

KEEPING RECORDS AS VOCABULARY STORAGE TECHNIQUE IN IMPROVING LONG-TERM MEMORY IN VOCABULARY MASTERY IN ESP CLASSROOM

(A Classroom Action Research in Nursing Academy Trenggalek in the Fourth Semester of Academic Year 2014/2015)

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ABSTRACT

The main factor of failure in mastering vocabulary faced by the fourth semester students of Akper Pemkab. Trenggalek in the academic year of 2014/2015 was storing vocabulary in long-term memory. The score of the post-test was below the passing grade with pronunciation as the biggest difficulty faced by the students. The conservative drilling and no effective vocabulary storage technique were another factor of the failure. In this case, Keeping Records was chosen as the vocabulary storage technique in improving the long-term memory in vocabulary mastery using classroom action research approach. The research was done in two cycles with planning, acting, observing, and reflecting as the stages done in each cycle. The data were collected from the pre-test and post-tests as the quantitative data and from observation, interviews, questionnaires, and students' vocabulary records as the qualitative data. The data were analyzed to answer the research problems. The results show that there was 25 % improvement in the students' long-term memory seen from the students' test scores. The technique was successful. The class climate also improved seen from the three dimensions of relationship dimension, personal development dimension, and system maintenance and change dimension with more positive environment, improvement of students' achievement, teacher control and students' responsibility.

Keywords: Keeping records, long-term memory, vocabulary mastery, classroom action research.

INTRODUCTION

Limited knowledge and understanding of vocabulary are the main factor in learners' failure in communication especially for non-native speaker. The main reason is that without developing the vocabulary, anyone will not be able to communicate as vocabulary is the main factor of meaning. The meaning making here is very important in communication. Thus, learning vocabulary is absolutely necessary for non-native learners. Both the teachers and the students take active control in the success of learning vocabulary. Thornbury (2002) states that less responsive vocabulary and the lack of teacher's awareness cause ineffective vocabulary building.

Learners are considered success in vocabulary mastery when they succeed in understanding the words' form, pronunciation, meaning, and use. They also need to remember and store them into their brain permanently as theoretically they will forget 80% of what they learn 24 hours after the engagement, so they can make use of the vocabulary for further use. Therefore, an effective and efficient vocabulary storage technique is required.

This technique is very important in helping the students learn vocabulary continuously as in Schmitt (2002) argumentation that learning vocabulary is a continuous change. The technique should be intended to help the students learn vocabulary systematically and sophisticatedly like the way the brain does. The brain processes the words in a more meaning based than form based. There are vocabulary labeling, categorizing, and network building process happening inside the brain.

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This research was conducted to solve the vocabulary learning problems faced by the second year students of Akper Pemkab. Trenggalek in the academic year of 2014/2015. Related

to vocabulary learning, vocabulary in ESP Classroom, in this case nursing, involves clinical setting in which nurses will have to use their English in communication and literature reading. A study conducted in a Japanese private hospital in 1998 by Watanabe (as cited in Yamanaka and Parker, 2005) shows the needs of English in the hospital are very great. It means that, nurses as a part of hospital staff needs to master the general communicative skills in English.

Based on the test conducted in the classroom, the researcher found out that the score of English test is still far from good. The students were having difficulty in arranging sentences because they did not have sufficient collection of vocabulary. They could not recall the vocabulary learned during the lessons. In the pre-test conducted prior the research, the mean score is 66.08 with spelling with 73.79, pronunciation 38.87, meaning 69.49, and use 67.65. It shows that all of the vocabulary aspects need improvement especially pronunciation aspect with the lowest score.

Low score of the pre-test happened because the students did not have an effective vocabulary storage technique in learning vocabulary. The students only copied and pasted the teacher's notes on the board. They did not recycle the words and leaved them in the book without being reviewed. The lack of review was due to the teacher's focus. Her focus was the grammar of the students. Vocabulary building and mastery were neglected. The class itself was not positive enough. The students were passive, did not have motivation, and lack of opportunities.

This research was done to tackle all of the problems stated above. Keeping records technique was chosen as the vocabulary storage technique in teaching vocabulary. Keeping records, also known as vocabulary notebook, is one of cognitive techniques in which learners use a notebook in storing and organizing their own vocabulary. The purpose of this technique to provide useful reference for later study. It is chosen because it gives the students freedom on how they record the words and make use of them. The teacher's role is guiding the students in recording the words and show how to organize the words in the record.

The research was conducted to answer the research problems; 1) does keeping records as the vocabulary storage technique improve the long-term memory in vocabulary mastery in ESP classroom done in AkperPemkab. Trenggalek, 2) how is the class climate in the application of keeping records as the vocabulary storage technique improve the long-term memory in vocabulary mastery in ESP classroom done in AkperPemkab. Trenggalek. The purpose of the research is to answer the research problems above.

Vocabulary is a set of common words which are meaningful and have their own rule in certain language, and is used to make up the four language skills in oral and print form. As in Kamil and Hiebert (2005), vocabulary is based on its form, oral and print forms, and its uses, productive and receptive words. Therefore, vocabulary includes the four aspects of form, pronunciation, meaning, and use.

Gains and Redman (1986) elaborated the pieces of word meaning into several aspects; conceptual meaning deals with the polysemy, homonymy, and synonymy, affective meaning deals with the attitudinal and emotional factors of vocabulary, style, register and dialect, sense relations, multi-word verbs, idioms, and collocation. Ur (1991) adds more aspects of word meaning such as denotation, connotation, and appropriateness, and meaning relationships. Therefore, learning a word is rich and complicated. A word cannot be seen only from one meaning but there is another meaning behind meaning.

There are two kinds of vocabulary; receptive vocabulary and productive vocabulary. Receptive vocabulary is the words used in listening and reading while productive vocabulary is the words used in writing and speaking (Hiebert and Kamil, 2005). Thornbury (2005) mentions that the basic measurement of knowing a word is knowing the form of the word and its meaning. Schmitt (2002) adds grammatical knowledge as the contribution of word form and meaning to vocabulary acquisition. Learners acquire vocabulary in verbal and written exposure. When a word is exposed verbally, a learner may learn the pronunciation and some of the syllables. Conversely, when exposed in written form, a learner captures the form of the word. Schmitt (2002) states that the two main process of vocabulary acquisition are explicit learning

and accidental learning. Explicit learning means learning vocabulary is purposely focused and done. Accidental learning happens when learners are exposed to the use of the language. The results vary depending on the L1, age, amount of exposure, motivation and culture.

Learning is remembering (Thornbury: 2002). A learner needs to both increase the number of the vocabulary and remember them. Memory itself involves the past and the present in the present (Peng, 2005:166). It is the process of recollecting and remembering facts, images, and past experience (Hudman, 2006).

Memorizing includes three stages to reach permanent storage: a) Sensory memory which is related to every sense of stimulus which indexes with human senses such as touch, vision, smell, and hearing (Hudmon, 2006). The information is limited in the duration of seconds and presented to the various sensory systems as the memory undergoes further processing, b) Short-term memory which deals with the capacity for short term retention on which the retention is consistent (Gains and Redman, 1996), and c) Long-term memory. Hudmon (2006) states that long-term memory is the process of transferring the short-term memory into a more permanent medium which is less sensitive to interference and disturbance and retains the information over extended periods of times. Human can recall the information in minutes, weeks, and years after the first input (Gains and Redman, 1996).

Vocabulary knowledge is learned and memorized through the process of learning and forgetting until the words are mastered and fixed in memory (Schmitt, 2000). To help memorizing the words, learners should train their memory using Vocabulary Learning Strategies including the strategies for word's meaning discovery such as determination strategies (DET) and social strategies (SOC), the strategies for consolidating a word such as Social strategies (SOC), memory strategies (MEM), Cognitive strategies (COG), and metacognitive strategies (MET). Each strategy consists of various activities in learning vocabulary and memorizing them.

Keeping records technique is one of the Cognitive Strategies (COG) in improving the long-term memory of vocabulary mastery. The notion of the technique is that vocabulary cannot be learned instantaneous; vocabulary needs to be repeatedly visited and studied (Thornbury 2002). This technique provides a more structured way of presenting vocabulary which is done continuously in the classroom in order to understand how memory behaves (Schmitt, 2000).

The implementation of the technique is based on the principles of designing vocabulary lesson which makes the technique effective in helping the learner master vocabulary. The format of the book is quite flexible as long as it is easy to use and carry. The procedure differs from each experts. Schmitt (2002) involves word pairs, vocabulary knowledge enrichment, recycling, expanding the word's information, expanding rehearsals, free activities, and review. Thornbury (2000) elaborates the procedure into notebook preparation, good and bad record exemplification, discussion, vocabulary recording, and vocabulary checking. In this research, the researcher collaborate both procedure into three stages: a) introduction of the technique including notebook preparation and good and bad record exemplification, b) expanding the word's knowledge including word pairs and vocabulary knowledge enrichment, and discussion, c) expanding rehearsals including recycling, reviewing, and free activities.

Teaching and learning activities should have a positive environment. Frases (1998) stated that "better achievement in a variety of outcome measures was found in classes perceived as having great cohesiveness, satisfaction, and goal direction and less disorganization and friction." The positive classroom can be seen from the three dimension of class climate by Moon's Scheme. The first is relationship dimension which focuses on the experience of the individual student in the classroom. The second is personal development which focuses on the academic aspects of classroom related to teaching and learning. The third is system maintenance and change which focuses on the teacher control, the classroom organization, the class rule clarity and strictness.

RESEARCH METHOD

This study took place in Akademi Keperawatan Pemerintah Kabupaten Trenggalek. The address of the institution is at Jln. Dr. Soedomo No. 5 Post code: 66312 Trenggalek Jawa Timur. Akademi Keperawatan Pemerintah Kabupaten Trenggalek is located near the Dr. Soedomo Hospital, the central public hospital in the town where people in the area would come when they need medical help.

The subject of the study is the fourth semester students of the academic year of 2014/2015. In this case, English is first taught in two semesters in the second year of the students period of study in the academy. There are two classes of the fourth semester students; class A and class B. The class chosen is class B. Class B was chosen for the low average score of the final test of the previous semester. The total number of students is 34 students with 12 males and 22 females. The students varied from different social background. Most of the students are from Trenggalek while the rest come from outside Trenggalek. All of the students can speak Javanese and Indonesian.

The approach of the research is Classroom Action Research. The research was done in the following steps; planning the action, implementation/action, observation and reflection. There were two kinds of data; quantitative and qualitative data. Quantitative data was collected from the students' pre-test and post-test scores which were compared from each cycle. The qualitative data was obtained from the observation, questionnaires and interview as well as the students' vocabulary records which was analyzed to answer the research problems.

The observation technique used in this study was full participant observation in which the researcher blended with the participants during the teaching and learning process. It allowed the researcher to teach and observe at the same time and get more natural data from the students and the class. The observation was done twice. First, the researcher observed the students during the teaching and learning process before the research was done. Second, the observation was done during the implementation of the technique.

The interviews consisted of questions which were used to analyze the students' general opinion toward English subject, nursing and the technique. The results of the interviews were analyzed to answer the research questions. The results also helped in making the analysis more relevant and reliable. There were five students who were interviewed. They were chosen based on their score in the pre-test and post-test; two students in the high score group, one students with the middle score group, and two students from the low score group.

The form of documents used in this study was paper-based or electronics including students' statements during the interviews and questionnaires, syllabus documents, lesson plans, observations journals records, the result of the tests, and the students' vocabulary records. In this research, the researcher used questionnaire to find out the class climate in the application of Keeping Records as the vocabulary storage technique in improving long-term memory in vocabulary mastery. In this research, the test was done three times; the pre-test, post-test after cycle 1 and post-test after cycle 2.

The quantitative data was analyzed using descriptive technique by using simple mathematical procedures to simplify, summarize, and categorize the data. The qualitative data was analyzed using categorization, data synthesis, and data familiarization.

Picture 1. Formula of Analyzing Quantitative Data

$$\bar{x} = \frac{\sum x}{n} \quad \text{and} \quad \bar{y} = \frac{\sum y}{n}$$

In which:

\bar{x}	= mean of pre-test score
\bar{y}	= mean of post-test score
N	= number of score
$\sum x$	= sum of pre-test score
$\sum y$	= sum of post-test score

RESULTS AND DISCUSSION

The research was done from the 5th of May 2015 until the 19th of June 2015 in two cycles. The first cycle consists of four meetings and the second cycle consists of three meetings followed by a post-test to measure the success of the technique. The post tests were done a week after each cycle finished to measure the long-term memory. There were a total of 34 students involved in the research. They are the second year student of Nursing Academy in Trenggalek East Java in the academic year of 2014/2015.

The Score of Pre-Test

No	Indicators	Mean Score
1.	Spelling	72.79
2.	Pronunciation	38.87
3.	Meaning	69.49
4.	Use	67.65
Mean Score		61.95

The result of the pre-test showed that the students did not master vocabulary skills well. The average score is 61.95 which is still lower than the passing grade. From the indicators, pronunciation score is the lowest with the average score 38.87. This score is very low compared with the other indicators. Spelling average score is 73.79, meaning is 69.49, and use is 67.65. The researcher found out that the students' problem in mastering the vocabulary was memorizing the words. 44.12% of them agree that memorizing words is difficult while 20.59% of the students said that memorizing words is strongly difficult.

Mean Score of Post-Test in Cycle 1

No	Indicator	Mean Score
1	Spelling	72.06
2	Pronunciation	55.30
3	Meaning	83.33
4	Use	63.26
Mean Score		68.49

Based on the mean score in each indicator from the post-test 1, the improvement of the students' achievement varies. The improvement of spelling aspect decreases from 72.79 into 72.06. The decrease is not significant with only 0.73 difference but this number shows that memorizing spelling using Keeping Records technique is not effective. The students' ability does not improve. They stay at the same level. Pronunciation aspects improve the highest among the vocabulary indicators. The students' skill in pronunciation improves 32% from 37.87 into 55.30. The score is evidently very low but the improvement is very high. It means that Keeping Records Technique helps the students to master pronunciation. The frequent drilling takes a big role in improving the pronunciation orally. However, in writing, they are very lacking because there is a big difference in sounds between English and Bahasa Indonesia as well as Javanese, the two languages the students use every day. The problem is in adjusting the sounds in English and the students' native language.

In the meaning aspect, there is 20% improvement from the score of 69.49 into 83.33. It means that the technique has succeeded in improving the students' score in the aspect and that the technique is definitely effective in improving the long-term memory. Meanwhile, the use aspect deals with a decrease of 6% from the score of 67.65 into 63.26. The students could not make use of the technique maximally in applying the vocabulary in context. There were lack of practice in this area during the implementation of the technique.

The progress of the class climate in cycle 1 shows positive improvement in all aspects. Compared with the time before the action, the students and the teacher improve in their own

ways. The students become more active in participation and assignments. The teacher felt easier to handle the students because they can let the students do what they want when doing the assignment. The teacher was also more active in helping the students improve their vocabulary knowledge by guiding and monitoring intensively. The teacher directly gave solutions to students' problem regarding the way they record and master the words learned.

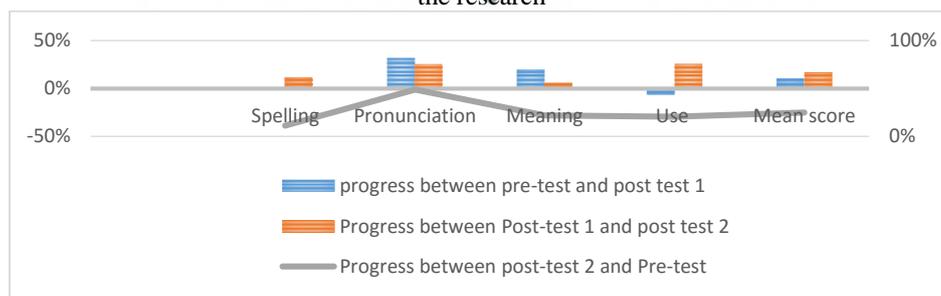
In cycle 2, the improvement happens in all aspects of vocabulary; spelling with 12% improvement, pronunciation with 25% improvement, meaning with 6% improvement, and use with 26% improvement. After the implementation of cycle 2 the mean score of the test increased 12 % which shows that the students could improve their spelling using the notebook. After the implementation of cycle 1 and cycle 2, the students' spelling ability improves 11% using the technique.

No	Indicator	Mean Score
1	Spelling	82.00
2	Pronunciation	74.00
3	Meaning	89.00
4	Use	85.00
	Mean Score	82.50

It is clearly indicated that the class climate in cycle II was fairly the same with the class climate in cycle I. The improvement occurs in the students' activeness in doing the exercises and drilling. The other aspects of class climate remained the same. The improvement also happened to the teacher in which the teacher was more active in giving drilling and exercises. Meanwhile, the student-teacher relationship improved along with the increase of the teacher control in delivering feedback and support during class activity.

The findings were found during the observation of the implementation of the cycles, the results of the post-tests, students' questionnaire and students' interview. The following graph shows the overall improvement of the long-term memory in vocabulary after keeping records technique was implemented.

Picture 2. The Improvements' percentage of the students' long-term memory in vocabulary mastery after the research



It is clear that keeping records technique has succeeded in improving the students' long-term memory in vocabulary mastery with such huge improvement.

The focus of the use of keeping records technique in this research is helping the student store vocabulary knowledge permanently in their brain. It can be seen from the mean score of the students' post-tests in the table below.

Table 1.1 Students' Achievement Progress during the Research

<i>Aspect</i>	<i>Pre-Test</i>	<i>Post-Test 1</i>	<i>Progress After Cycle 1</i>	<i>Post-Test 2</i>	<i>Progress After Cycle 2</i>	<i>Overall Progress</i>
<i>Mean score</i>	61.95	68.49	11%	82.5	17%	25%

In this case, the test was designed to measure both the students' long-term memory and vocabulary mastery. The test itself took place a week after the action. From the results of the post-test, there is 25% improvement as a whole bringing up the mean score from 61.95 into 82.50. The improvement happens in each cycle; cycle 1 improves 11% and cycle 2 improves 17%. This continuous improvement shows that Keeping records technique indeed effective in improving the students' long-term memory in vocabulary mastery.

During the interview, all the students stated that they could improve their vocabulary using Keeping records technique. Their vocabulary storage increased, and they also stated that the technique made them easier in memorizing the words. The biggest factor that made it easier is the use of pictures in the notebook in defining the words. The use of the pictures gives the visualization of the words meaning. The pictures are the effective means of remembering.

In the questionnaire, there were 57.94% of the students strongly agree and 32% of them agree that the technique improve to their vocabulary collection. It shows that the technique clearly improve the students' vocabulary storage. There were 14.71% of the students strongly agree and 52.94% of the students agree that the technique helped them memorize easier. There were only 2.94% of the students who stated that they could not remember vocabulary easily using the technique. It shows that most of the students could make use of the record effectively and successfully.

Keeping records technique provides the complete procedure in improving the long-term memory in vocabulary mastery. It stores all the vocabulary knowledge including spelling, pronunciation, meaning, and use. In spelling, the record saves the form of the word which is recycled repetitively in word pairs, translation, derivatives, and sentence production. The students automatically rehearse the words continuously which is then stored into their mind permanently. However, after the first cycle, the spelling improvement was not seen. It is because the students were still adapting with the new method in which they were in the process of understanding a new concept of the technique, did semantic maps, and recording numerous words.

Table 1.2. Progress in Spelling Aspect

<i>Aspect</i>	<i>Pre-Test</i>	<i>Post-Test 1</i>	<i>Progress After Cycle 1</i>	<i>Post-Test 2</i>	<i>Progress After Cycle 2</i>	<i>Overall Progress</i>
<i>Spelling</i>	72.79	72.06	-1%	82	12%	11%

In cycle 2, the spelling aspect improved significantly after the teacher added the frequency of the drilling. Their mean score after the action improves 11% from the pre-test from 72.79 into 82.00. This percentage shows that Keeping records help the students recognize the form of the words better. In this case, they also began to understand of how the technique work and after many reviews and sentence productions in which 78% of the students agreed that keeping records technique improve their spelling skills.

Pronunciation is the aspect which has the biggest improvement after the action. 33% of the students strongly agreed that keeping records technique improve their pronunciation skill while the other 58% has the same opinion. In the test, the overall progress of pronunciation is 49% from the score 37.87 into 74. From the beginning, before the action, the students did not have

the knowledge of phonetic transcription at all. The action has improved the students' pronunciation skill. The improvement is seen in the following table:

Table 1.3. Progress in Pronunciation

<i>Aspect</i>	<i>Pre-Test</i>	<i>Post-Test 1</i>	<i>Progress After Cycle 1</i>	<i>Post-Test 2</i>	<i>Progress After Cycle 2</i>	<i>Overall Progress</i>
<i>Pronunciation</i>	37.87	55.3	32%	74	25%	49%

During the cycle 1, The student got difficulty in synching the sounds, forms, and their native language. They mixed the sound /l/ with the sounds /e/, /ə/, /æ/ and /i/. Other sounds which confused the students were /dj/, /j/, /θ/, /ð/, and /ʃ/. Those were new symbols for unfamiliar to the students. After the cycle 2, the confusion was solved. The teacher shows the students how to use the keyword method by synching the English' sounds and forms with Javanese words.

In term of meaning, Keeping Records could improve the skill since the first cycle in a significant number. The mean score of the pre-test was 69.49, and the mean score of post-test 1 was 83.33 showing 20% improvement. It is supported by agreement by more than 70% of the students that the technique has helped them understand the meaning better.

Table 1.4 Progress in Meaning

<i>Aspect</i>	<i>Pre-Test</i>	<i>Post-Test 1</i>	<i>Progress After Cycle 1</i>	<i>Post-Test 2</i>	<i>Progress After Cycle 2</i>	<i>Overall Progress</i>
<i>Meaning</i>	69.49	83.33	20%	89	6%	22%

The table above also shows that after cycle 2, meaning aspect also improves. With 6% improvement, Keeping records shows that it has the power to develop the students' skill in mastering vocabulary. The use of the pictures was the main factor of the improvement. In this case, the students draw pictures representing the words, and they would always look at the picture anytime they use the notebook.

The result of the post-test 1 shows decrease. There was 6% decrease in the mean score. It shows that the action in the cycle 1 has failed to improve the students' vocabulary mastery. In cycle 2, the teacher uses different way in teaching the words in context. The teacher uses a song's lyric and an article as the vocabulary sources. The students learn the words in real context and they could apply it in their own sentences.

Table 1.5. Progress in Use

<i>Aspect</i>	<i>Pre-Test</i>	<i>Post-Test 1</i>	<i>Progress After Cycle 1</i>	<i>Post-Test 2</i>	<i>Progress After Cycle 2</i>	<i>Overall Progress</i>
<i>Use</i>	67.65	63.26	-6%	85	26%	20%

The post-test shows 26% improvement from the previous cycle. The improvement was quite high increasing the mean score from 63.26 into 85. It means that the students were able to use the words in the correct context.

From the questionnaire, the students felt that keeping records technique was fun with 14.71% of the students strongly agreed and 52.94% agree. The technique is a new method which challenges the students and pulls their interest in recording and memorizing vocabulary knowledge in a creative way. There are about 60% of the students agreed to continue using the notebook after the research finished.

Using keeping records technique, the students were able to explore their own ability and memorize words fully using their own notebook. Indeed, they had more responsibility, but they could handle the responsibility by having their own target in finishing and creating the best vocabulary record. They were involved in all activities which made them enjoyed the class

more. They could improve their emotional relationship as well. However, their competitiveness was not really improved. It can be seen from the questionnaire that 61.76% of the students feels that the competitiveness in the class existed in a moderate level. The students tend to rely on each other instead of trying to get more attention from the teacher. The students were reluctant to participate individual drilling.

Keeping records technique improves students' participation and involvement. More than 55% of the students feel that they could participate the class activity and that they were involved in those activities. Those were all active assignments in which the students, willing or not, would do. During the class activities, the teacher gave instructions, rules, and procedures to the students. Most students with 70% agree that those instructions, rules, and procedures are clear and understandable. During the action, the students could show themselves more to the teacher and gave more attention. In this case, 80% of the students feel that they got the same treatment from the teacher. No one felt that they were treated unfairly.

The support and feedback from the teacher led the students to trust the teacher in solving the problem. They were more open than before the action. 52% of the students strongly agree that they got enough support and feedback from the teacher. 38.24% of them agree with the support. No one in the class disagrees with this.

In term of the students' attitude, keeping records technique has made the students pay more attention to the teacher's explanation. In this class, the students agree that the teacher could control the classroom and solve every problem aroused. There were 23.53% of the students who strongly agree and 61.76% of them who agree.

CONCLUSION

Keeping records as vocabulary storage technique can improve the students' long-term memory in vocabulary mastery. The students could memorize the words learned during the action. They also improve their spelling, pronunciation, meaning and use skills. The class climate is also improved during the application of the technique. The strengths of the technique are that the technique can record vocabulary longer and contains intensive drilling and the freedom of learning. The weaknesses of the technique are that the students need to adapt the technique longer, the recording of the vocabulary can be boring.

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