Investigating English Vocabulary Mastery of Students with Special Educational Needs (SEN) through Using Animated Cartoons

Lulus Irawati[1], Krismi Natalia[2], Samsul Arifin[3]
Universitas PGRI Madiun, Indonesia[1,2,3]
Email: lulusirawati@unipma.ac.id[1]

Abstract. Every student has a different ability to learn vocabulary. There are students with good ability to learn new vocabulary, but on the other side, there are also students with low ability to learn. Students who have a low ability to learn are usually called students with special education needs. They need extra consideration for their education. An animated cartoon is suggested to be one of the audiovisual media that provide both sounds and moves. This research was conducted to know the effect of using animated cartoons on the vocabulary mastery of students with special educational needs (SEN). The research was using a pre-experimental research design and the type of data was numeric data from students' tests. This research was conducted in one of the SEN schools in Madiun Regency involving 15 students with mental retardation. The data were collected by exhibiting a vocabulary mastery test. The data were analyzed by using paired sample t-test with the level of significance at.05. The result shows the significant value is 0.002. This value is lower than the $\alpha = 0.05$, so Ha is accepted, and Ho is rejected. It can be said that there is a significant effect of animated cartoons on students' vocabulary. It implies that the animated cartoon can help students with special education needs especially mental retardation to learn vocabulary. Hopefully, the next researchers can conduct other research using the media for other skills and disabilities.

Keywords: Animated Cartoon, Vocabulary mastery, Students with Special Education Needs

https://ojs.unm.ac.id/eralingua

INTRODUCTION

Vocabulary is one of the important aspects of learning English. The teaching activity, including speaking, listening, reading, and writing is based on vocabulary. Students and teacher can understand what each other mean and can also express something by using vocabulary. This is why Thornbury (2002) said that a lot of vocabulary will make it easier for someone to master a language. Therefore, vocabulary can be the main basis of language learning.

Every student has a different ability to learn vocabulary. There are students with good ability to learn new vocabulary, but on the other side, there are also students with low ability to learn. Students with a medium to high ability to learn usually do not need any special education. They can study in public school as usual. Besides, students who have a low ability to learn are somehow called students with special education needs. They need extra attention to their education. Students with special education needs are usually called exceptional children. According to Heward, et.al (2006), an exceptional child is a comprehensive term that alludes to children with learning and/or behavior problems, children with physical handicaps or tactile weaknesses, and children who are mentally skilled or have a special talent. Exceptional children include children who need adjustment in their educational program and guidance to support their potential. Therefore, special education for them is needed.

One of the common problems faced by exceptional children is cognitive functioning, especially when they learn something new like vocabulary. Heward (2006) explains that it includes poor memory, slow learning rates, attention problem, difficulty generalizing what they have learned, and lack of motivation. In this study, the exceptional needs children being investigated are the students with mental retardation. According to Armatas, (2009), genetically, mental retardation is characterized by significantly below-average intellectual functioning and adaptive behavior deficits. A child with intellectual limitations has Intelligence Quotients (IQ) less than two standard deviations from the population mean of 100 (70), and a person with adaptive functioning limitations has at least two out of ten skill impairments. By all means, to handle the students with all these problems, the teacher should prepare suitable strategies, teaching methods, or media used in the classroom.

An animated cartoon is one of the audiovisual media that can both entertain and educate. The audio from the cartoon contains spoken words that will be processed by the left side of the brain. The left side of the brain acts as the analytical which will recognize and interpret the words. On another side, the right side of the brain act as the artistic side will process the visual information to make students feel interested. According to Bahrani & Soltani, (2011), by using cartoons, students are interested in the visual, as well as the auditory, it will give extra adequacy through assortment and inventiveness. Abuzahra et al., (2018)report by using animated cartoons students' language performance will be developed because of many reasons, namely providing a source of authentic language input appropriate for all students' levels and an expressive form of language including a sense of humor, various kinds of senses and characters, music, sound effect, and

etcetera. In addition, Baglama et al. (2018) state that the use of animation events may encourage special needs students who are particularly shy to speak. They, then take initiative and can manage voice, tone, and movements while talking. By all means, students effectively can learn and figure out the meaning since language and movement are related in cartoon films.

Some research report that animated cartoon is an effective and likable medium to teach vocabulary to students with special education needs or those who do not. Król (2013), states that in her research animated cartoons have positive effects on children's vocabulary comprehension, to a lesser extent also production. Most of the students affirmed that it was fun to use video during classes. Ulfa, et.al (2017) show that in their research, based on the comparison between pre-test and post-test there is a significant effect on students' vocabulary. Students have a higher score in their vocabulary after they learn vocabulary through the animated cartoon. Further, a cartoon can be one of the media for students' process to enrich vocabulary. Similarly, Aziza & Syafei (2018), Pitriana & Jufri, (2013) investigate how animated cartoons can make students easier in learning vocabulary. Animated cartoons can make students feel more enthusiastic and active when learning English. Thus, students will feel curious about the new and different learning processes that usually they do not get in class.

Besides, students who enthusiastically follow the learning process will also be able to learn better. According to Król (2013), by using animated cartoons, a student with Attention Deficit Hyperactivity Disorder (ADHD) can remember well all of the new nouns and almost all of the verbs. When it comes to the adjective, he remembered more than half of the words that were displayed. Other SEN students with Asperger Syndrome (AS) can remember and recall all new nouns and verbs. (Malhotra, 2019)explain that animated cartoon provides audio-visual sensory, so they can be an appealing source of learning which students can use when dealing with activities and tasks. In their research, there is an enhancement of about 20% of the vocabulary understanding after watching and listening to animated cartoons. All in all, the animated cartoon is very helpful for SEN students to learn vocabulary and give beneficial outcomes for low-proficient students.

There are at least three procedures for using the animated cartoon to teach students vocabulary mastery. First, Król (2013) explains that teachers can combine animated cartoons with a supported method namely a 5-min Target Warming-up (TW) session. TW will be applied before children viewed the video of the animated cartoon. This TW section teacher will display each target word that is printed on an A4 flashcard, read the word aloud, and ask the class to repeat it several times. This session aims to make children familiar with each word's pronunciation. After that, the cartoon movie was projected twice with the overhead projector. Second, Munir (2016) proposes that the teacher checks the knowledge of the students, about their skills, feeling, and intelligence and then, plays the animated cartoon and explains the video to help the students understand the ideas. The animated cartoon is played by using an LCD Projector to show the picture and an active speaker to make the sound louder. Third, Islam et al. (2014) investigate when a teacher uses animation accompanied by an explanation and students can gain maximum correct answers

higher compared to another teaching method. Fourth, Satyawan & Yulia (2018) report that there are 2 cycles applied in this research namely observation, interviews, lesson plan, and questionnaire to collect the data and there are some problems faced by the students in the learning process such as lack of vocabulary, uninteresting learning process, less participation, and lack of grammar knowledge. Later, among three of the procedures, the researchers exhibit Krol's procedure (2013) for this present study.

Due to the previous research above, the research gap presents to see the different parts of this study that the animated cartoons are suitably applied for teaching the students with Special Educational Needs (SEN), but there are no specific disabilities investigated in the previous research and there is no specific research focusing on mental retardation students with having different ages. The researchers, therefore are still interested in investigating the English vocabulary mastery of students with mental retardation through using animated cartoons. Hopefully, the students with Special Educational Needs (SEN) can learn vocabulary effectively, be interested in the animated cartoon and have fun during the English teaching-learning process. However, the teacher would not only rely on one teaching strategy but would be also challenged to execute other strategies. In sum, the research question is "Do the students with special educational needs (SEN) have a better vocabulary in using animated cartoons?"

RESEARCH METHOD

In this research, the researchers used a pre-experimental research design where the quantitative data were presented to give numeric data of the effect of animated cartoons on students' vocabulary of the children with special educational needs (SEN) at SLB. The population was all the students with special education needs at SLBN Banjarsari Wetan, Madiun Regency. The total number of the population was 102 students who were divided into 12 classes. In this research, the sampling was done by using purposive sampling. The sample was 15 students of fourth, fifth, and sixth-grade students. These 15 students consisted of 4 males and 11 females. Their ages ranged from 10 to 15 years old. Based on the school teacher's description, the students were in mental retardation (Intellectually Disability) condition in which they were slow in responding and understanding information. It is also mentioned in The American Association on Intellectual and Developmental Disabilities (Armatas, 2009) has defined mental retardation having as significant limitations either in intellectual functioning or in adaptive behavior covering some everyday social and practical skills, originating before the age of 18. They, at least needed more than three- or four-times explanations before doing some tasks in the classroom and there are 2 or 3 co-teachers. They, then were having different ages and proficiency, however they could have already read words or sentences.

The data were collected by using the test called Vocabulary Recognition adapted from Krol (2013). The test was used to measure how far the students understand and know about the vocabulary that they have learned. The tests were exhibited twice in terms of pre-test and post-test. In the test, the students were tested collectively. Each student worked on a worksheet that contain a few pictures from the animated cartoon. The worksheet was arranged with target vocabulary

items. During the test, the students filled the blank space below the picture with the correct word or vocabulary.

The data were analyzed by using paired sample t-test of IBM SPSS (Statistical Product and Service Solutions) version 2020, with a level of significance at .05. The students' vocabulary productions were assessed by using a scoring rubric adapted from Krol (2013). The assessment consisted of some criteria namely: 3 points if students recalled a word correctly, 2 points if students recalled a word but mispronounced it, 1 point if students remember only a part of the word, and 0 points if students were not able to recall the word at all. All in all, two kinds of scores gained from the pre-test and post-test were analyzed to find out the difference in mean scores.

RESULTS AND DISCUSSIONS

This study reveals the data of the research in the form of a score. The score is gained from the test. Based on the design, there are two activities conducted in the study namely pre-test and post-test. Each activity represents a meeting. The pre-test and post-test are conducted to see whether there is a difference in the student's achievement before or after having a treatment. The pre-test is, therefore conducted before having the treatment. The oral explanation about the topic is presented to ease the students' understanding. After that, the treatment by using animated cartoons is provided. The animated cartoons are about school stationery related to the materials being delivered in the classroom. Later, it continues by giving a post-test. Students' works are assessed by using a scoring rubric. The highest score in the pre-test is 100 and the lowest score in the pre-test is 20. The highest score in the post-test is 100 and the lowest score in the post-test is 50. Below is the result of the paired sample statistics.

Table 1. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE-TEST	72.67	15	24.775	6.397
	POST-TEST	82.00	15	16.345	4.220

Table 1 shows the average scores of both tests of 15 students. For the pre-test, the mean score is 72.67 and for the post-test, the mean score is 82.00. Further, the mean score of the post-test is higher than the mean score of the pre-test (82.00 > 72.67). It means that descriptively there are different mean scores between the pre-test and post-test. After presenting the data, it is conducted the normality test to check whether the data are gained based on normal distribution or not. The normality test used in this study is the Shapiro-Wilk test since the number of the sample is under fifty (< 50). The sample (n) of this research is 15. The analysis of the normality test can be seen in the table below.

Table 2 Normality Data

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PRE-TEST	.150	15	.200*	.915	15	.159
POST-TEST	.173	15	.200*	.903	15	.107

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

To decide whether the data is normal or not, there are two criteria:

a. If the significance value is higher than 0.05 the data is accepted

b. If the significance value is lower than 0.05 the data is rejected

From the table above, it can be known that the sig. value of the pre-test is 0.159 which means the data of the pre-test is accepted or normally distributed because of the sig. value more than 0.05. The sig. value of the post-test is 0.107, this value is more than 0.05 which also means the data is accepted or distributed normally. Therefore, both data from the pre-test and post-test are used for the next analysis by using Paired Samples t-test as seen in Table 3 below.

Table 3 Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PRE-TEST - POST-TEST	-9.333	9.424	2.433	-14.552	-4.115	-3.836	14	.002

After having the normality test, and then it operates the paired sample t-test to test the effect of using animated cartoons on students' vocabulary mastery. The table above shows the result of the computation by using SPSS Statistic Subscription 2020. Based on the result obtained in the paired sample t-test in Table 3, the significant value = 0.002 is lower than 0.05 (0.002 < 0.05). So, Ho is rejected and Ha is accepted. Based on the computation, it can be concluded that there is a significant effect of using animation cartoons on students' vocabulary mastery of the students with special educational needs (SEN).

Concerning the results, there is a difference between students' responses viewed before and after the treatment. Before giving the treatment using animated cartoons, it is given a pre-test. On this occasion, the students with special educational needs receive a direct presentation of the material without the use of specific media. When the material is explained, the students seem to be very serious to memorize what the teacher said and wrote. After the explanation, the pre-test is conducted. The mean of pre-test score is 72.67. This is in line with what Hasanah et al., (2016), and Nazar, et.al (2019) state that the students who are taught using cartoon movies get higher mean scores in post-test than those

students who are not. To sum up, the use of animated cartoons in the teaching-learning process can motivate students in learning English vocabulary.

The next is the students' responses based on the flashcard. After giving the pre-test, it is conducted the treatment by using an animated cartoon. Since the teacher needs much time to make the students remember the vocabulary, the teacher uses flashcards as additional media. First, the flashcards are issued before the animated cartoons are shown. The students are then asked to guess the name of the object on the flashcard. Next, the teacher shows the flashcards again to emphasize the students' understanding. Students seem to be curious about the picture on the flashcard and enjoy the lesson more. It is in line with what Paduren (2014) has reported that some responses are gained from the use of visual images to possibly make SEN students' attitudes toward English becoming more positive. They can enjoy learning and are more interested in things related to English.

The researchers continue the activities by showing the animated cartoon. Here, the researchers play the animated cartoon three times and all the students still watch the animated cartoon thoroughly. The cartoons can bridge the teaching-learning process and the context. This is similarly stated by Egounleti et al. (2018) that cartoons-based media help students get into contact with the language and arouse their desire to communicate efficiently with others. Their responses show enthusiasm. In the present research, after giving the treatment, the researcher gives a post-test to the students. Malhotra, (2019) has similarly conducted to assign a post-test to see whether the animated cartoon can enhance the students' vocabulary as it is viewed from the mean post-test score of 82.00. Again, they state that the mean score has increased from 72.67 to 82.00. The animated cartoon also provides audio-visual sensory and it can be an appealing source of learning which students can use to deal with their activities and tasks.

There is also the different ability of the students to master the vocabulary. Some students can understand what the teacher explains without using any support material such as media. On the other side, the students have their characteristics in learning; some students have a better understanding of the explanation by using support media. Those can be seen from the score of pre-test and post-test. It is related to Avianita et al. (2018) stating that although the samples in this research come from one disability, they have different capacities to learn. Every student has different intellectual characteristics in learning. Further, another different ability of vocabulary mastery is in terms of English word classes. The students investigated in the study easily understand nouns such as pencil, book, pen, and many nouns more. This is different from what Anggraeni et al., (2016) reported that mentally retarded students can learn and understand English nouns and verbs by using the Make-a-Match technique. Thus, teaching media, techniques or strategies can become one of the innovations to help students with mental retardation learn English vocabulary.

Besides exhibiting the teaching-learning process with the media for SEN, the teacher has some roles that also appear in the teaching activity. The teacher provides more space for the students to practice the material, no matter whether the students can do it correctly or not. This is also supported by Radford et al.

(2014) that at the time the teacher carries out their roles as the repair role, support role, and heuristic role, teaching activity will be more effective. The repair role is when the students are in difficulty, the teacher must handle the problem and give the solution with some strategies. The support role is when the teacher identifies the students' support needs. The last is the heuristic role; this role is when the teacher analyzes suitable learning strategies and applies them in the classroom. In addition, (Sajana, 2018) states that by exhibiting special strategies, the teacher can help the learners interact with their classmates and get rid of their fear and shyness in English speaking and writing. To sum up, the teacher should operate more roles in teaching students of SEN and become more creative in providing suitable media.

The use of animated cartoons can gain students' attention and can make the learning process more interesting. This is in line with Aziza & Syafei (2018) an animated cartoon can increase students' enthusiasm in learning vocabulary. The students also feel motivated to learn vocabulary and interested in the English lesson which is represented in their scores on the test (Devi, 2012). There are also some advantages of using animated cartoons as media in teaching. The first is creating fun and interesting teaching and learning. The second is by watching the image and the vocabulary written in the animated cartoon students can remember the vocabulary easier. It proves that animated cartoons can be useful media to teach vocabulary without making the students suppressed.

CONCLUSION

After conducting the research and analyzing the data, there is a significant effect of using animated cartoons on the students' vocabulary of children with special education needs (SEN). It can be concluded that the students get good achievements in mastering vocabulary after using audiovisual media, especially animated cartoons. They have positive responses to watching the animated cartoons presenting school stationery. The visual dan movement of the stationary can attract either the students' attention or understanding, however, the teacher should drill them for some time. The cartoons can bridge the teaching-learning process and the context. The students can enjoy the lesson well. They seem to be very serious to memorize what the teacher said and wrote. Later, the students can directly identify the school stationary flashcards given by the teacher, in an attempt to make sure their vocabulary mastery. Further, it implies that the teacher should use various media in teaching students with special needs so they can learn easily, for example by using animated cartoons. The teacher can also combine not only one medium but also another medium such as flash cards. Parents, they should give more attention to support their children in learning English. Thus, the next researcher can conduct research related to this media on other skills and different disabilities.

REFERENCES

Abuzahra, N., Farrah, M. A.-H., & Zalloum, S. (2018). Using Cartoon in Language Classroom from a Constructivist Point of View. *SSRN Electronic Journal, Special Is*(August), 229–245. https://doi.org/10.2139/ssrn.2822995
Anggraeni, D., Marhum, M., & Mertosono., S. R. (2016). *Teaching English Vocabulary*

To Mentally Retarded Students of Slb Negeri 2 Palu Through Make-a-Match Technique. 4, 75–84. http://jurnal.untad.ac.id/jurnal/index.php/Bahasantodea/article/view/13205

Armatas, V. (2009). Mental Retardation : Definitions , Etiology, Epidimology and Diagnosis. *Journal of Sport and Health Research*, *1*(april), 112–122. http://journalshr.com/papers/Vol 1_N 2/V01_2_5.pdf

Avianita, A., Asib, A., & Drajati, N. A. (2018). The Strategy in Teaching English Vocabulary for Students with Special Needs: A Narrative Inquiry Study. *Journal of Education and Human Development*, *7*(2), 66–70. https://doi.org/10.15640/jehd.v7n2a8

Aziza, W., & Syafei, A. F. R. (2018). Using cartoon film series " shawn the train " as media in teaching vocabulary to young learners. *Journal of English Language Teaching*, *7*(1), 112–122. https://doi.org/https://doi.org/10.24036/jelt.v7i1.9718

Baglama, B., Yucesoy, Y., & Yikmis, A. (2018). Using animation as a means of enhancing learning of individuals with special needs. *TEM Journal*, *7*(3), 670–677. https://doi.org/10.18421/TEM73-26

Bahrani, T., & Soltani, R. (2011). The pedagogical values of cartoons. *Research on Humanities and Social Sciences*, *1*(4), 19–23. https://www.iiste.org/Journals/index.php/RHSS/article/view/1267

Devi, I. (2012). Animation video to improve students' vocabulary mastery. *Pendidikan Bahasa Inggris*, *1*(1), 01–118. https://jurnal.fkip.uns.ac.id/index.php/bhs_inggris/article/view/1169

Egounleti, P. M., Hindeme, U. O. S., & … (2018). Examining the Impacts of Cartoons on Motivating EFL Beginner Students to Speak English Language in Beninese Secondary Schools: The Case Study of Some Secondary Schools in the Atlantic Region. *American Academic Scientific Research Journal for Engineering, Technology, and Sciences*, *50*(1), 155–180. https://asrjetsjournal.org/index.php/American_Scientific_Journal/article/view/4526

Hasanah, U., Mirza, A. A., & Raya, I. P. (2016). Towards vocabulary score. *Proceedings of International Conference: Role of International Languages toward Global Education System*, *June 2016*, 100–119.

Heward, W. L., & Wood, C. L. (2006). Exceptional children: An introduction to special education (p. 672). Pearson Education/Merrill/Prentice Hall.

Islam, B., Ahmed, A., Islam, K., & Shamsuddin, A. K. (2014). Child Education Through Animation: An Experimental Study. *International Journal of Computer Graphics & Animation*, *4*(4), 43–52. https://doi.org/10.5121/ijcga.2014.4404

Król, W. (2013). Research Communiqué on the Use of Animated Cartoons in Teaching English to Children with Disorders and Disabilities. *Procedia - Social and Behavioral Sciences*, *106*, 2259–2268. https://doi.org/10.1016/j.sbspro.2013.12.257

Malhotra, G. (2019). Animated Cartoons to Develop Listening Skill and Vocabulary. In *RESEARCH REVIEW International Journal of Multidisciplinary* (Vol. 4, Issue 4). https://doi.org/https://doi.org/10.5281/zenodo.2642341

Munir, F. (2016). The Effectiveness of Teaching Vocabulary by Using Cartoon Film

toward Vocabulary Mastery of EFL Students. *Journal of English Language Teaching and Linguistics, 1*(1), 13. https://doi.org/10.21462/jeltl.v1i1.20

Nazar, N., Farukh, A., Ahmad, M., & Mansha, M. (2019). The Effectiveness of the Use of Cartoons in Teaching English to the Children of Grade 5: An Experimental Study. *Al-Qalam,* *December*(May 2022), 287–292. https://www.researchgate.net/publication/339457671

Pitriana, D., & Jufri. (2013). The Use of Cartoon Movie as a Media in Teaching Vocabulary to Young Learners. *Journal of English Language Tea, 1*(2), 106–113. https://doi.org/https://doi.org/10.24036/jelt.v1i2.1281

Radford, J., Bosanquet, P., Webster, R., & Blatchford, P. (2015). Scaffolding learning for independence: Clarifying teacher and teaching assistant roles for children with special educational needs. *Learning and Instruction, 36*, 1–10. https://doi.org/10.1016/j.learninstruc.2014.10.005

Sajana. C, M. (2018). Cartoons in language teaching and learning. *International Journal of Pure and Applied Mathematics, 119*(12), 2435–2450. https://acadpubl.eu/hub/2018-119-12/articles/7/1785.pdf

Satyawan, V. Y. (2018). the Use of Animation Video To Teach English At Junior High School Students. *JELLT (Journal of English Language and Language Teaching), 2*(2), 89. https://doi.org/10.36597/jellt.v2i2.3277

Thornbury, S. (2002). *How to Teach Vocabulary*.

Ulfa, F. (2018). Teaching Vocabulary Using Cartoon Movie. *Journal of Languages and LanguageTeaching, 5*(1), 23. https://doi.org/10.33394/jollt.v5i1.330