THE USE OF MAGIC SQUARES TO IMPROVE STUDENTS’ VOCABULARY MASTERY FOR THE SEVENTH GRADE STUDENTS OF SMP NEGERI 1 MASARAN IN 2015

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ABSTRACT

The aims of research are to know that magic squares could improve students’ vocabulary mastery and to know how far was the improvement of students’ vocabulary mastery using magic squares especially in 7A grade students at SMP Negeri 1 Masaran in 2015/2016 academic year. Magic square is one of best strategy that is appropriate with students’ characteristic to be more focus and easier in learning vocabulary. The researcher used Classroom Action Research in the students of class 7A at SMP Negeri 1 Masaran in 2015/2016 Academic Years. There were 32 totals students that consist of 20 girls students and 12 boys students. The research was conducted in two cycles and every cycle consisted of three meetings. The researcher used qualitative and quantitative data analysis. The qualitative data involved interview, documentation, documents, and observation. The quantitative data was taken from the vocabulary test before and after the cycles were implemented. Based on scores of vocabulary test, the researcher concludes that magic squares could improve students’ vocabulary mastery. The improvement in students’ vocabulary mastery could be shown by the results of pre-test and post-test. The mean score of pre-test is 60.43, and it improved in post-test 1 is 74.62. The mean score of post-test 1 is 74.62, and it improved in post-test 2 is 85.31. Teaching English vocabulary through magic squares not only improve the students’ vocabulary mastery but also improve classroom situation and students’ behaviour.

Keywords: vocabulary mastery, magic squares strategy, classroom action research
PENGGUNAAN MAGIC SQUARES UNTUK MENINGKATKAN PENGUASAAN KOSAKATA PARA SISWA PADA PARA SISWA KELAS TUJUH SMP NEGERI 1 MASARAN PADA 2015

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Abstrak


INTRODUCTION

All of the people from over the world can communicate each other by using English because it is an international language used among them. It is identic with Holmes (1992: 51), he states that a world language or international language is English language. It was used by people such as in economic, political and also education.

Vocabulary needs to be mastered by the students since it is the basic rule of language and in order to be able to communicate to foreign people. According to Thornbury (2002: 13), vocabulary is the first and foremost important step in language acquisition. In other words, vocabulary is the first step to be learned by students in any language learning especially English. Fauziati (2005: 155) states that vocabulary is central to language. In order to get other competencies like reading, listening, speaking, and writing, vocabulary have to be mastered in the language learning. Without vocabulary, people cannot communicate or express their idea both orally and written form.

When the students learn it, they get some difficulties and problems in the learning process of vocabulary. It is caused by many factors. The factors can come from the students and also from the teacher. It can make a failure in teaching and learning vocabulary.

The researcher identified that the students’ vocabulary mastery of students in SMP Negeri 1 Masaran is still low. The Successful Minimal Criteria (KKM) of that school is 75. It is too high for the seventh grade student. Almost 50
% students cannot pass KKM score. The teacher argued if it caused by English is not their mother language, so the students did not understand enough about English.

Based on the observation, there were some problems in teaching and learning vocabulary. The problem was from teacher’s factor; students’ factor; school’s factor; and environment’s factor. The problems that come from teacher’s factor are (1) the teacher uses teacher-centered learning, she still dominated the teaching and learning process, (2) the teacher did not check one by one students to know what they understand or not about the material, (3) the teacher cannot handle the class because the class was very noisy. The problems that come from students’ factor are (1) the students get the difficulty to find the meaning of the word, (2) sometimes, the students could master and always remember some of the vocabularies learned at school well, but after they have finished their study in the school, they lose a lot of English vocabularies and only limited numbers are remembered by them, (3) some of the students did not bring their dictionary, (4) they did not pay attention to their teacher well and busy with their activities, (5) they think learning English are difficult and confusing. The problems that come from school’s’ factor are (1) not all of the class VII have projector in the class, (2) incomplete facility in the language laboratory room, (3) and limited library collection. The last one, the problems that come from environment’s factor is the school near of highway so condition in the class is a little bit crowded and not conducive.
In order to solve the problem above, the researcher proposed the way of teaching vocabulary by using magic squares. The researcher taught that magic squares is the effective way for teaching vocabulary. Magic squares are good exercises for vocabulary review because they give students an opportunity to associate terms with their definitions. That’s why the magic squares strategy is so effective for teaching English vocabulary. They have all of the definitions and terms on the sheet, so they can deduct what each word means. Then, they can check to make sure their answers are correct by adding up the squares. Magic squares strategy is also really helpful for reinforcing students’ memorization. From the cases, the researcher used magic squares strategy to improve students’ vocabulary mastery at the seventh grade of SMP Negeri 1 Masaran in 2015/2016 Academic Year.

THEORETICAL REVIEW

Magic Squares

*The Definition of Magic Squares*

According to Vacca (2005: 287-290), “Magic squares strategy is an activity sheet has two columns, one for content area terms and one for definitions or other distinguishing statements such as characteristics or examples. The students are asked to match terms with definitions. In doing so, they must take into account the letters signaling the terms and the numbers signaling the definitions. The students then put the number of a definition in the proper space (denoted by the letter of the term) in the “magic square answer box.” If their matchups are correct, they will form a magic square. That is, the numerical total will be the same for each row across and each column down the answer box. This total forms the puzzle’s “magic number.”
Students need to add up the rows and columns to check if they’re coming up with the same number each time. If not, they should go back to the terms and definitions to reevaluate their answers.”

**METHOD**

The method was used in this research is Classroom Action Research method. There are some definitions given by some expert. According to Burns (1999: 30), action research is the application of fact finding to practical problem solving in social situation with view to improve the quality of action within involving the collaboration and cooperation of researchers, practitioners and laymen. The model of classroom action research is this study is model by Kemmis and Mc Taggart (in Burns, 1999: 32) who state that the model of action research is consist of four steps in a spiraling process. There are namely: a) Planning; b) Acting; c) Observing; and d) Reflecting. In this research, the students were given pre-test before treatments and in the end of the research the students were also given post-test after giving treatments. Pre-test was administered in order to find out the students’ vocabulary mastery before the treatments, and post-test was administered in order to find out the increase of the treatments towards the students’ vocabulary mastery after being given the treatments. Pre-test and post-test were used to get the data to analyze the students’ vocabulary mastery. Each treatment was conducted into three meetings of activities and each meeting took 2 x 40 minutes. The population of this research consisted of 32 students of the seventh grade students at SMP Negeri 1 Masaran in 2015/2016 Academic Year.
The instruments were used for collecting the quantitative data (vocabulary test before treatment, test after first treatment, and test after the second treatment) and qualitative data (interview, observation, documentation, documents, and field note) for collecting data on the students’ motivation in improving vocabulary mastery using magic squares.

**RESULTS AND DISCUSSION**

**Results**

The preliminary research was conducted to identify and get data about the factual conditions of the problems faced by the teacher and students in teaching and learning English, especially vocabulary. The researcher conducted the preliminary research by (a) observing the classroom and teaching and learning process in order to know the situation and activities employed in teaching and learning English especially vocabulary, (b) interviewing the English teacher in order to know the technique employed in teaching English especially in teaching vocabulary, (c) interviewing the students in order to know the students’ difficulties in vocabulary mastery, and (d) giving pre-test to the students in order to identify the students’ problems of English vocabulary and students’ understanding about English vocabulary.

The classroom observation was conducted on Tuesday, 28 April 2015 in the VII A of SMP Negeri 1 Masaran to know situation and activities employed in teaching and learning English especially vocabulary. The researcher found many
problems in the teaching and learning process. The first problem come from the classroom activities, the class was very crowded and noisy. The class consists of 32 students and the teacher could not manage the classroom easily. It was added by noise of vehicles because the school is near highway. The second problem was the lack of students’ vocabulary caused the students’ limitation in understanding English vocabulary.

The researcher conducted the interview with the English teacher. It was held on Tuesday, 28 April 2015. The researcher asked the teacher about teacher and students’ problems, students’ background and method used in teaching English, especially vocabulary. The conclusion of the interview was the vocabulary mastery in class VII A was still low.

The researcher also conducted the interview with the students, as the representative students of seventh grade of VII A, SMP Negeri 1 Masaran. The interview was held on Wednesday, 2 September 2015 at 9.15 a.m. when break time. The researcher asked the students about the difficulties faced by students focus on vocabulary learning. They still found difficulties to memorize new words they had learnt before correctly and felt difficult to find the meaning of the words.

The pre-test was conducted before implementing Classroom Action Research (CAR). It was done to identify the students’ vocabulary mastery and to make comparison with the post-test to know whether or not the students’ vocabulary improved. The pre-test was conducted on Saturday, 12 September 2015. The pre-test included multiple choices. The test consisted of 50 questions. The students carried out the pre-test during 75 minutes in doing this test. From the
By analyzing the results of the pre-test, it was found that the mastery of English vocabulary of the students was still low. It was proven by the mean score of pre-test, only 60.43.

Based on the result of pre-test, the data showed that the mean score of pre-test is 60.43. There were only three students who got the score above the Standard Minimum Criterion (Kriteria Ketuntasan Minimum/KKM) for English (75), meanwhile the other 29 students were below that criterion. From the analyzing, it could be seen that almost of seventh grade of SMP Negeri 1 Masaran students’ vocabulary was still very low.

After analyzing the result of preliminary research, it could be concluded that the most of students at seventh grade of SMP Negeri 1 Masaran had limited vocabulary and low understanding on find the correct words. So, it needs to find out the solution to solve this problem. The researcher used magic squares as the strategy in teaching vocabulary.

The result of cycle 1 can be explained as follows:

a) The first meeting

In the first meeting, the students were interested in the lesson given through magic squares, but the students felt difficult to complete the magic squares. The students did not understand well the explanation about how to answer the magic squares, then, it made the class very crowded. The students did not concern on the explanation given by the researcher about family member. The students also did not know many new vocabularies, so they had problem to match the words with the definitions. Some of the students were not
active during the teaching and learning process. Generally, in the first meeting the class was very noisy and not conducive.

b) The second meeting

In the second meeting, the students were more enthusiastic to learning English than in the first meeting. The class was not too noisy. The students did not make a lot of noise in the class and the students already known how to complete the magic squares. Although, some students still confused to answer the magic squares but the researcher tried to help them in answering their magic squares. When the researcher asked the definition, some of the students could answer correctly. However, the students were still shy when the researcher asked them to read the text. But actually, the teaching and learning English was more conducive than the previous meeting. There were improvement of the students’ motivation and attention.

c) The third meeting

The next meeting the researcher collected the data from post-test 1. The post-test 1 was conducted to know the students’ improvement of students’ vocabulary mastery after the treatment. The result of post-test 1 showed the mean score of the class increased to 74.62.

In the teaching and learning process of cycle 1, the students still confused on how to complete the magic squares. The problem was the longer time used in explaining to the students how to complete the magic squares correctly because it was new for them. Based on the observation, the students needed help to fulfill the
magic squares and the researcher walked around to help them to answer their difficulties.

The first cycle was not good enough to improve the students’ vocabulary mastery. The result did not give satisfaction improvement and the atmosphere of the class was not conducive. Although generally, there was an improvement of the students’ vocabulary mastery after cycle 1, but the goal and criteria of success were not achieve completely. In the cycle 1, the mean score of pre-test was 60.43 and the mean score of the post-test 1 was 74.62. Based on the fact, the researcher decided to conduct cycle 2.

The result of cycle 2 can be explained as follows:

a) The first meeting

In the first meeting, the condition of the class was better than the first cycle. The students more concerned and enjoyed with the material when doing vocabulary activity using magic squares. They were very enthusiastic and active to filled magic squares. The students also followed the researcher’s explanation carefully. Most of the students became active to the activity given by the researcher, so the situation of the class made the students followed the teaching learning process easily.

b) The second meeting

In the second meeting, the class was conducive enough. Generally, the implementation of magic squares in the teaching and learning vocabulary ran well. In this meeting, the students paid attention better than the first cycle. The
students more understood about the instructions and explanations that the researcher given. The students could memorize new vocabularies easier. When the researcher asked one student to read the text, the other students wanted to do the same. The students also enjoyed the magic squares activity and most of the students changed their behaviour. All of the students showed their high attention, concentration, and motivation in teaching and learning process.

c) The third meeting

The next meeting the researcher collected the data from post-test 2 to know how far the magic squares could improve the students’ vocabulary mastery. In this second cycle, students’ vocabulary improvement was better than in the first cycle, it was shown by students’ vocabulary mean score was better than the first cycle. The result of post-test 2 showed that the mean score of the students increased to 85.31.

The result of the cycle 2 showed good improvement of students’ vocabulary and students’ behaviour. In cycle 2, the researcher found that the students still remember the vocabulary that they had learnt. They could answer the researcher’ questions accurately and clearly. It meant that they could memorize the meaning and definition of vocabulary really well. They were more active when the researcher asked them to read the text. They also could complete magic squares correctly, it made the situation of the class was more conducive.

In the end of cycle 2, the researcher conducted the post-test 2 to support the data. The students’ vocabulary improvement was significant, it could be seen
from the students’ mean score. The mean score of the post-test 2 was 85.31. There was an improvement of the students’ vocabulary mastery after cycle 2.

In cycle 2, even though the class was still a little bit noisy, but the class was conducive enough. Generally, the students listened to the researcher’s explanation carefully. The researcher had tried very hard to get the students’ attention and concentration in order to reduce students’ noisiness. The students who were shy, in this cycle began to show up their action bravely. Compared with the cycle 1, the researcher found some improvement in cycle 2. The classroom situation was also much better so the researcher decided to stop the cycle.

Magic squares strategy made the students interested to improve their vocabulary mastery because they looked serious when they did their magic squares sheet. In cycle 2, the students had a good motivation and concentration to learn more about English vocabulary.

**Discussion**

The findings then can be theorized in two major points as follows: a. Magic squares can improve students’ vocabulary mastery, and b. Magic squares can improve classroom situation. The discussion of the theories is presented in the following section.
a. Magic squares can improve students’ vocabulary mastery

In the fact, the findings of the study showed that the use of magic squares in the seventh grade improved students’ vocabulary mastery. The improvement could be achieved because magic squares helped students involved matching and problem-solving skill. It is supported by Vacca (2005: 287), he says that “Magic squares strategy is a way of reviving even the most mundane matching exercise, and magic squares was used successfully in elementary and secondary grades as well as in graduate courses”. Also, Allen (2006: 104) states that “Magic squares strategy is a helpful way for reinforcing, checking, and testing knowledge of words”. The improvement of the students’ vocabulary mastery could be recognized from the ability to answer the teacher's question, the ability to memorize the vocabulary and its definition.

Before the research, the researcher found that the students had low vocabulary achievement. The improvement of the vocabulary mastery could be seen from the improvement of students’ achievement from cycle 1 to cycle 2. The vocabulary achievement was increased significantly. It can be seen from the mean score of the pre-test was 60.43, the mean score of post-test 1 was 74.62, and the mean score of post-test 2 was 85.31. It meant that the students’ achievement increased significantly. It can also prove that conducting magic squares improve the students’ vocabulary mastery.

Based on the result of the analysis using t-test, the result of the test between pre-test and post-test 1 is 10.8 and the result of pre-test and post-test 1 in
cycle 1 is compared with \( db = (n-1) = (32-1) = 31 \). The t table in significance 5% = 2,042. It can be concluded that \( t_0 > t \) table is significance 5% (10,8 > 2,042). It means that there is significance from learning of vocabulary mastery using magic squares in pre-test and post-test 1.

The result of the analysis using t-test between post-test 1 and post-test 2 is 15,1 and the result of post-test 1 and post-test 2 in cycle 2 is compared with \( db = (n-1) = (32-1) = 31 \). The t table in significance 5% = 2,042. It can be concluded that \( t_0 > t \) table is significance 5% (15,1 > 2,042). It means that there is significance from learning of vocabulary mastery using magic squares in post-test 1 and post-test 2. Based on all of the findings above, it can be concluded that magic squares can improve the students’ vocabulary mastery in the seventh grade students of SMP N 1 Masaran in 2015/2016 academic year.

b. Magic squares can improve classroom situation

The findings of teaching and learning process showed that there was a change of classroom situation before and after the magic squares was implemented in the class. The magic squares strategy makes matching more interesting and interactive for students. It is supported by Allen (2006: 102), she states that “The magic square is an enjoyable way to assess an initial understanding of words and concepts”. The teaching and learning process using magic squares strategy was more conducive. The students were more joyful, concentration, and independent. It means that the class atmosphere really made them fun.
CONCLUSION

Based on the result of the research, the researcher can draw some conclusion:

1) Teaching English vocabulary through magic squares can improve the students’ vocabulary mastery. Based on calculation result, the students’ mean score increased significantly after getting all of the treatment using magic squares. The students’ mean score in the pre-test was 60.43, in the first cycle was 74.62, and the second cycle was 85.31. It showed that the use of magic squares could improve students’ English vocabulary.

2) Teaching English vocabulary through magic squares not only improve the students’ vocabulary mastery but also improve classroom situation and students’ behaviour. The teaching and learning process showed that there was a change of classroom situation before and after the magic squares was implemented in the class. The teaching and learning process using magic squares was more conducive. The students were more serious, active, and independent. It means that the class atmosphere really made them followed the teaching and learning process easily.
REFERENCES


