic instruction is a way to help students with intellectual disabilities remember new information more effectively, efficiently, and easily. There are several types of mnemonics, and one of them is picture mnemonics as one of the types of visual mnemonic classification (Thompson, 1987).Picture mnemonics make use of pictures or visualizations to create an association with the target concepts (e.g., symbolic, pictographic). As explained by Thompson in Amiryousefi&Ketabi (2011) that when using picture mnemonic, the target words are associated (paired) with pictures instead of associating the words with their definition or translation.

Many scholars have investigated the effectiveness of mnemonic strategies for teaching regular students and students with disabilities either inscience, social subject or in language class.Benge&Robbin (2009)studiedthe use of mnemonics in language learning, especially related to vocabulary for regular students. This study found that the keyword method can be considered as a further vocabulary instruction to develop secondary students' vocabulary because of the effectiveness of the method.Another study on the use of mnemonics for regular students was done by Phillip (2016). In his research, he found that visual strategies (word pairing and semantic mapping strategies helped regular participants to learn vocabulary. Finally, a study which was done byFazih et al (2018) found that mnemonic vocabulary instruction increased students' engagement and motivation toward vocabulary learning.

Lubin&Polloway (2016) explain that mnemonic instruction has been also proven to be a research-based method for teaching students with different kinds of disabilities. Dakhiel& Rub (2017) who measured the effectiveness of pictured mnemonic strategy in learning similar English language letters among 90 students with learning disabilities in Saudi Arabia by using pretest, posttest and follow up test revealed that there were significant differences attributed to the teaching method, in favor of the method of both modified and abstract letters, while there were no statistically significant differences due to gender or interaction between the teaching method and gender. Another study on the use of mnemonics for teaching students with disabilities was also conducted by Whitescarver (2018).

He found that the use of mnemonic devices increased the acquisition and retention of vocabulary. Moreover, the students also showed a satisfactory rating in the ease and enjoyment of using mnemonics.

Although many researchers have conducted research related to the use of mnemonics either for regular student or students with disabilities, however, research which investigates the use of picture mnemonics for Indonesian intellectually disabled students in English class is rarely done. Therefore, it is interesting to conduct a study on the effectiveness of picture mnemonics for teaching basic English communication for the eighth grade students with an intellectual disability at State Special School(SLB N) Purwosari Kudus. Then, the research question of this study is ," Is there any significant difference between the basic English communication ability of the eighth grade students with an intellectual disability at State Special School Purwosari Kudusbefore and after being taught by using picture mnemonics?So that the objective of this study is to find out whether or not there is a significant difference between the basic English communication ability of the eighth grade students with an intellectual disability at State Special School (SLBN) Purwosari Kudusbefore and after being taught by using picture mnemonics.

II. METHOD

A. Design of the Research

This present study aims at investigating the effectiveness of picture mnemonics for teaching basic English communicationfor students with an intellectual disability. The data of this research was the score of students' achievement of basic English communication in the form of speaking and writing test. From the types of data collected and analyzed in this study, this research employs a quasi experimental with one group pretest and posttest design. This research was conducted at State Special School (SLB N) Purwosari Kudus which is located at Jl. Ganesha II No. 32 Purwosari Kudus, Central Java Province, Indonesia. The consideration of choosing SLBN Purwosari is because the school is provided for students with disabilities from elementary school until senior high school students. The total number of students is 184 students, 96 boys, and 88 girls.

B. Participants of the Research

The participants involved in this research were 9 eighth grade secondary students with an intellectual disability joining English class at State Secondary Special School Purwosari Kudus. Those students have 50 – 65 IQ, so that they are categorized as mild intellectual disability. In this class, there were 3 female students and 6 male students.

C. Instruments of the Research

The aim ofteaching English for the eighth grade students with an intellectual disability at Special School Purwosari Kudus is focusing on preparing the students be able to use English in basic communication especially in spoken and written related to the very familiar topics that will be learned. In other words, it is categorized as basic user A1/beginner level. According to the Common European Framework of Reference for Languages, basic userA1 is considered as the lowest level of language use in which the learner can interact in a simple way, ask and answer simple questions about themselves, where they live, people they know, and things they have, initiate and respond to simple statements in areas of immediate need or on very familiar topics.

Based on the objective of the research, the instrument used in this study was achievement test. The test consists of 5 items for speaking and 5 items for writing. The test items were colorful with 16 font size in order tobe interesting and readable for the special students. The content validity of the test is establishedby ensuring that the objectives of the test are presented in the test items. In addition, it is also determined by having experts assess the content of the test against outline that specifies the instrument's claimed domain (Huck , 2012 in Suryani, 2019). In this study two experts on special education and English language teaching assessed and reviewed the test items used as the instrument. The result of the assessment establishes the content validity of the achievement test.

D. Data Analysis

The data in this research in the form of the score of achievement test were then analyzed by using SPSS. This analysis aimed to knowwhether or not there is a significant difference between the basic English communication ability of the eighth grade students with an intellectual disability before and after being taught by using picture mnemonics.

III. RESULTS

To knowwhether or not there is a significant difference between the basic English communication ability of the eighth grade students with an intellectual disability before and after being taught by using picture mnemonics, the data needed are the score of the achievement test before and after the students were taught by using picture mnemonics. Those data were then analyzed using SPSS. However, before doing the analysis the data were examined for the normality to determine if the data fit the standard normal distribution.

A. The Normality Test

Shapiro-Wilkstatistic was used to run the normality test for the data of achievement test before and after the students were taught by using picture mnemonics. The consideration of using Shapiro-Wilk was because the sample size is small, that is less then 50, (Ho, 2014). The results of Shapiro-Wilk test for the data of achievement test before the students were taught by using picture mnemonics is presented in table below.

Table 1. The Normality of Achievement Test Score of the Intellectually Disabled students' Ability in Basic English Communication before being Taught by Using Picture Mnemonics

	Shapiro-Wilk		
	Statistic	df	Sig.
PRETEST	.722	9	.003

From the result, it is found that the p- value is .003. It is lower than the significance value (α) 0.05. It is concluded that the data of the students' achievement test before they were taught by using picture mnemonics are not normally distributed.

Meanwhile, the data of students' achievement test after they were taught by using picture mnemonics is also calculated by using Shapiro-Wilk test for determining its normal distribution. The result of the calculation is presented in table 2.

Table 2. The Normality of Achievement Test Score of the Intellectually Disabled students' Ability in Basic English Communication Tught by Using Picture Mnemonics

	Shapiro-Wilk		
	Statistic	Df	Sig.
POSTEST	.724	9	.003

The result of the calculation also indicates that the p- value is 0.003. It is lower than the significance value (α)0.05. Therefore, It can be stated that the data of the students' achievement test after they were taught by using picture mnemonics are not normally distributed.

To sum up, both the data of the students with an intellectual disability' achievement test before they were taught by using picture mnemonics and the data of the students with an intellectual disability' achievement test after they were taught by using picture mnemonics are not normally distributed. In this case, t-test can not be used since the distribution does not approximate a normal distribution. Therefore, the results of the calculation serve as the basic assumption to run non-parametric test or Wilcoxon test.

B. *The Significance Difference between Basic English Communication Ability of the Eighth Grade Students with an Intellectual Disability before and after being Taught by Using Picture Mnemonics.*

To know the significance different between the data of achievement test before and after the students were taught by using the picture mnemonics, this study run non-parametric test or Wilcoxon test since the data of the students with an intellectual disability' achievement test before and after they were taught by using picture mnemonics are not normally distributed. The results of the calculation is presented in the following table.

Table 3. The results of Wilcoxon Signed Ranks Test of the students with an intellectual disability' achievement test before and after they were taught by using picture mnemonics.

	POSTEST – PRETEST
Z	-2.680[b]
Asymp. Sig. (2-tailed)	.007

The result of the calculation indicates that the p-value is 0.007. Because the p-value is lower than the significance value (α) 0.05,then it can be stated that there is significant difference between the score of the students' achievement test before and after they were taught by using picture mnemonics. In other words, the score of the students' achievement test after the students were taught by using picture mnemonics is better than the score of the students' achievement test before the students were taught by using picture mnemonics.

IV. DISCUSSION

As stated previously that the Wilcoxon test was employed in order to find out whether or not there is significance different between the data of basic English communication achievement test before and after the students were taught by using the picture mnemonics. Based on the statistical calculation, the results showed that the p-value is 0.007. Because the p-value is lower than the significance value (α) 0.05,then it can be stated that there is significant difference between the score of the students' achievement test before and after they were taught by using picture mnemonics. In other words, the score of the students' achievement test after the students were taught by using picture mnemonics is better than the score of the students' achievement test before the students were taught by using picture mnemonics. It means that the use of picture mnemonics improves the students with an intellectual disability' ability basic English communication. Picture mnemonics help students with an intellectual disability memorize the vocabularies that have been learned and use those vocabularies in simple speaking and writing activity as in basic communication. One of the reason of the improvement may because the students with an intellectual disability are more interested in learning with the colorful pictures.

This finding also supports the idea that pairing pictures with words in L2 results in better recall than pairing them with their L1 equivalents (Thompson, 1987). Moreover, Gians and Redman (1986) believe that objects and picture can facilitate recall. Similarly, Amiryousefi&Ketabi (2011) explain that pictures and objects not only can be used to give meaning and information but they can also be used to the motivation and interest of the students. By using picture visual mnemonics, the meaning of the word becomes clear. Therefore, it is easier for the students to memorize and recall the words that have been learned.

The results of this study also support the research finding found by Philip (2016) thatvisual strategies (word pairing and semantic mapping strategies helped regular participants to learn vocabulary.

V. CONCLUSION AND SUGGESTION

The conclusion which the researchers can draw isthat there is statistically significant different between the students with an intellectual disability' basic English communication ability before and after being taught by using picture mnemonics. It can be seen from the results of Wilcoxon test that indicates that the p-value is 0.007. Because the p-value is lower than the significance value (α) 0.05,, that is the p-the p-value is 0.007 which is lower than the significance value (α) 0.05. Considering the benefits of that picture mnemonics which can help students with an intellectual disability remember better it is suggested that this mnemonics should be used by the teacher when teaching English, especially for special students.

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