



**A COMPARATIVE STUDY OF USING CROSSWORD
PUZZLE AND QUARTET CARD TO ENHANCE STUDENTS'
VOCABULARY MASTERY**

**(A Case of the Fourth Grade Students of MI Al Iman Banaran
Gunung Pati Semarang in the Academic Year of 2010/2011)**

a final project

**submitted in partial fulfillment of the requirements
for the degree of Sarjana Pendidikan in English**

by

Chubbi Millatina Rokhuma

2201407172

ENGLISH DEPARTMENT

FACULTY OF LANGUAGES AND ARTS

SEMARANG STATE UNIVERSITY

2011

PERNYATAAN

Dengan ini saya,

Nama : Chubbi Millatina Rokhuma

NIM : 2201407172

Prodi / Jurusan : Pendidikan Bahasa Inggris / Bahasa dan Sastra Inggris

Fakultas Bahasa dan Seni Universitas Negeri Semarang, menyatakan dengan sesungguhnya bahwa skripsi/tugas akhir/final project yang berjudul:

“A Comparative Study of Using Crossword Puzzles and Quartet Card to Enhance Students’ Vocabulary Mastery (A Case of the 4th Grade Students of MI Al Iman Banaran Gunung Pati Semarang in the Academic Year of 2010/2011)”

Saya tulis dalam rangka memenuhi salah satu syarat untuk memperoleh gelar sarjana ini benar-benar merupakan karya saya sendiri yang saya hasilkan setelah melalui penelitian, pembimbingan, diskusi dan pemaparan/ujian. Semua kutipan baik yang langsung maupun tidak langsung, baik yang diperoleh dari sumber kepustakaan, wahana elektronik, wawancara langsung maupun sumber lainnya dengan cara sebagaimana yang lazim dalam penulisan karya ilmiah. Dengan demikian, walaupun tim penguji dan pembimbing penulisan skripsi/tugas akhir/final project ini membubuhkan tanda tangan sebagai tanda keabsahannya, seluruh isi karya ilmiah ini tetap menjadi tanggung jawab sendiri. Jika kemudian ditemukan ketidakberesan, saya bersedia menerima akibatnya. Demikian, harap pernyataan ini digunakan seperlunya.

Semarang, Agustus 2011

Yang membuat pernyataan

Chubbi Millatina Rokhuma

NIM. 2201407172

APPROVAL

This final project has been approved by a team of examiners of the English Department of Languages and Arts Faculty of Semarang State University on Thursday, August 25, 2011:

Board of Examination

1. Chairperson

Prof. Dr. Agus Nuryatin, M. Hum
NIP. 196008031989011001



2. Secretary

Drs. Ahmad Sofwan, Ph.D
NIP. 196204271989011001



3. First Examiner

Dr. Dwi Rukmini, M. Pd.
NIP. 195104151976032001



4. Second Supervisor/ Second Examiner

Dr. Dwi Anggani L. B, M. Pd.
NIP. 195901141989012001



5. First Supervisor/ Third Examiner

Sri Wuli Fitriati, S. Pd., M. Pd.
NIP. 197510262005012001



Approved by

Dean of Languages and Arts Faculty



Prof. Dr. Agus Nuryatin, M. Hum
NIP. 196008031989011001

Your Future is Based on What You Do Now

(Anonymous)



Dedicated to:

My beloved parents (abah and ibu)

My beloved brother and sisters

ACKNOWLEDGEMENTS

First of all, I wish to praise Allah SWT, who has blessed and led me to the completion of this final project.

I would like to express my sincerest thanks to:

Sri Wuli Fitriati, S. Pd., M. Pd. as my first advisor and Dr. Dwi Anggani L. B, M. Pd. as my second advisor for their continuous guidance and advice in making and completing this final project.

I also would like to express my thanks to Sri Maryatun, S. Pd. I as the headmaster of MI Al Iman Banaran Gunung Pati Semarang and Ismi Widayanti, S. Pd. as the English teacher of MI Al Iman Banaran Gunung Pati Semarang, who allowed me to carry out the research in MI Al Iman Banaran Gunung Pati Semarang.

Then, my special thanks go to my beloved parents (abah and ibu) who always give me endless love, prayer and support. I also would like to thank to my brother and sisters, my best friend (Syara) and all of my friends who always supported me from the very beginning to the finishing of this final project.

Chubbi Millatina Rokhuma

ABSTRACT

Rokhuma, Chubbi Millatina. 2011. *A Comparative Study of Using Crossword Puzzles and Quartet Card to Enhance Students' Vocabulary Mastery (A Case of the 4th Grade Students of MI Al Iman Banaran Gunung Pati Semarang in the Academic Year of 2010/2011)*. Final Project. English Department. Languages and Arts Faculty. Semarang State University. First Supervisor: Sri Wuli Fitriati, S. Pd., M. Pd. Second Supervisor: Dr. Dwi Anggani L. B., M. Pd.

Key words: comparative study, crossword puzzles, quartet cards, vocabulary mastery.

The objective of this study is to find out whether there is any significant difference of vocabulary mastery achieved by the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang who have been taught using crossword puzzle game from those taught using quartet card game in the academic year of 2010/2011.

The method which is used in this study is true experimental method, while the design of this study is pre test-post test comparison group design. The subjects of this study are the students of the 4th grade students of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011. They were divided into two groups. Class IV A that consists of twenty seven students was considered as the experimental group 1. While class IV B that consists of twenty eight students was considered as the experimental group 2. In this research, both of the two groups were given pre-test in order to know their first condition. Afterwards, both of them were given treatment. The experimental group 1 was taught by using crossword puzzles, while the experimental group 2 was taught by using quartet card. After the treatment, both of them were given post-test. It was given to know whether there is any significant difference of vocabulary mastery achieved by the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang who have been taught by using crossword puzzle game from those who were taught by using quartet card game in the academic year of 2010/2011.

The methods of data collection in this research are documentation and test. The documentation was used to obtain the students' list that belonged to the subject of the study, while test was used to measure the students' vocabulary mastery.

The gathered data were analyzed by using statistical analysis. To test the hypothesis of this research, the formula used is t-test formula. The post-test means of the experimental group 1 (crossword puzzles group) is 87.96, while the post-test means of experimental group 2 is 81.96. Based on the calculation of hypothesis test, it was obtained that $t_{hitung} = 2.24$ and $t_{tabel} = 2.01$, because $t_{hitung} > t_{tabel}$, H_0 is rejected and H_a is accepted. It means that the means of the vocabulary mastery of the experimental group 1 was greater than or not equal to the means of the experimental group 2. Thus, it can be concluded that there was significant difference of vocabulary mastery achieved by the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang who have been taught by using crossword puzzle game from those who were taught by using quartet card game in the academic year of 2010/2011. Therefore, it is suggested for English teachers to use crossword puzzle game in teaching English vocabulary, because even though both of crossword puzzle game and quartet card game are effective to improve students' vocabulary mastery, it was proved that in teaching English vocabulary, crossword puzzle game was more effective to be used than quartet card game.

TABLE OF CONTENTS

ACKNOWLEDGEMENT	v
ABSTRACT.....	vi
TABLE OF CONTENTS.....	vii
LIST OF TABLES	x
LIST OF CHARTS AND FIGURES.....	xi
LIST OF APPENDICES.....	xii
CHAPTER	
I INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.2 Reasons for Choosing the Topic	4
1.3 Research Questions	4
1.4 Objective of the Study.....	5
1.5 Significance of the Study	6
1.6 Definition of the Term	6
1.7 Outline of the Report.....	8
II REVIEW OF RELATED LITERATURE	10
2.1 Review of Previous Studies	10
2.2 Review of Related Literature	11
2.2.1 Teaching and Learning English in Elementary School.....	11
2.2.2 Vocabulary	19
2.2.3 Media	21
2.3 Framework of the Present Study	29
III METHOD OF INVESTIGATION.....	31
3.1 Research Design.....	31
3.2 Population and Sample.....	32

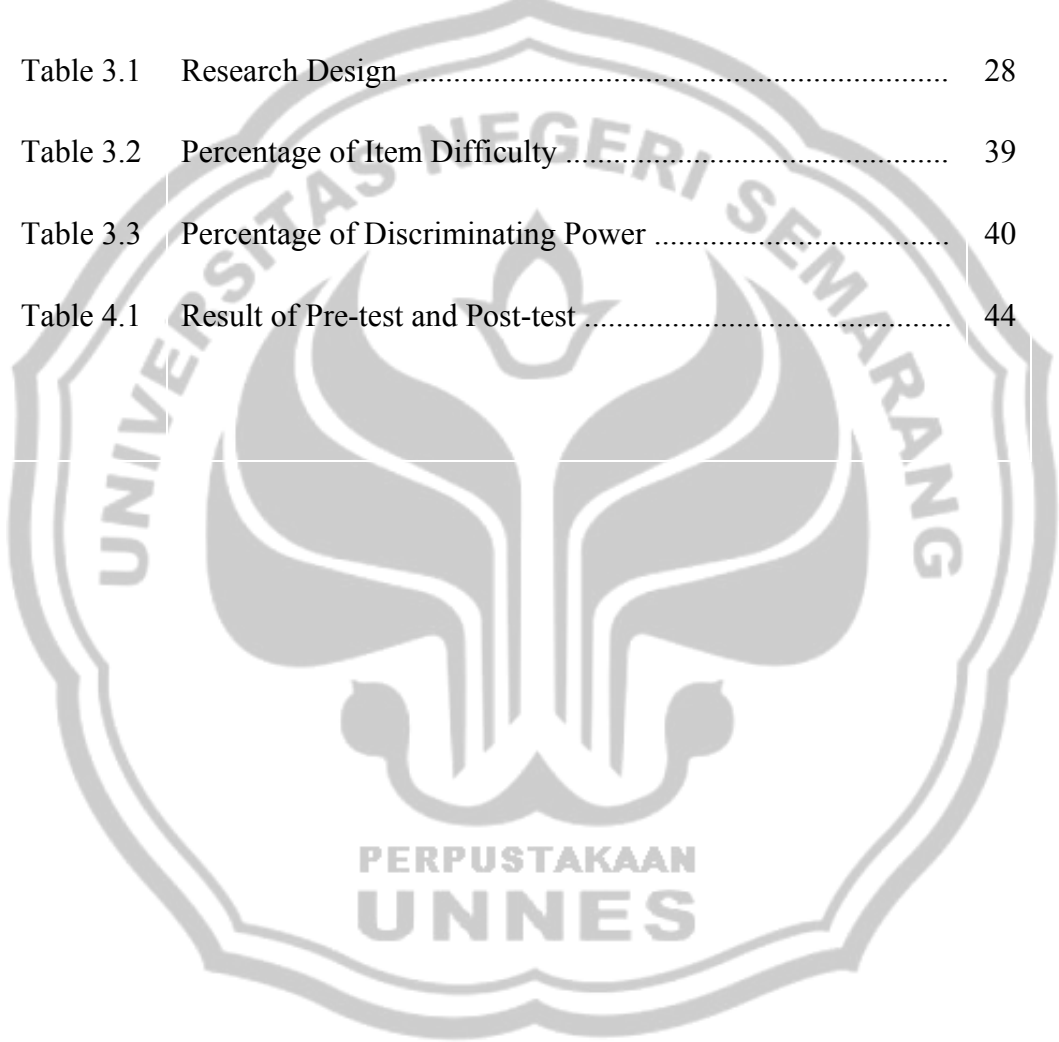
3.2.1	Population	32
3.2.2	Sample.....	33
3.3	Variables	33
3.3.1	Independent Variable	34
3.3.2	Dependent Variable.....	34
3.4	Procedure of the Experiment.....	34
3.5	Procedure of Data Collection.....	35
3.6	Method of Data Collection.....	36
3.7	Instrument	36
3.8	Try-out Test.....	37
3.9	Condition of the test.....	37
3.9.1	Validity.....	37
3.9.2	Reliability.....	39
3.9.3	Item Analysis	40
3.10	Technique of Data Analysis	43
IV RESULT OF INVESTIGATION AND DISCUSSION		45
4.1	Descriptions of the Research.....	46
4.1.1	Descriptions of the Experimental Group 1.....	46
4.1.2	Descriptions of the Experimental Group 2.....	49
4.2	Research Findings	51
4.2.1	Result of Pre-test and Post-test	51
4.3	Initial Data Analysis.....	53
4.3.1	Normality Test	53
4.3.2	Homogeneity Test.....	54
4.3.3	Similarity Test between Two Means	55
4.4	Final Data Analysis.....	55
4.4.1	Normality Test	55

4.4.2	Homogeneity Test	56
4.4.3	Hypothesis Test.....	57
4.5	Discussion	57
V	CONCLUSIONS AND SUGGESTIONS.....	59
5.1	Conclusions	59
5.2	Suggestions	60
	REFERENCES.....	61
	APPENDICES	64



LIST OF TABLES

Table		Page
Table 2.1	Content Standard for the 4 th Graders for Semester 1	14
Table 2.2	Content Standard for the 4 th Graders for Semester 2	15
Table 3.1	Research Design	28
Table 3.2	Percentage of Item Difficulty	39
Table 3.3	Percentage of Discriminating Power	40
Table 4.1	Result of Pre-test and Post-test	44



LIST OF CHARTS AND FIGURES

Chart		Page
4.1	The Average Score of Pre-test and Post-test	44

Figure		Page
2.1	Scheme of the Present Study Framework	27

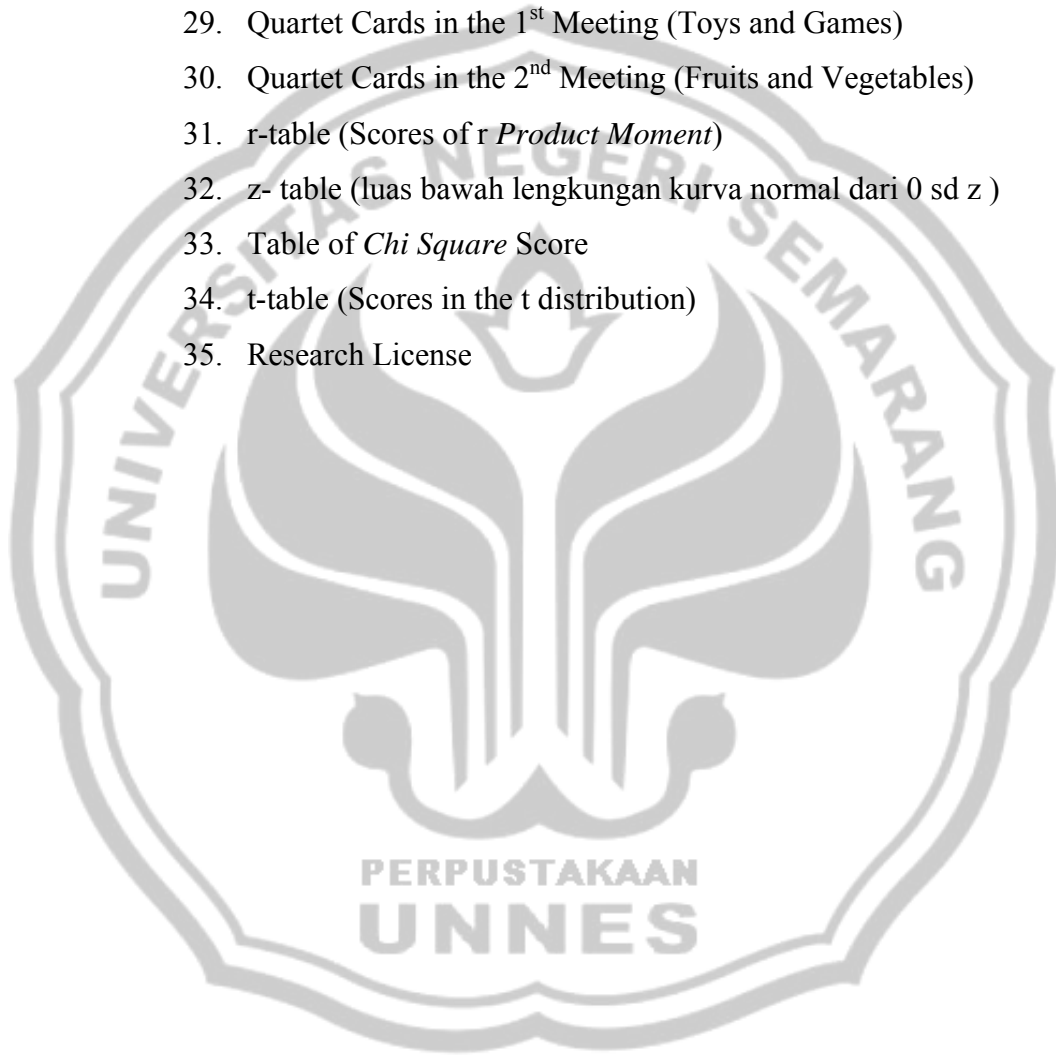


LIST OF APPENDICES

Appendix

1. List of Students
2. Pre-test Result of the Experimental Groups
3. Post-Test Result of the Experimental Groups
4. Try-out Test
5. Key Answer of Try-out Test
6. Result of Try-out Analysis
7. The Computation of Item Validity
8. The Computation of Item Difficulty
9. The Computation of Item Discrimination
10. The Computation of Item Reliability
11. Pre-test
12. Key Answer of Pre-test
13. Pre-test Normality of the Experimental Group 1
14. Pre-test Normality of the Experimental Group 2
15. Pre-test Homogeneity between Two Variances of the Experimental Group 1 and Experimental Group 2
16. Initial Data Similarity Test between the Means of the Experimental Group 1 and the means of the Experimental Group 2
17. Post-test
18. Key Answer of Post-test
19. Post-test Normality of the Experimental Group 1
20. Post-test Normality of the Experimental Group 2
21. Post-test Homogeneity between Two Variances of the Experimental Group 1 and Experimental Group 2
22. Hypothesis Test

23. Lesson Plan of Experimental Group 1 (1st meeting)
24. Lesson Plan of Experimental Group 1 (2nd meeting)
25. Lesson Plan of Experimental Group 2 (1st meeting)
26. Lesson Plan of Experimental Group 2 (2nd meeting)
27. Crossword Puzzles in the 1st Meeting (Toys and Games)
28. Crossword Puzzles in the 2nd Meeting (Fruits and Vegetables)
29. Quartet Cards in the 1st Meeting (Toys and Games)
30. Quartet Cards in the 2nd Meeting (Fruits and Vegetables)
31. r-table (Scores of r *Product Moment*)
32. z- table (luas bawah lengkungan kurva normal dari 0 sd z)
33. Table of *Chi Square* Score
34. t-table (Scores in the t distribution)
35. Research License



CHAPTER I

INTRODUCTION

This chapter consists of six sections: First, background of the study. Second, reasons for choosing the topic. Third, research questions. Fourth, objective of the study. Fifth, significance of the study. Sixth, outline of the report.

1. 1 Background of the Study

It is known that in our country, Indonesia, English is a foreign language. In order to develop English that is played as the first foreign language in our country, our government includes it in school curriculum as one of school subjects. It is not only taught in Junior High School and Senior High School, but also at Elementary School.

One of important things in learning language, especially English, is by mastering vocabulary. It is the basic things in learning language. Without mastering vocabulary, someone cannot speak what he is going to say, someone cannot write what he is going to write, and someone cannot understand what he reads either. Therefore, as language learners, students are supposed to master a lot of English vocabulary.

In fact, there are some problems that they often find when they learn it. One of the problems is because there is lack of teaching media used by the teachers in teaching vocabulary. It also happens in MI Al Iman Banaran Gunung

Pati Semarang. MI Al Iman Banaran Gunung Pati Semarang has included English in its curriculum as one of the local content subject, even English is taught to the first graders until the sixth graders there. Based on the first observation, the writer saw that the students find some difficulties in mastering English vocabulary which is caused by the minimum teaching media used in teaching vocabulary there.

In fact, based on KTSP, teachers are demanded to be creative. They are supposed to change a judgment that teachers are only the knowledge suppliers for their students, because teachers are also facilitators, motivators, and mediators for them. Students are not the object or the passive knowledge receiver anymore, but they are the active subject in the teaching and learning process that are demanded to get their own knowledge. Therefore, in this case, the students are supposed to try to get their own knowledge, while the teacher guides, facilitates, mediates, and motivates them to get what they need.

Moreover, children world are fun. As young learners, they need to be served with playful and energetic activities, because one of the young learners' characteristics is that they love playing. "They learn best when they are enjoying themselves" (Scott and Ytreberg, 1990: 2-4). Therefore, they will be interested and enjoy the teaching and learning process if there is a game. It means that an English teacher should use interesting teaching media to attract the students' attention during the teaching and learning process.

Because of that demand, nowadays, there are so many teaching media. Teaching media are something that can convey messages and stimulate students' mind, feeling, and desire, which cause learning process in themselves (Rustaman,

2003:135). In the case of mastering vocabulary, there are a lot of teaching media developed to teach English vocabulary among crossword puzzle and quartet cards game. "Crossword puzzle is a word puzzle that normally takes the form of a square or rectangular grid of white and shaded squares. The goal is to fill the white squares with letters, forming words or phrases, by solving clues which lead to the answers". (<http://en.wikipedia.org/wiki/Crossword>). According to Purwaningrum (2008) in her research entitled the effectiveness of crossword puzzles to improve the students' mastery of vocabulary (the case of the fifth graders SDN Cemoro Randusari Boyolali in the academic year 2007/2008), crossword puzzles can improve students' vocabulary mastery. Besides that, there is quartet card game. "Quartet card is a card collecting game. Students have to collect cards from other players by asking for them. The object is to collect sets of cards, usually sets of four cards of the same rank." (Wibowo, 2005). According to him in his research entitled teaching English vocabulary using quartet cards game (the case of fourth graders SDN Kebondowo 2 Ambarawa in the academic year 2005/2006), quartet card can improve students' vocabulary mastery.

Based on the background above and the result of the previous researches that showed that the use of crossword puzzles and quartet cards can improve students' vocabulary mastery, it is necessary to do a research in order to know which the most effective teaching medium in the teaching and learning process is, especially in teaching English vocabulary. Therefore, the writer intends to conduct a research entitled a comparative study of using crossword puzzle and quartet card

to enhance students' vocabulary mastery (a case of the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011).

1. 2 Reasons for Choosing the Topic

The writer chose the topic of a comparative study of using crossword puzzle and quartet card to enhance students' vocabulary mastery for the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang because of the following reasons:

- (1) Teaching English vocabulary to young learners especially the fourth grade students is not easy. The teachers are supposed to be creative and create an enjoyable situation.
- (2) Mostly, children like having fun. They like playing, singing, and some other fun activities. Therefore, by using interesting teaching media, i.e. crossword puzzle game and quartet card game, young learners will enjoy in learning English vocabulary.
- (3) As an English department student and a future English teacher, I am interested in investigating this problem because I want to participate in the education development. At least, I can do some help to the English teacher of MI Al Iman Banaran Gunung Pati Semarang in teaching her students by sharing some alternatives in teaching English vocabulary in order to help the students in mastering English vocabulary.

1. 3 Research Questions

The research questions can be stated as follows:

- (1) How does crossword puzzle enhance the fourth grade students' vocabulary mastery of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011?
- (2) How does quartet card enhance the fourth grade students' vocabulary mastery of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011?
- (3) Is there any significant difference of vocabulary mastery achieved by the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang who have been taught using crossword puzzles game from those taught using quartet card game in the academic year of 2010/2011?

1. 4 Objective of the Study

The objectives of the study can be stated as follows:

- (1) to find out how crossword puzzle enhances the fourth grade students' vocabulary mastery of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011.
- (2) to find out how quartet card game enhances the fourth grade students' vocabulary mastery of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011.
- (3) to find out whether there is any significant difference of vocabulary mastery achieved by the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang who have been taught using crossword puzzles game from those taught using quartet card game in the academic year of 2010/2011.

1. 5 Significance of the Study

Theoretically, there are some significances of this study. First, for students. There is any improvement in the students' vocabulary mastery after being taught using crossword puzzles and quartet cards game. Then, for English teachers. They will always try to make an enjoyable situation during the teaching and learning process.

Besides that, there are also some significances of this study practically. First, for students. The fourth grade students of elementary school are able to develop their thinking ability and get learning motivation in learning English vocabulary. Then, for English teachers. It will give information to English teachers about some kinds of vocabulary teaching media, i.e. crossword puzzle game and quartet card game.

1. 6 Definition of the Term

In order to avoid misunderstanding of the readers in understanding the means of “a comparative study of using crossword puzzle and quartet card to enhance students' vocabulary mastery (a case of the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011)”, it is necessary to present the following definition of term specifically:

1) Comparative Study

Sugiyono (2007:117) states that comparative study is a research which tests the population parameter in the form of comparison through the sample which is also in the form of comparison. However, what is meant by comparative

study here is a research which tests the comparison. In other words, it is a research which compares the vocabulary mastery achieved by the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang who have been taught by using crossword puzzle game from those taught by using quartet card game in the academic year of 2010/2011.

2) Crossword puzzle

Hornby (1974:206) states that crossword puzzle is a puzzle in which words have to be written (from numbered clues) vertically and horizontally in spaces on a chequered square. Because there are some types of crossword puzzle, the crossword puzzle that is used here is from picture to words, especially picture crossword with word list, because the type is appropriate to elementary school students' skill, especially for fourth grade students.

3) Quartet card

Mardiana (2007) states that a quartet card is a piece of stiff paper containing information played by a small number of players. The object of this game is collecting sets of cards, usually sets of four cards of the same rank. On the cards are pictures of members of families with their names below, each family has four members.

4) Vocabulary

Webster (1993: 1166) defines vocabulary as a list of words, and phrases, usually arranged and explained or defined. However, what is meant by vocabulary here is the English words as specified in the fourth graders curriculum. The

vocabulary which is used in this study includes vocabulary which relates to *Toys and Games* and also *Fruit and Vegetables*.

1. 7 Outline of the Report

This final project is divided into five chapters.

Chapter I includes background of the study, reasons for choosing the topic, research questions, objective of the study, significance of the study, and outline of the report.

Chapter II presents review of related literature. It is divided into three parts. They are review of the previous studies, theoretical background, and framework of the present study. Review of the previous studies presents the researchers' final project that has done in the same area with this study. Theoretical background presents the theories expressed by experts including the theory of characteristics of elementary school students, school based curriculum for teaching English at elementary school, general concept of vocabulary, teaching vocabulary in elementary school, general concept of media, definition of crossword puzzles, function and importance of crossword puzzle in teaching English, definition of quartet cards, and also function and importance of quartet card in teaching English. While framework of the present study presents a little description about the study.

Chapter III discusses the method of investigation that consists of research design, population and sample, variables, procedure of the experiment, procedure

of data collection, method of data collection, instruments, try out test, condition of the test, and technique of data analysis.

In chapter IV, the writer presents research findings and discussion which consist of descriptions of the research, research findings, initial data analysis, final data analysis, and discussion.

And as closing, chapter V presents the conclusions and suggestions of the study.



CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter consists of three sections: First, review of previous studies. Second, review of related literature. Third, framework of the present study.

2.1 Review of Previous Studies

Review of the previous study consists of some researches that have been done in this area. They can be used as references in this study. The writer has found some previous studies that use the same teaching media but they are different in the materials used. Those studies are: First, *“The Effectiveness of Crossword Puzzles to Improve the Students’ Mastery of Vocabulary: The Case of the Fifth Graders SDN Cemoro Randusari Boyolali in the academic year 2007/2008.”* The research was done in 2008 by Indah Widayati Purwaningrum. She used three learning materials; they were vocabulary items related to hobbies and daily activities, food and drinks, and clothes and costumes. Second, Tasuli’s final project (2000) entitled *“Crossword Puzzle as an Effective Way to Teach English Vocabulary: The Case of the Second year Students of SLTP 4 Rembang in the Academic Year of 1999/ 2000.”* In his study, he wanted to know the effectiveness of Crossword Puzzles in teaching English vocabulary. He used four learning materials; they were animals, entertainment, geography, and natural resources.

In the case of the quartet card, the previous studies are: First, the final project of Doni Aris Wibowo (2005) entitled *“Teaching English Vocabulary*

Using Quartet Cards Game: The Case of Fourth Graders SDN Kebondowo 2 Ambarawa in the Academic Year 2005/2006.” In his study, he used three topics; they were numbers, things around school, and things in the classroom. Besides that, there is Anita Mardiana’s study entitled “*Teaching Simple Noun Phrases Using Quartet Cards to the Fifth Graders of SD 1 Mlati Kidul Kudus in the Academic Year of 2006/2007.*” In her study, she taught simple noun phrases on chapter shapes, clothes and costumes, toys and games, and also food and drink by using quartet card.

From those studies above, the writer wants to compare the vocabulary mastery achieved by students who are taught by using crossword puzzles from those who are taught by using quartet cards in elementary school.

2.2 Review of Related Literature

There are some theories which base the research, they are the theory which relates to teaching and learning English in elementary school, vocabulary, and media.

2.2.1 Teaching and Learning English in Elementary School

In the case of teaching and learning English in elementary school, there are some points that will be presented among characteristics of elementary school students and school based curriculum for teaching English at elementary school.

2.2.1.1 Characteristics of Elementary School Students

The writer took the fourth grades because it is in this grade that English is taught as a local content in the elementary school curriculum. Their ages are good for

them to be more familiar in English. Teaching the fourth grade students means that the writer would be teaching children 8 to 10 years old. The general characteristics of the 8 to 10 years, according to Scott and Ytreberg are:

- (1) They are competent users of the mother tongue.
- (2) They can tell the differences between fact and fiction.
- (3) They love to play and learn best when they enjoy themselves seriously and like to think that what they are doing is real work.
- (4) They are enthusiastic and positive about learning.
- (5) They rely on the spoken word as well as the physical word to convey and understand meaning.
- (6) They are able to work with others and learn from others.
- (7) Their own understanding comes through eyes, hands, and ears. The physical world is dominant at all times.
- (8) They have very short attention and concentration span.

(Scott and Ytreberg, 1990:2-4)

By knowing those characteristics, the implications in teaching activity for young learners according to Scott and Ytreberg (1990: 5), are:

- (1) Words are not enough.
The teacher should not rely on the spoken words only. He/she should include movement and involve the sense in their activities. The teacher will need to have plenty of objects and pictures to work with. The teacher should demonstrate, speaking to the students.
- (2) Playing with the language.
Let the pupils talk to themselves with the language they can produce.
- (3) Language as language.
Becoming aware of language as something separate from the events taking place takes time. They use the language to be their own language just like a foreign language at the first stage for beginners.
- (4) Variety in the Classroom.
Variety in the classroom is much needed in teaching young learners because their concentration and attention spans are short. The teacher needs a lot of variety, for example by using pictures, songs, games, puppets, etc. This variety makes young learners motivated and the lessons interesting. It makes children familiar with foreign language.
- (5) Routines.
Children benefit from knowing the rules and being familiar with the situation is the role of the teacher to make them familiar with a

new language especially a foreign language such as English.

From the quotation above, it is clear that in teaching young learners, the teacher should use a lot of varieties, for example by using interesting teaching media. By using interesting teaching media the students will remember easier than without it. Moreover, the students will be more interested in following the lesson and the situation of the class will be more enjoyable. By this stage the students will become more familiar with foreign language and they will begin using it like their own language.

2.2.1.2 School Based Curriculum for Teaching English at Elementary School

School Based Curriculum is the newest curriculum in Indonesia. For further discussion, it will be discussed clearly in three sections. First, the definition of School Based Curriculum. Second, teaching English at elementary school based on School Based Curriculum, and third, teaching English at elementary school based on School Based Curriculum for fourth graders.

2.2.1.2.1 The Definition of School Based Curriculum

It is known that since the academic year of 2006/2007, curriculum that is used in Indonesia is School Based Curriculum (KTSP). School Based Curriculum is an operational curriculum which is made and implemented in every level of education in Indonesia including elementary school, junior high school, etc (BSNP, 2006).

According to Indonesian government regulation in “UU No. 20 tahun 2003 dan PP No. 19 tahun 2005” about SNP (Standar Nasional Pendidikan), every

school/madrasah should develop School Based Curriculum or KTSP (Kurikulum Tingkat Satuan Pendidikan) (KTSP, 2008).

From the statement above, it is clear that in elementary school, school based curriculum is developed as the realization of elementary school curriculum which is arranged by a team that consists of teachers and school committee under the coordination and the supervision of the educational department. And here it is its difference from the previous curriculum (Competence Based Curriculum/ CBC). CBC was developed by government, while SBC is developed by school and each education level, especially the teachers because they deserve to make their own learning material to be taught to the students in order to be appropriate with schools' need. However, in designing it, it should be oriented to SI (Standar Isi) and SKL (Standar Kompetensi Lulusan) from BSNP (Badan Standar Nasional Pendidikan) guideline (BSNP, 2006).

In its implementation, school based curriculum demands all elementary school teachers to make an effective teaching and learning situation which can excite students' activity and creativity during the class. Besides that, all elementary school teachers are supposed to create an enjoyable learning in order to make them enjoy and easier in understanding the lesson. Therefore, teaching and learning in elementary school should be effective, fun, enjoyable, educating, exciting, and also challenging.

2.2.1.2.2 Teaching English at Elementary School Based on School Based Curriculum

According to elementary school curriculum, elementary school can add some school subjects which called “muatan lokal” or local content. There are some local content subjects that are taught at elementary school, such as English, regional language, TIK (Teknologi Informasi dan Komunikasi), etc.

..., Pendidikan bahasa Inggris di SD/MI dimaksudkan untuk mengembangkan kemampuan berbahasa yang digunakan untuk menyertai tindakan atau *language accompanying action*. Bahasa Inggris digunakan untuk interaksi dan bersifat “*here and now*.” Topik pembicaraannya berkisar pada hal-hal yang ada dalam konteks situasi. Untuk mencapai kompetensi ini, peserta didik perlu dipajankan dan dibiasakan dengan berbagai ragam pasangan bersanding (*adjacency pairs*) yang merupakan dasar menuju kemampuan berinteraksi yang lebih kompleks.

(KTSP SD 2006: 403).

From the quotation above, it means that English in elementary school is intended to develop students’ language skill which is used to language accompanying action. English is used to interact and it is “here and now.” The topic is about everything which is in the context of situation. To achieve this competence, students need to be drilled and made to be common with some kinds of adjacency pairs which is the basic to reach more complex interaction ability.

As a local content subject, it has teaching objectives. According to KTSP, there are two objectives of teaching English at elementary school, they are:

- (1) to introduce English as an international communication language to students.
- (2) to give students some supplies in facing the demand of globalization era.
- (3) by studying English, students are expected to have ability to develop their communication competence in oral, limitedly, in language accompanying action in context of school.

(4)later, the students are expected to have awareness of essence and importance of English to develop their competitive capacity in global community.

(KTSP SD 2006: 403)

From the functions above, it is clear that English learning in elementary school is necessary in order to be able to communicate in English, at least by using simple English.

2.2.1.2.3 Teaching English at Elementary School Based on School Based Curriculum for Fourth Graders

According to the government regulation, English is started to be taught to elementary school students when they are at the fourth grade level. It means that it is, the fourth grade level, the basic level of English teaching at elementary school.

As stated above that the implementation of School Based Curriculum should be oriented to content standard (Standar Isi) which consists of competence standard (Standar Kompetensi) and basic competence (Kompetensi Dasar).

The following table is a table of content standard for the fourth graders of elementary school based on School Based Curriculum.

Table 2.1 Content Standard for the 4th Graders for Semester 1

Standar Kompetensi	Kompetensi Dasar
<p>Mendengarkan</p> <p>1. Memahami instruksi sangat sederhana dengan tindakan dalam konteks kelas.</p>	<p>1.1 Merespon dengan melakukan tindakan sesuai instruksi secara berterima dalam konteks kelas.</p> <p>1.2 Merespon instruksi sangat sederhana sederhana secara verbal</p>

	dalam konteks kelas.
<p>Berbicara</p> <p>2. Mengungkapkan instruksi dan informasi sangat sederhana dalam konteks kelas.</p>	<p>2.1 Bercakap-cakap untuk menyertai tindakan secara berterima yang melibatkan tindak tutur: mengenalkan diri, member salam/sapaan, member salam perpisahan, dan member aba-aba.</p> <p>2.2 Bercakap-cakap untuk meminta/ memberi jasa/barang secara berterima yang melibatkan tindak tutur: meminta bantuan, meminta barang, dan memberi barang.</p> <p>2.3 Bercakap-cakap untuk meminta/ memberi informasi secara berterima yang melibatkan tindak tutur: berterima kasih, meminta maaf, member maaf, melarang, memuji, dan mengajak.</p> <p>2.4 Mengungkapkan kesantunan secara berterima yang melibatkan ungkapan: <i>thank you, sorry, please, dan excuse me.</i></p>
<p>Membaca</p> <p>3. Memahami tulisan bahasa Inggris sangat sederhana dalam konteks kelas.</p>	<p>3.1 Membaca nyaring dengan melafalkan alfabet dan ucapan yang tepat yang melibatkan kata, frasa, dan kalimat sangat sederhana.</p> <p>3.2 Memahami kalimat dan pesan tertulis sangat sederhana.</p>
<p>Menulis</p> <p>4. Mengeja dan menyalin tulisan bahasa Inggris sangat sederhana dalam konteks kelas.</p>	<p>4.1 Mengeja ujaran bahasa Inggris sangat sederhana secara tepat dan berterima dengan tanda baca yang benar yang melibatkan kata, frasa, dan kalimat sangat sederhana.</p>

	4.2 Menyalin tulisan bahasa Inggris sangat sederhana secara tepat dan berterima seperti ucapan selamat dan pesan tertulis.
--	--

Table 2.2 Content Standard for the 4th Graders for Semester 2

Standar Kompetensi	Kompetensi Dasar
Mendengarkan 5. Memahami instruksi sangat sederhana dengan tindakan dalam konteks kelas.	5.1 Merespon dengan melakukan tindakan sesuai instruksi secara berterima dalam konteks kelas dan dalam berbagai permainan. 5.2 Merespon instruksi sangat sederhana sederhana secara verbal.
Berbicara 6. Mengungkapkan instruksi dan informasi sangat sederhana dalam konteks kelas.	6.1 Menirukan ujaran dalam ungkapan sangat sederhana secara berterima. 6.2 Bercakap-cakap untuk menyertai tindakan secara berterima yang melibatkan tindak tutur: memberi contoh melakukan sesuatu dan member aba-aba. 6.3 Bercakap-cakap untuk meminta/ memberi jasa/ barang secara berterima yang melibatkan tindak tutur: meminta bantuan, meminta barang, dan memberi barang. 6.4 Bercakap-cakap untuk meminta/ memberi informasi secara berterima yang melibatkan tindak tutur: meminta ijin, member ijin, tidak menyetujui, menyangkal, dan meminta kejelasan. 6.5 Mengungkapkan kesantunan secara berterima yang melibatkan ungkapan: <i>thank you, sorry, please, dan excuse me.</i>

<p>Membaca</p> <p>7. Memahami tulisan bahasa Inggris sangat sederhana dalam konteks kelas.</p>	<p>7.1 Membaca nyaring dengan ucapan yang tepat dan berterima yang melibatkan kata, frasa, dan kalimat sangat sederhana.</p> <p>7.2 Memahami kalimat dan pesan tertulis sangat sederhana.</p>
<p>Menulis</p> <p>8. Mengeja dan menyalin tulisan bahasa Inggris sangat sederhana dalam konteks kelas.</p>	<p>8.1 Mengeja ujaran bahasa Inggris sangat sederhana secara tepat dan berterima dengan tanda baca yang benar yang melibatkan kata, frasa, dan kalimat sangat sederhana.</p> <p>8.2 Menyalin tulisan bahasa Inggris sangat sederhana secara tepat dan berterima seperti ucapan selamat dan pesan tertulis.</p>

(KTSP SD 2006: 404-407)

2.2.2 Vocabulary

It is known that vocabulary is one of the main parts of language. For further discussion, it will be discussed clearly in two sections, they are general concepts of vocabulary and teaching vocabulary in elementary school.

2.2.2.1 General Concepts of Vocabulary

Vocabulary is an important element in a language besides pronunciation and grammar. Vocabulary supports the speakers in communication to express their idea in the target language.

The writer would like to present several definitions about vocabulary before giving more explanation.

Webster (1993: 1166) defines vocabulary as a list of words, and phrases, usually arranged and explained or defined.

Similarly, Hornby (1995:1331) defines vocabulary as:

- (1)The total number of words in a language.
- (2)All the words known to a person or used in a particular book, subject, etc.
- (3)A list of words with their meanings, especially one that accompanies a textbook in a foreign language.

From the definitions above, it could be concluded that vocabulary is a stock of words, written or spoken that has certain meanings from a certain groups of people.

2.2.2.2 Teaching Vocabulary in Elementary School

Students of Elementary schools are expected to have the skills of the language in simple English. Teachers have aim at giving introduction to the language, which means, teaching processes have to be utilized the existing context of situation. Teachers have to do this because teaching English to children is different from teaching it to adults, especially in teaching vocabulary.

Vocabulary that is introduced by the teacher to the class is taken from the text book he uses, but he can also add other vocabulary that is relevant to the students. The chosen vocabulary should consider several guidelines as suggested by Haycraft (1978:92) as follows:

- (1)Commonest words

They are the words which are commonly used or the words that the students need. By teaching common words, the students will often

find them and it will be easy for them to understand and to memorize.

(2) Students' need

The words that are needed by the students are usually worth to be taught to the students. If the students need to know them they will be motivated to learn, because motivation will ensure them to use the words in communication.

(3) Students' language

If the students are from a language group, knowledge of their language can be very helpful. The words that are similar in their language and English will be learned easily, for example, the word "bottle" in Indonesia will be "botol", "glass" will be "gelas", and so on.

This means that in teaching vocabulary, the teacher should be selective in choosing the English words that will be taught to the students. He or she should choose the words which are commonly used, words which are needed by the students, and also words which are similar in their native language.

2.2.3 Media

Gerlach and Ely (1990:241) state that medium is any person, material, or event that establishes conditions which enable learners or students to acquire knowledge, skills, and attitude. Brown (1964:7) defines media as things that help the teachers' implant of media of what is presented in the mind of the students.

From those definitions above, it can be concluded that medium is instrument used by the teacher which can help the teaching and learning process because it can make the students easy to understand the material given to them.

Kemp (1985: 36-40) classifies media into eight broad groups. Those classifications are:

(1) Printed Media

A number of materials prepared on paper, many serve instructional or informational purposes. They are classified as printed media and consist of three groups: (a) Learning aids like guide sheet, (b) Training material like handout, (c) Informational material like brochure, newsletter, and annual report.

(2) Display Media

Most display media are used by an instructor as information which is presented in front of small class or audience. This category includes chalkboard, flip chart, cloth board, and also bulletin board.

(3) Overhead Transparencies

Transparencies are popular form of instructional media. The use of large transparencies is supported by the development of light weight, efficient overhead projectors combined with simple technique for preparing transparencies and by the dramatic effectiveness of medium. Overhead projector is especially useful for instructing large group on all levels.

(4) Audio-Tape Recording

Audio material is economical way to provide certain type of informational or instructional content. Recording maybe prepared for group or more commonly individual listening.

(5) Slide Series and Filmstrips

Slide is a form of projected media which are easy to prepare. They frequently serve as the starring efforts in a media producing program.

(6) Multi-Image Presentation

Combination of visual material can be effective when used for specific purposes. Two or more pictures are projected simultaneously on one or more screens for group viewing.

(7) Video and Motion Picture

Video and film are both “media of motion”. They should be considered for used whenever motion is inherent in a subject, or when it is necessary to communicate and understanding of a subject. Video or film can be more effective than other instructional media for relating one idea to another, for building a continuity of thought and for creating dramatic effect.

(8) Computer Based Instruction Media

Computer based instruction refers to any application of computer technology to the instructional process. It includes using computer to present information, to tutor a learner, to provide practice for developing a skill, to stimulate a process which is being studied and to manipulate data to solve problems. Among instructional media, computer based instruction offers the unique ability to ask a learner a question, record and judge the learners’ response and the use of that information to control the sequence of instructional that follow.

Based on the quotation above, we can say that crossword puzzles and quartet card can be included to printed materials because both of them are printed.

While according to Kimtafsirah (1998:4) instructional media for teaching language can be classified into:

- (1) Games, for example: words and role playing
- (2) Visual media. It is media that can be seen such as black board and picture.
- (3) Audio media. It is media which can be heard such as radio and tape recorder.
- (4) Audio and visual media such as television and computer.

The quotation above strengthens the assumption that crossword puzzles and quartet card games belong to teaching media because both of them are two kinds of game, while games itself is included into one of the teaching media.

2.2.3.1 Crossword Puzzle

One of teaching media used in teaching vocabulary is crossword puzzle. The discussion about crossword puzzle will be discussed clearly in three sections. First, definition of crossword puzzle. Second, types of crossword puzzle, function and importance of crossword puzzle in teaching English.

2.2.3.1.1 Definition of Crossword Puzzle

As we know that learning English is not easy, especially for elementary school students because English is a foreign language in Indonesia. Therefore, it is necessary for the teachers to be creative in order to make them enjoy in learning English, especially in learning English vocabulary, as one of the language

components. One of the ways that teachers can do is by using games, including crossword puzzle.

Crossword puzzle is one of vocabulary games. This kind of game is popular enough in Indonesia. According to Paul (2003:187), crossword puzzle is a popular game which is using words the children have learned and some pictures as clues. The clues can also be definitions or sentences with gaps if the children's level is high enough.

Based on (http://www.abcteach.com/directory/fun_activities/crossword), crossword puzzle is a group of words that have been arranged horizontally and vertically so that each word crosses at least one other word at a common letter. It is a fun way to practice spelling and reading comprehension, and to reinforce vocabulary.

While according to Hornby (1974:206), crossword puzzle is a puzzle in which words have to be written (from numbered clues) vertically and horizontally in spaces on a chequered square.

From those definition, the writer concludes that crossword puzzle is a kind of game to practice spelling and reading, and reinforce vocabulary that have been arranged horizontally and vertically so that each word crosses at least one other word at a common letter.

2.2.3.1.2 Types of crossword puzzles

Because in this research the writer uses crossword puzzle, it will be better for us to know the type of crossword puzzles. There are some types of crossword puzzles. They are:

(1) From picture to words;

This game function is to identify pictures into words. The teacher will write the name of picture or objects in the squares. Each object is arranged according to the number and the cross-down squares. The students have to write the name of object in the correct place in the crossword puzzles.

(Tim Instruktur Jateng, 1999: 60)

Based on its level of difficulty, this kind of crossword puzzles is divided into four kinds, they are:

(1) Picture Crossword with Word List

Students sound out words from the words list and then match them with the picture. Students copy the words from the word list into the crossword puzzles.

(2) Picture Crossword (No Word List)

Students use the picture clues to figure out the words that go in the crossword. Students print the words from the picture clues into crossword puzzles.

(3) Word Clues (Regular) Crossword with Word List

Students use the verbal clues and the word list to figure out where the words go in the crossword. Students print the words from the word list into the crossword puzzles.

(4) Word Clues (Regular) Crossword (No Word List)

Students use the verbal clues to figure out the crossword. Students print the words into the crossword puzzles.

(<http://www.dltk-holidays.com/easter/m-crossword.htm>)

(2) Translation Crossword;

In this activity, the clue is given in the native language and the answers are in the target language or vice versa. It is possible that the clues are given both in the native and the target languages.

(Larcom, 2003: 4-5)

(3) Anagrams;

Based on (<http://www.centrosoftware.com/anagrams.html>), anagram is a game where students have to arrange the word into a good word. Anagram only needs a little more preparation but it is fun and students will be interested with this game.

Based on those types of crossword puzzles above, the writer uses from picture to words, especially picture crossword with word list as media in this

study, because the type is appropriate to elementary school students' skill, especially for fourth grade students.

2.2.3.1.3 Function and Importance of Crossword Puzzle in Teaching English

In order to make the students easier in learning or understanding, teacher should be able to create new interesting methods through games including crossword puzzle. Since the students cannot always successfully in learning just by listening to the teacher or by reading some books on the English lesson, it is hoped that it can attract student's motivation and attention.

According to Tasuli (2000: 6-8) there are several functions of crossword puzzle in teaching English. They are:

- (1) It will help the teachers draw the students' interest and engage their motivation.
- (2) It can also make the students active during the teaching and learning process.
- (3) The teachers are able to stimulate their students an active way and urge them to take part in the activities in which they have a chance to produce some English words with correct forms or to spell them correctly.
- (4) It will help the students develop their inner selves.
- (5) It motivates them to know more about the new vocabulary.
- (6) It helps them relate to others more effectively and cooperatively.
- (7) It trains them in creative freedom as they feel less embarrassed or nervous, so they become more self-confident.
- (8) It gives a challenge to solve problems in an enjoyable situation.
- (9) It helps those who are slow learners or demotivated students to grasp the target of the lesson.
- (10) It can make the teachers to be more creative.

From the above quotation, it means that crossword puzzle is very useful in teaching English vocabulary. It is not only useful for students, but also useful for teacher. For students, it can excite the students to be active in the class because they are urged to take part in the class activity. Besides that, it can help students to

be more self-confident because they are trained in creative freedom as they feel less embarrassed or nervous. Afterwards, it also gives them a challenge to solve problem in an enjoyable situation, so that they do not feel bored and stressed in solving the problem given to them. And the most important thing is that it can excite the students' motivation to know more about new vocabulary because basically, when a child feels enjoy with something, he or she will be more interested in knowing more about it.

While for teacher, it can make the teacher to be more creative because to create an enjoyable situation which is loved by young learners, teachers are supposed to think creatively about how to make the students enjoy with the lesson in the class.

2.2.3.2 *Quartet Card*

The other example of teaching media is quartet card. The discussion of quartet card will be discussed clearly in two sections, they are definition of quartet card and function and importance of quartet card in teaching English.

2.2.3.2.1 Definition of Quartet Card

The writer would like to propose the idea of the Quartet Card Game. According to Wibowo (2005) quartet card game is a card collecting game. Students have to collect cards from other players by asking for them. While Mardiana (2007) states that a quartet card is a piece of stiff paper containing information played by a small number of players.

The object of this game is collecting sets of cards, usually sets of four cards of the same rank. On the cards are pictures of members of families with their names below, each family has four members.

The activity is similar like the Happy Family game. The activities may function as a vocabulary review, a review of the previous lesson and they can be applied at the beginning, and or at the end of the lesson.

The process of the activity of quartet card is described below:

- (1) there must be a small number of players (minimum three players).
- (2) one of the players shuffles the pack of cards and deals cards to each player. Each of them gets four cards. And the others are put in a pile in closed position.
- (3) to do this, they take turns to ask other players for particular cards. If the player who is asked has the card, he/she has to give it and the one who asks for the card can keep on asking for the other cards to the other player.
- (4) if the player who is asked doesn't have the card, the one who asks for the card can't continue the game because the turn goes to the next student and he/she can take a card from the pile.
- (5) once a player has completed a quart or perhaps they are dealt with a quart, then the completed set must be laid down on the table.
- (6) the game ends when there are no further cards to be had and the winner is the one who has collected the most quarts (families).

(http://www.ultimate-top-trumps.co.uk/game_rules.htm)

2.2.3.2.2 Function and Importance of Quartet Card in Teaching English

Quartet card game is an interesting and useful activity that can be used whether for practicing listening, speaking, writing and reading skills, spelling dictation or as a vocabulary review.

It can be used in the beginning as a review of the previous lesson, at the middle of lesson as a main part of teaching, or at the end of lesson as a practice for the material given.

This kind of game is very suitable mostly for children, since it is entertaining. With this activity, students will enjoy English learning and the most important thing of all is they will think that English is fun, and they will be motivated to learn English.

2.3 Framework of the Present Study

In this study, the writer finds out the differences of the vocabulary mastery achieved by students taught by using crossword puzzles from those who are taught by using quartet cards. Therefore, the writer took two classes, they are IVA and IVB. The students of IVA are taught English vocabulary by using crossword puzzles, while students of IVB are taught English vocabulary by using quartet cards.

Each class is taught for two times with the same learning materials. For the first meeting they are taught vocabulary items related to toys and games. While for the second meeting, they are taught vocabulary items related to fruits and vegetables.

Schematically, the framework of the present study can be seen in the diagram below:

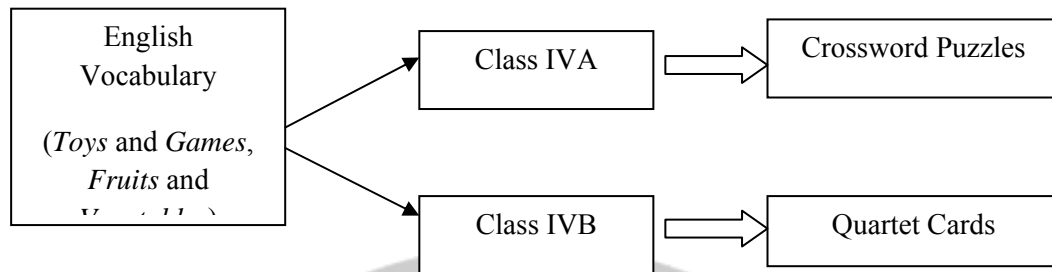


Figure 2.1 Scheme of the Present Study Framework



CHAPTER III

METHOD OF INVESTIGATION

In this chapter, the writer presents the main sources of data, the research design, the population and sample of the research, variables, procedure of the experiment, procedure of data collection, method of data collection, instrument, the construction of the test, try-out test, condition of the test including validity and reliability of the test, item analysis including item difficulty and discriminating power, and the last part of this chapter is about the technique of data analysis.

3.1 Research Design

The research method used in this study was true experimental method by dividing the subjects into two experiment groups. The first group was the experiment group that was taught using crossword puzzles game, while the second group was the experiment group that was taught using quartet card game.

The research design that is used is pre test-post test comparison group design. This design is shown with this following form:

Table 3.1 Research Design

Group	Pre test	Treatment	Post test
Group: E1 Crossword Puzzle	O1	X 1	O2
Group: E2 Quartet Card	O1	X 2	O2

Note:

G E1 Crossword Puzzle : Experiment group 1 using crossword puzzle game

G E2 Quartet Card : Experiment group 2 using quartet card game

X1 : Treatment using crossword puzzle game

X2 : Treatment using quartet card game

O1 : Pre test

O2 : Post test

(Arikunto 2006: 86)

In this design, the observation was done twice, before and after the experiment. The observation that is done before the experiment (O1) is called pre-test, and the observation that is done after the experiment (O2) is called post-test. The difference between O1 and O2 is assumed as the effect of the treatment/experiment.

3.2 Population and Sample

The next discussion of this chapter is about population and sample.

3.2.1 Population

Sutrisno Hadi (1980: 35) defines that “population is a group of people or items from which the data are collected.” Besides that, Saleh (2001: 33-34) states that “population is a group of people or object which is going to be known its situation through the investigation.”

In this research a group of people that was taken as the population is the fourth graders of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011. The writer chose the fourth graders of MI Al Iman Banaran

Gunung Pati Semarang as the population because according to the government regulation, the fourth grade is the basic level of English teaching in elementary school. Therefore, the writer wanted to help the fourth graders of MI Al Iman Banaran Gunung Pati Semarang as the beginners in learning English, especially in helping them in mastering English vocabulary as it is one of the important things in learning English. Besides that, the writer chose MI Al Iman Banaran Gunung Pati Semarang because of its location which is not far from UNNES campus (only 1 km from the school to campus). Therefore, the writer thought that this research also could be considered as an activity of community service around campus.

3.2.2 Sample

Besides population, the writer took a note about sample. Best (1981: 130) states that “A sample is a small proportion of population selected for observation and analysis”. While, Kerlinger (1965:118) states that a sample is a part of a population, which is supposed to represent the characteristics of the population”. There are 55 students of the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang. Class IVA has 27 students, while class IVB has 28 students. Since the students are less than one hundred, the writer took all of the students as sample. As stated by Arikunto (2002: 112) if the students less than one hundred, then, the entire subject should be taken.

3.3 Variables

Brown (1980: 8) points out that variable is something that may vary or differ. There are two variables that can be involved in this study.

3.3.1 Independent Variable

According to Sugiyono (2007: 4), independent variable is the presumed of the dependent variable. In this experiment, the independent variable which is called treatment (X), is the use of crossword puzzles and quartet card.

3.3.2 Dependent Variable

Sugiyono (2007: 4) says that dependent variable is the presumed effect of the independent variable. The dependent variable of this experiment which is called (Y) is the students' vocabulary mastery.

3.4 Procedure of the Experiment

First of all, this study was started by finding some problems, they are: there are a lot of teaching media used in teaching English vocabulary such as crossword puzzles game and quartet card game. Besides that, there are so many researches that discuss about the effectiveness of those teaching media to improve students' vocabulary mastery. However, there is no research that compares between them. That's why the writer is interested in investigating this case in order to know which teaching media is more effective in teaching English vocabulary.

The next procedure was deciding the research method and designing the research design. Besides that, the writer also made and did the procedure of data collection needed in the research. After that, the writer tested the hypothesis and tried to find the result of the research. Then, the last procedure is making a conclusion.

3.5 Procedure of Data Collection

In collecting the data, the writer did some steps. They were:

- (1) Collecting the data of the students which became the population and the sample of the research.
- (2) Deciding the experiment group that was treated by using crossword puzzle and the control group that was treated by using quartet card.
- (3) Doing a try out test which was done in order to know the validity and the reliability of the instrument. In this case, it was given to the students who did not belong to the subject of the research. And the writer took the fifth grade students (VA) as the try out class.
- (4) Counting the validity and reliability of the try out test and choosing the items that would be used to be the pre-test and post-test.
- (5) Giving pre-test that contained some vocabularies (which were based on the elementary school curriculum) to the subjects of the research including the experimental and the control group with the same test that was aimed to find out the prior students' vocabulary mastery.
- (6) Giving treatment to the subject of the research by using crossword puzzle to class IVA and quartet card to class IVB that was aimed to find out the significance between groups experiencing different teaching media.
- (7) Giving post-test to the subjects of the research including the experimental and the control group with the same test.
- (8) Evaluating the result of the tests from the two groups.
- (9) Writing the report of the study.

3.6 Method of Data Collection

As we know that there are some methods of data collection such as interview, questionnaire, test, or document. However, in this study the writer used two data collecting methods, they are:

- (1) Documentation: It was used to get the students' list that belonged to the subject of the study.
- (2) Tests: They were used to measure the students' vocabulary mastery. The tests were done twice, they are pre-test and post-test. Pre-test was done in order to know the students' vocabulary mastery before given the treatment and post-test was done in order to know the students' vocabulary mastery after given the treatment.

3.7 Instrument

An instrument plays an important role in a research in order to collect data required in an experiment. The instrument that was used in this research was a vocabulary test. The tests were given before and after the students are taught using crossword puzzle and quartet card in each class. Heaton (1975: 5) explains that "A test of vocabulary measures the students' knowledge of the meaning of certain words and words group. Such a test may examine the students' active vocabulary (the words he should be able to recognize and understand when he is listening to someone on when he is reading)."

In this study, the writer chose the instruments in the form of multiple choice items, and it was chosen because of the following reasons: 1) It is an

objective test type. 2) It is easy to score, and 3) The way of answering this kind of test is easy for the students.

The writer conducted the test consisting of 20 items and the writer gave 35 minutes to do their best. It covered two topics: toys and games, and fruits and vegetables. There are four options A, B, C, and D. One of the options is the answer while the other is the distracters

3.8 Try-out Test

Arikunto (2006: 167) states that the goal of the try-out is to obtain a reliable instrument.

In this study, the try-out test was conducted at MI Al Iman Banaran Gunung Pati Semarang on March 8, 2011. The test was tried out to 28 students. The try-out test consisted of 30 items and the time provided was 35 minutes. Then, the tests items were computed to determine their validity and reliability, the index of item difficulty and the index of discriminating power.

3.9 Condition of the test

Harris (1969: 13) said that all good tests possessed three qualities, they are validity, reliability, and practically. Those characteristics of a good test would be explained further below:

3.9.1 Validity

Arikunto (2006, 168) states that validity is the measurement which shows the level of precision of an instrument.

According to Haris (1969: 19-21) states that validity is distinguished into three kinds. They are content validity, empirical validity, and face validity. In this study, the writer concerns to content validity because content validity is particularly important to achievement test. In content validity, a valid instrument is an instrument which has high validity. On the contrary, an invalid instrument is an instrument which has low validity.

And the formula used in measuring the validity of an instrument according to Arikunto (2007: 69) is by using Product Moment Formula.

$$r_{xy} = \frac{N \sum xy - \sum x \sum y}{\sqrt{\{N \sum x^2 - (\sum x)^2\} \{N \sum y^2 - (\sum y)^2\}}}$$

Note:

- r_{xy} : validity of the item
- N : total number of the respondent
- $\sum x$: the sum of total item
- $\sum y$: the sum of item score
- $\sum xy$: the sum of item score multiplying the total score
- $\sum x^2$: the sum of the square of the total item
- $\sum y^2$: the sum of the square of the item score

Then, the result of r_{XY} is consulted to r_{tabel} *product moment* with $\alpha = 5\%$.

When $r_{XY} > r_{tabel}$ the test item is considered to be valid and when $r_{XY} < r_{tabel}$, it is invalid. Based on the analysis of try-out test, there are 20 test items which are valid, and 10 test items which are invalid. The invalid items are the test items

number: 5, 7, 8, 11, 12, 20, 21, 25, 29, 30. The rest of the calculation can be seen in appendix 7.

3.9.2 Reliability

Besides validity, reliability is another important criterion in judging the adequacy of a measurement. It is important to know whether the test as an instrument for collecting data is reliable or not.

Reliability refers to the consistency of the test scores. Tinambunan (1988: 14) states “a test is reliable if it is consistently yields the same or nearly the same ranks over repeated administrations.”

According to Arikunto (2007: 100) to measure the reliability of the test, the formula used is by using KR 20 formula.

$$r_{11} = \left[\frac{n}{(n-1)} \right] \left[\frac{S_t^2 - \sum P_i q_i}{S_t^2} \right]$$

Note:

r_{11} : reliability of the test

n : the number of the test items

1 : constant digit

S_t^2 : the total variants

P_i : the proportion of the students answering the item correctly

q_i : the proportion of the students answering the item wrongly,

(or $q_i = 1 - P_i$)

$\sum p_i q_i$: the sum of p_i multiplying q_i

To know S_t^2 the following formula is applied.

$$S_t^2 = \frac{\sum y^2 - \left(\frac{\sum y}{N} \right)^2}{N}$$

Where,

S_t^2 = the total variants

$\sum y$ = the total score

$\sum y^2$ = the quadratic total score

N = the number of students

Then, the result of r_{11} is consulted to r_{tabel} *product moment*, when $r_{11} > r_{tabel}$, the instrument is considered to be reliable. Based on the reliability analysis, the $r_{11} = 0.786$ and $r_{tabel} = 0.3338$. It means that the $r_{11} > r_{tabel}$. Therefore, we can say that the instrument is reliable. The rest of the calculation can be seen in appendix 8.

3.9.3 Item Analysis

According to Tinambunan (1988: 137), the function of item analysis is to reexamine each item to find out its strength and weakness. This item analysis involves analysis of index of item difficulty and index of discriminating power.

3.9.3.1 Item Difficulty

Heaton (1975: 172) says, “The index of difficulty of an item simply shows how easy or difficult the particular item proved in the test”. It is needed to identify whether an item is difficult or easy one.

According to Arikunto (2007: 207) to calculate the index of difficulty of an item, we can use the following formula which is found by Dubois:

$$P = \frac{B}{JS}$$

Note:

P : Index of difficulty

B : The number of students who answered correctly

JS : The total number of the students

The index of difficulty can be classified as follows:

$P < 0.30$: difficult

$0.30 \leq 0.70$: medium

$P > 0.70$: easy

Based on the calculation of index of difficulty, it is obtained the percentage of the test item difficulty which can be seen in the following table below:

Table 3.2 Percentage of Item Difficulty

No	Criteria	Number of item	Total (Σ)	Percentage (%)
1	Difficult	8, 10, 11, 27, 29.	5	16.67 %
2	Fair (medium)	3, 4, 6, 7, 9, 12, 13, 14, 15, 18, 19, 20, 22, 24, 30.	15	50 %
3	Easy	1, 2, 5, 16, 17, 21, 23, 25, 26, 28.	10	33.33%

The calculation of the index of difficulty can be seen in appendix 9.

3.9.3.2 Discriminating Power

The index of discriminating power is needed to identify whether or not the item can be used to differentiate the more able students from the less able students. Heaton states “the discrimination index of an item indicates the extent to which the item discriminates between the testees, separating the more able testees from the less able.”

According to Arikunto (2007: 213) the calculation of the discrimination power can be formulated as follows:

$$D = \frac{BA}{JA} - \frac{BB}{JB}$$

Note:

- D : Discrimination index
- JA : The number of students in upper group
- JB : The number of students in lower group
- BA : The number of students in the upper group who answered the item correctly
- BB : The number of students in the lower group who answered the item correctly

The classification of the discrimination index is presented below:

- $D < 0.0$ very poor
- $0.0 < D \leq 0.20$ poor
- $0.20 < D \leq 0.40$ fair
- $0.40 < D \leq 0.70$ good

$0.70 < D \leq 1.00$ excellent

Based on the calculation of discriminating power, it was obtained the percentage of discriminating power which can be seen in the following table below:

Table 3.3 Percentage of Discriminating Power

No	Criteria	Number of Item	Total	%
1	Excellent	-	-	-
2	Good	1, 3, 8, 9, 22, 26, 27.	7	23.33%
3	Fair	2, 4, 5, 6, 10, 11, 13, 14, 15, 16, 17, 18, 19, 23, 24, 25, 28, 30.	18	60%
4	Poor	12, 20, 21.	3	10%
5	Very Poor	7, 29.	2	6.67%

The calculation of discriminating power can be seen in appendix 10.

3.10 Technique of Data Analysis

In analyzing the data of the research, the writer takes the following steps:

(1) Tabulating the Data

It includes scoring the test items of each students of the research and arranging the scores into rank order.

(2) Using the appropriate formula for analyzing the data

The writer analyses the data by comparing the mean of experimental group and the mean of control group. Then, to know whether there is any difference between two means or not, the writer applies the t-test formula.

The formula is below:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

with

$$S = \sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}}$$

Note:

t : t- test (to compare means of two group of samples)

\overline{X}_1 : means of group 1

\overline{X}_2 : means of group 2

n_1 : number of samples of group 1 (Crossword puzzle group)

n_2 : number of samples of group 2 (Quartet card group)

S = total standard deviation

S_1 = standard deviation of group 1 (Crossword puzzle group)

S_2 = standard deviation of group 2 (Quartet card group)

By using the formula above, the writer could determine whether there is a significant difference between the means of students that are taught by using crossword puzzle and those who are taught using quartet card.

CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

This chapter presents the results of the research which contain the result of pre-test and post-test, initial data analysis, final data analysis, and also the discussion of the research findings.

As stated in the previous chapter, this research aims to find out which group of the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011 achieves better vocabulary mastery between those who were taught using crossword puzzles and those who were taught using quartet card. Therefore, this study was called a comparative study because the subjects of this research were divided into two groups. The experimental group 1 (class IV A) that consisted of 27 students was taught by using crossword puzzles and the experimental group 2 (class IV B) that consisted of 28 students was taught by using quartet card. However, before the treatment was given to the students, the researcher gave them pre-test on vocabulary in order to know their prior condition/mastery whether both of those two classes were proper to be compared or not. After the pre-test, the researcher gave treatment to both of the experimental groups. Each of them was treated twice (two meetings). In the first meeting, the learning materials taught was the vocabulary which related to toys and games. While in the second meeting, the learning material taught was the vocabulary which related to fruits and vegetables. Afterwards, the researcher gave them post-

test which was done to measure the improvement of students' vocabulary mastery after getting the treatments. Then, the gathered data from the pre-test and the post-test were calculated to know which teaching media is more effective to be used between crossword puzzles and quartet card game in teaching English vocabulary to the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011.

4.1 Descriptions of the Research

In this part, the writer describes the activities which were done during the research. First, the writer describes the activities which were done to the experimental group 1 and followed by the descriptions of the activities which were done to the experimental group 2.

4.1.1 Descriptions of the Experimental Group 1 (Crossword Puzzle Group)

At the beginning of the research, before giving treatment, the experimental group 1 was given a pre-test. The purpose of this test was to check the students' ability in mastering English vocabulary whether the students were familiar or not with the words that would be presented. The pre-test was conducted on Monday, March 14, 2011. There were 27 students who followed this test. They had to answer 20 multiple-choice items given by the writer. The given test was about vocabulary which related to toys and games and also fruits and vegetables.

After the pre-test, the writer gave them treatment by using crossword puzzle. This treatment was given twice. The first treatment was given on Monday, March 28, 2011. Here, the writer taught the experimental group 1 the vocabulary

which related to toys and games. In this meeting, firstly, the writer showed some pictures related to toys and games to the students. After that, she asked them “What picture is this?”. Then writer showed the correct answer of it. After that the writer asked the students to guess what they are going to learn. Then, the writer asked what kind of toys and games that they know. The writer wrote the students’ answers on the blackboard by giving them know their meanings in English. Next, the writer pronounced those words written on the blackboard one by one and she asked the students to repeat after her. After all, the writer divided the students into 6 groups. Some of them consisted of four students and the other consisted of 5 students. The writer gave them two pieces of papers containing crossword puzzle and its clue (1 group 2 papers). Then, the writer explained the rules of the game. The students were asked to match the words from the word list with the picture. Then, they were asked to copy the words from the word list into the crossword puzzle. After that, the students were asked to do the crossword puzzle with their groups. The writer gave them 10 minutes to do it. And the group that could answer the most correct answer would be the winner. After giving the explanation, the writer asked the students to start doing the crossword puzzles. After that, the writer exchanged the students’ work with other group to be checked. Then, the writer discussed the correct answer classically by asking the delegation of each group to write down the words in the crossword puzzles that was drawn on the blackboard. After checking the correct answer and getting the winner, the writer asked the students whether they found any difficulties during

the lesson. Then, the writer reviewed the words that had been learnt by showing some pictures to check the students' understanding of the lesson.

In the next meeting, the writer gave the second treatment. This treatment was given on Monday, April 11, 2011. In that meeting, the writer taught the experimental group 1 the vocabulary which related to fruits and vegetables. The use of crossword puzzle of fruits and vegetables were the same as the previous one.

During the given treatment, the situation of the class was very enjoyable. It can be seen from the students who seemed active and attractive during the class. Besides that, it could motivate them to know more about the new vocabulary. It was proved with the students' enthusiastic in asking the writer about the new vocabulary which they had not known.

Afterwards, they were given a post-test. The purpose of this test is to find out whether there is any improvement of the students' vocabulary mastery. The post-test was conducted on Monday, April 18, 2011. There were 27 students who followed this test. They had to answer 20 multiple-choice items given by the writer. The given test was the same as the pre-test.

From the post-test result, it can be seen that there is any improvement of the students' vocabulary mastery achieved by the experimental group 1 (crossword puzzle group).

4.1.2 Descriptions of the Experimental Group 2 (Quartet Card Group)

As the experimental group 1, at the beginning of the research, before giving treatment, the experimental group 2 was given a pre-test. The purpose of this test was to check the students' ability in mastering English vocabulary whether the students were familiar or not with the words that would be presented. The pre-test was conducted on Wednesday, March 16, 2011. There were 28 students who followed this test. They had to answer 20 multiple-choice items given by the writer. The given test was about vocabulary which related to toys and games and also fruits and vegetables.

After the pre-test, the writer gave them treatment by using quartet card. This treatment was given twice. The first treatment was given on Wednesday, March 30, 2011. Here, the writer taught the experimental group 2 the vocabulary which related to toys and games. In this meeting, firstly, the writer showed some pictures related to toys and games to the students. After that, she asked them "What picture is this?". Then writer showed the correct answer of it. After that the writer asked the students to guess what they are going to learn. Then, the writer asked what kind of toys and games that they know. The writer wrote the students' answers on the blackboard by giving them know their meanings in English. Next, the writer pronounced those words written on the blackboard one by one and she asked the students to repeat after her. After all, the writer divided the students into 7 groups. Each group consists of four students. Then, the writer explained the rules of the game. Each group received one set of quartet card which consisted of seven families. And each family had four members. Students had to collect all of

the members of each family by asking their friends. One student shuffled the cards and gave 4 cards to each player. If the student who was asked has the card, he/she had to give it and the one who asked for the card could keep on asking for the other cards to the other students. If the student who was asked didn't have the card, the one who asked for the card couldn't continue the game because the turn went to the next student and he/she could take a card from the pile. If one player could collect one family which consisted of four cards, he/she had to put the cards down. And the one who could collect a lot of families; he/she would be the winner. After giving the explanation, the writer gave the sets of the cards to each group and asked them to start the game. After getting the winner, the writer asked the students whether they found any difficulties during the lesson. Then, the writer reviewed the words that had been learnt by showing some pictures to check the students' understanding of the lesson.

In the next meeting, the writer gave the second treatment. This treatment was given on Wednesday, April 13, 2011. In that meeting, the writer taught the experimental group 2 the vocabulary which related to fruits and vegetables. The use of quartet card of fruits and vegetables were the same as the previous one.

During the given treatment, the situation of the class was enjoyable. It can be seen from the students who seemed attractive during the class. However, it was not as enjoyable as the situation of the experimental group 1. It can be seen from their response which was not enthusiastic as the experimental group 1.

Afterwards, they were given a post-test. The purpose of this test is to find out whether there is any improvement of the students' vocabulary mastery. The

post-test was conducted on Wednesday, April 20, 2011. There were 28 students who followed this test. They had to answer 20 multiple-choice items given by the writer. The given test was the same as the pre-test.

From the post-test result, it can be seen that there is any improvement of the students' vocabulary mastery achieved by the experimental group 2 (quartet card group).

4.2 Research Findings

In this part, the writer presents the finding of the research which contains of the result of pre-test and post-test.

4.2.1 Result of Pre-test and Post-test

The result of the students' vocabulary test which includes the pre-test and the post-test scores from the experimental group 1 and 2 can be seen in this following table:

Table 4.1 Result of Pre-test and Post-test

Variance Source	Pre-test		Post-test	
	<i>Crossword Puzzles</i>	<i>Quartet Card</i>	<i>Crossword Puzzles</i>	<i>Quartet Card</i>
Number of Students (N)	27	28	27	28
Total Score	1410	1515	2375	2295
Means	52.22	54.11	87.96	81.96
Variance	148.72	133.43	90.88	106.18
Standard Deviation	12.19	11.55	9.53	10.30

And the means above, can be presented in the following chart:

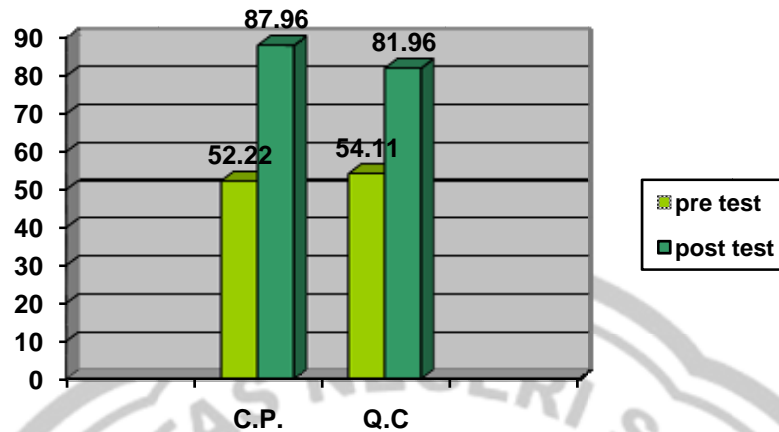


Chart 4.1 The Average Score of Pre-test and Post-test

Based on the table and the chart above, it can be seen that the average score (the means) of the experimental group 1 (crossword puzzle group) in pre-test is 52.22, while the average score of the experimental group 2 (quartet card group) in pre-test is 54.11. It shows that at the beginning, the students' vocabulary mastery of the experimental group 1 (crossword puzzle group) is lower than the experimental group 2 (quartet card group).

Then, after post test, the average score of the experimental group 1 (crossword puzzle group) is 87.96, while the average score of the experimental group 2 (quartet card group) is 81.96. It shows that after given the treatment, the students' vocabulary mastery of experimental group 1 (crossword puzzle group) is greater than the experimental group 2 (quartet card group). Therefore, we can say that the vocabulary mastery improvement of the experimental group 1 (crossword puzzles group) is better than the experimental group 2 (quartet card group). The overall score can be seen in appendix 2 and 3.

4.3 Initial Data Analysis

The initial data analysis is necessary in order to know their prior condition whether both of the experimental groups are proper to be compared or not. There are some steps that should be done in analyzing the initial data. They are: normality test, homogeneity test, and similarity test between two means.

4.3.1 Normality Test

After gathering the data from pre-test, it is necessary to test the normality of the data. It is done in order to know whether those gathered scores are in the normal distribution or not. If the scores are in the normal distribution, the treatment can be conducted, but if they are not in the normal distribution, the treatment cannot be conducted. In testing the normality test, it is necessary to find the normality of each group, the normality of the experimental group 1 and the normality of the experimental group 2.

4.3.1.1 Normality of the Experimental Group 1 (Crossword Puzzles Group)

Based on the calculation of initial normality test of the experimental group 1, it is obtained that $x^2_{hitung} = 9.89$, with $\alpha = 5\%$ and $dk = 6-1 = 5$ from the distribution list of Chi-square, it was obtained that $x^2 = 11.1$. If $x^2_{hitung} \geq x^2_{tabel}$, it means that the data is not in the normal distribution, but if $x^2_{hitung} < x^2_{tabel}$, it means that the data is in the normal distribution. From the calculation above, because $x^2_{hitung} < x^2_{tabel}$, it means that the initial data from the experimental group 1 is in the normal distribution. The complete calculation can be seen in appendix 13.

4.3.1.2 Normality of the Experimental Group 2 (Quartet Card Group)

Based on the calculation of initial normality test of the experimental group 2, it was obtained that $x^2_{hitung} = 5.90$, with $\alpha = 5\%$ and $dk = 6-1 = 5$ from the distribution list of Chi-square, it was obtained that $x^2 = 11.1$. If $x^2_{hitung} \geq x^2_{tabel}$, it means that the data is not in the normal distribution, but if $x^2_{hitung} < x^2_{tabel}$, it means that the data is in the normal distribution. From the calculation above, because $x^2_{hitung} < x^2_{tabel}$, it means that the initial data from the experimental group 2 is in the normal distribution. The complete calculation can be seen in appendix 14.

4.3.2 Homogeneity Test

Homogeneity test was done to find out whether both of the experimental group 1 and experimental group 2 have homogeneous variances or not. If both of them do not have homogenous variance, the treatment cannot be conducted.

Based on the computation of homogeneity test, it was obtained that $F_{hitung} = 1.115$ with variance_{hitung} of the experimental group 1 is 148.72 and variance_{hitung} of the experimental group 2 is 133.43. With $\alpha = 5\%$, dk numerator = 27 and dk denominator = 26, it was obtained that $F_{tabel} = 2.18$. Because it is clear that $F_{hitung} < F_{tabel}$, it can be concluded that the experimental group 1 and experimental group 2 have homogeneous variance. The complete calculation can be seen in appendix 15.

4.3.3 Similarity Test between Two Means

Similarity test between two means is used to find out whether the experimental group 1 and experimental group 2 have similar means in the initial data (pre-test). The means of those two groups is called similar when $t_{\text{tabel}} < t_{\text{hitung}} < t_{\text{tabel}}$. With $\alpha = 5\%$ and $dk = (27 + 28 - 2) = 53$, it was obtained that $t_{\text{tabel}} = 2.01$. Based on the calculation, it was obtained that $t_{\text{hitung}} = -0.589$. Because $t_{\text{tabel}} < t_{\text{hitung}} < t_{\text{tabel}}$, so it can be concluded that there is means similarity of the pre-test between the experimental group 1 and experimental group 2. The complete calculation can be seen in appendix 16.

4.4 Final Data Analysis

The main activity of this research was the analysis of final data. As initial data analysis, there are some steps that should be done in analyzing the final data, they are: normality test, homogeneity test, and hypothesis test.

4.4.1 Normality Test

As well as the previous one, in testing the normality test, it is necessary to find the normality of each group, the normality of the experimental group 1 and the normality of the experimental group 2.

4.4.1.1 Normality of the Experimental Group 1 (Crossword Puzzles Group)

Based on the calculation of final normality test of the experimental group 1, it was obtained that $x^2_{\text{hitung}} = 5.27$, with $\alpha = 5\%$ and $dk = 6-1 = 5$ from the distribution list of Chi-square, it was obtained that $x^2_{\text{tabel}} = 11.1$. If $x^2_{\text{hitung}} \geq x^2_{\text{tabel}}$, it means that

the data is not in the normal distribution, but if $x^2_{hitung} < x^2_{tabel}$, it means that the data is in the normal distribution. From the calculation above, because $x^2_{hitung} < x^2_{tabel}$, it means that the final data from the experimental group 1 is in the normal distribution. The complete calculation can be seen in appendix 19.

4.4.1.2 Normality of the Experimental Group 2 (Quartet Card Group)

Based on the calculation of final normality test of the experimental group 2, it was obtained that $x^2_{hitung} = 6.15$, with $\alpha = 5\%$ and $dk = 6-1 = 5$ from the distribution list of Chi-square, it was obtained that $x^2_{tabel} = 11.1$. If $x^2_{hitung} \geq x^2_{tabel}$, it means that the data is not in the normal distribution, but if $x^2_{hitung} < x^2_{tabel}$, it means that the data is in the normal distribution. From the calculation above, because $x^2_{hitung} < x^2_{tabel}$, it means that the final data from the experimental group 2 is in the normal distribution. The complete calculation can be seen in appendix 20.

4.4.2 Homogeneity Test

In the final data analysis, homogeneity test is used to find out whether both of the experimental group 1 and experimental group 2 have homogeneous variances or not after being taught with the given treatment.

Based on the computation of homogeneity test, it was obtained that $F_{hitung} = 1.17$ with variance_{hitung} of the experimental group 1 is 90.88 and variance_{hitung} of the experimental group 2 is 106.18. With $\alpha = 5\%$, dk numerator = 26 and dk denominator = 27, it was obtained that $F_{tabel} = 2.17$. Because $F_{hitung} < F_{tabel}$, it can be concluded that the experimental group 1 and the experimental group 2 have homogeneous variance. The complete calculation can be seen in appendix 21.

4.4.3 Hypothesis Test

In testing the hypothesis, the researcher used the t-test formula. It was used in order to measure the significant difference of vocabulary mastery achieved by the experimental group 1 and the experimental group 2. And the score that was used to be processed is the score of post-test.

With $\alpha = 5\%$ level of significance and $dk = (27 + 28 - 2) = 53$, it was obtained that $t_{tabel} = 2.01$. Based on the calculation, it was obtained that $t_{hitung} = 2.24$. If $t_{hitung} \leq t_{tabel}$, it means that H_0 is accepted. However, because in this research $t_{hitung} > t_{tabel}$, it means that H_0 is rejected and H_a is accepted. Therefore, it means that the means of the experimental group 1 is greater than or not equal to the means of the experimental group 2. In other words, it can be concluded that there was significant difference of vocabulary mastery achieved by the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang who had been taught using crossword puzzle game from those taught using quartet card game in the academic year of 2010/2011. The complete calculation can be seen in appendix 22.

4.5 Discussion

Based on the initial data analysis of the pre-test scores, it shows that the experimental group 1 and experimental group 2 are normal. They also have homogeneous variances, and similar means. It means that both of them were in the same condition. Therefore, they could be compared and taken as the sample of this research.

Afterwards, both of the experimental groups were given same learning material. They were taught the vocabulary which related to toys and games and also vocabulary which related to fruits and vegetables with different treatment (different teaching media). The experimental group 1 (class IV A) was taught by using crossword puzzles, while the experimental group 2 (class IV B) was taught by using quartet card. After the treatment, both of the experimental groups were given the same post-test.

From the final data analysis, it was obtained that the means of the experimental group 1 is 87.96, while the means of the experimental group 2 is 81.96. Based on the calculation of hypothesis test, it was obtained that $t_{hitung} = 2.24$ and $t_{tabel} = 2.01$. Because the $t_{hitung} > t_{tabel}$, so H_0 is rejected and H_a is accepted. It means that the means of the vocabulary mastery of the experimental group 1 was greater than or not equal to the means of the experimental group 2. And it can be concluded that there was significant difference of vocabulary mastery achieved by the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang who have been taught using crossword puzzle game from those taught using quartet card game in the academic year of 2010/2011.

CHAPTER V

CONCLUSION AND SUGGESTIONS

5.1 Conclusion

Based on the result of the research, it can be concluded that crossword puzzle is one of vocabulary games. It is an alternative medium that can be used in teaching English vocabulary for children. In doing this game, students were asked to match the words from the words list with the picture. Then, they were asked to copy the words from the words list into crossword puzzle. By doing this, it makes the students have a lot of chance to speak out, memorize the spelling, and also read and read again the words. Consequently, students get easier in recognizing and memorizing the English vocabulary given to them.

As one kind of vocabulary games, quartet card is very helpful for children in learning English vocabulary, because it belongs to one of the alternative media in teaching English vocabulary. In doing this game, students were asked to make a group of four. Each group got a set of quartet card which consisted of seven families. Each family has four members. Students had to collect all of the members of each family by asking their friends. The one who could collect a lot of families, he/she would be the winner. By doing this, students have a lot of chance to read and read again, even to sounds out the words written on the cards. Consequently, students get easier in memorizing the English vocabulary given to them.

Because $t_{hitung} > t_{tabel}$ ($2.24 > 2.01$), it can be concluded that there is any significant difference of vocabulary mastery achieved by the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang who have been taught using crossword puzzles game from those taught using quartet card game in the academic year of 2010/2011 in which crossword puzzle game is more effective than quartet card game to be used in teaching English vocabulary to the fourth grade students of MI Al Iman Banaran Gunung Pati Semarang in the academic year of 2010/2011 with the means of the experimental group 1 (crossword puzzle group) is 87.96 and the means of the experimental group 2 (quartet card group) is 81.96.

5.2 Suggestions

Based on the above conclusion, the researcher offers some suggestions to the readers, especially to English teachers and students.

First, for English teachers. It is necessary for English teachers to use crossword puzzle game in teaching English vocabulary. Therefore, students will feel enjoy the lesson and it can help them to understand the lesson easily.

Then, for students. Because of the limited time at school, it is necessary for students to have an initiative to have more practices at home. Therefore, they will not forget the vocabularies which have been got at school easily.

REFERENCES

- Arikunto, S. 2002. *Prosedur Penelitian Suatu Pendekatan Praktek*. Jakarta: PT Rineka Cipta.
- Arikunto, S. 2006. *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: PT Rineka Cipta.
- Arikunto, S. 2007. *Dasar-Dasar Evaluasi Pendidikan*. Jakarta: Bumi Aksara.
- Best, J. W. 1981. *Research in Education*. New Jersey: Prentice-Hall, Inc.
- Brown, H. D. 1980. *Principle of Language Learning and Teaching*. Englewood Cliffs, New Jersey: Prentice Hall Inc.
- Brown, J. W.; Lewis, R. B; harkroad. EF. 1964. *Audio Visual, Instruction, Material and Instruction*. New York: MC. Graw Hill Book Company
- BSNP. 2006. *Panduan Penyusunan Kurikulum Tingkat Satuan Pendidikan Jenjang Pendidikan Dasar dan Menengah*. Jakarta.
- Depdikbud. Prop. Jateng. 2006. *Kurikulum KTSP Muatan Lokal SD Pelajaran Bahasa Inggris*. Semarang.
- Depdiknas.2008. Kurikulum Tingkat Satuan Pendidikan (pdf). Available at: <http://www.pdf-search-engine.com/ktsp-pdf.html> [accessed 03/ 03/ 11].
- Gerlach, V. S; Ely. D. P. 1990. *Teaching and Media: a Systematic Approach*. New Jersey: Prentice Hall, Inc.
- Hadi, S. 1980. *Metodologi Research*. Yogyakarta: Andi Yogyakarta.
- Harris, D. 1969. *Testing English as a Second Language*. New Delhi: Tata Mcgraw-Hill Publishing Company. Ltd.
- Haycraft, J., 1978. *An Introduction to English Language Teaching*. Manchester: Longman Group, Ltd.

Heaton, J. B. 1975. *Writing English Language Tests*. London: Longman Group Limited.

Hornby, A. S. 1974. *The Advanced Learner's Dictionary of Current English*. Oxford: Oxford University Press

Hornby, A. S. 1995. *Oxford Advanced Learner's Dictionary 5th. ed.* Oxford: Oxford University Press.

http://www.abcteach.com/directory/fun_activities/crossword

<http://www.centrosoft.com/anagrams.html>

<http://www.dltk-holidays.com/easter/m-crossword.htm>

http://www.ultimate-top-trumps.co.uk/game_rules.htm

<http://en.wikipedia.org/wiki/Crossword>

Kerlinger, F. N. 1965. *Foundation of Behavioral Research*. New York University: Holt, Rinehart Winston.

Kimtafsirah. 1998. *a Review on Instructional Media as One of Aspects of Teaching Methodology (a paper)*. Jakarta: Departemen Pendidikan dan Kebudayaan.

Larcom, D. L. 2003. *English is Fun*. 3th edition. Kesaint Blanc.

Mardiana, A. 2007. *Teaching Simple Noun Phrases Using Quartet Cards to the Fifth Graders of SD I Mlati Kidul Kudus in the Academic Year of 2006/2007*. Semarang: FBS UNNES. Unpublished Final Project.

Paul, D. 2003. *Teaching English to Children in Asia*. Longman.

Purwaningrum, I. W. 2008. *The Effectiveness of Crossword Puzzles to Improve the Students' Mastery of Vocabulary: The Case of the Fifth Graders SDN Cemoro Randusari Boyolali in the academic year 2007/2008*. Semarang: FBS UNNES. Unpublished Final Project.

Rustaman, N dkk. 2003. *Strategi belajar Mengajar Biologi*. Jurusan Pendidikan Biologi FMIPA UPI Bandung.

- Saleh, M. 2001. *Pengantar Praktik Penelitian Pengajaran Bahasa*. Semarang: IKIP Semarang Press
- Sugiyono. 2007. *Statistika untuk Penelitian*. Bandung: CV Alfabeta
- Scott A, Wendy and Lisbeth H. Yterberg. 1990. *Teaching English to Children*. London: Longman Group Ltd.
- Tasuli. 2000. *Crossword Puzzles as an Effective Way to Teach English Vocabulary: The Case of the Second Year Students of SLTP 4 Rembang in the Academic Year of 1999/2000*. Semarang: FBS UNNES. Unpublished Final Project.
- Tim Instruktur. 1999. *GBPP Kurikulum Bahasa Inggris 1994*. Semarang: Depdikbud Wilayah Jawa Tengah
- Tinambunan, W. 1988. *Evaluation of Students' Achievement*. Jakarta: Depdikbud.
- Webster. 1993. *Webster's Dictionary*. Ashland, Ohio: Landoll Inc.
- Wibowo, D. A. 2005. *Teaching English Vocabulary Using Quartet Cards: The Case of Fourth Graders SDN Kebondowo 2 Ambarawa in the Academic Year 2005/2006*. Semarang: FBS UNNES. Unpublished Final Project.

Appendix 1**LIST OF THE STUDENTS****Class IVA (Experimental Group 1 Crossword Puzzle)**

No	Code	Name
1	E1-01	AHMAD ARIYANTO
2	E1-02	FERI ARDIANSYAH
3	E1-03	UMA AGUS FITRIYONO
4	E1-04	DANANG ADITYA N.
5	E1-05	FAHRUL ARDIANSYAH
6	E1-06	A. NUROKHIM
7	E1-07	DEDE KHORIZUL F.
8	E1-08	ELVINA FIJRI F.
9	E1-09	RIKI KURNIA AJIE P.
10	E1-10	LINDA AYUNINGTYAS
11	E1-11	CHABIBUL WAHAB
12	E1-12	AHMAD MARFU'IN
13	E1-13	NIKEN NUR FITRIANI
14	E1-14	FINA WINEKE N
15	E1-15	ANDIKA PUTRIANA
16	E1-16	EGA TARISA N.
17	E1-17	TITI ANA NINGRUM
18	E1-18	FAJAR TRI NUGROHO
19	E1-19	TAZKIYATUN NAFSIYAH
20	E1-20	KHASAN ARJUNA
21	E1-21	SINTA NUR R
22	E1-22	INDAH SETIAWATI
23	E1-23	SALMA KURNIADI
24	E1-24	AYU AMBARWATI
25	E1-25	AHMAD NUR HIDAYAT
26	E1-26	TUCHFATUN NI'MAH
27	E1-27	ULI ARIF FAJAR

Class IVB (Experimental Group 2 Quartet Card)

No	Code	Name
1	E2-01	FATCHUL YUSUF
2	E2-02	INTAN VIVIANA
3	E2-03	ROY FIRMANSYAH
4	E2-04	MILHAH TSIHATI T.
5	E2-05	AQSAI QUMAR
6	E2-06	AHMAD CANDRA F.
7	E2-07	LULUK NUR SAFITRI
8	E2-08	DANANG WAHYU D. S.
9	E2-09	MERDIANA DESTI P.
10	E2-10	SATRIO PRADANA U.
11	E2-11	ELSA SEPTIANINGRUM
12	E2-12	M. RIO NUR SADEWO
13	E2-13	FAHMI NISYAK
14	E2-14	DANIS HENDRAWAN
15	E2-15	DANIATUR ROHIMAH
16	E2-16	ARIF MAULANA
17	E2-17	RIFKI FILLAH H.
18	E2-18	DEWI SRI AGUSTINA
19	E2-19	KUSNIATUN RUZIAH
20	E2-20	ALI MUNFIQIH
21	E2-21	USTUTIK ALAWIYAH
22	E2-22	ANDRE KURNIA SANDI
23	E2-23	INTAN PERMATA SARI
24	E2-24	INTAN PERMATA S
25	E2-25	RIA RESTUNINGSIH
26	E2-26	FERI SETIAWAN
27	E2-27	WILI ARTINA PUTRI
28	E2-28	A. SYUKRON

Class VA (Try out Class)

No	Code	Name
1	T1-01	ANA FAISAL
2	T1-02	ILLA NUR MAULITA
3	T1-03	AVE SYAH SHINA
4	T1-04	ARGA PRAYOGA
5	T1-05	AGHNIA WIDYA AVINA
6	T1-06	ANISATUL ERNA A
7	T1-07	ERIK DANI SETIAWAN
8	T1-08	VISKA RAHMATUNNISA
9	T1-09	TASLIYATUL UMMAH
10	T1-10	SHERLY ANGGRAINI
11	T1-11	NUR FAQIH
12	T1-12	DICKY BAYU CANDRA
13	T1-13	SALSABILA INDIRA S.
14	T1-14	MACHMUDI
15	T1-15	LILIN ANA PUTRI
16	T1-16	ELVIANA TAHLIA A
17	T1-17	IRVAN YOGA S
18	T1-18	ENGGAR PRASETYO
19	T1-19	DANDI BAGUS S
20	T1-20	RIZKI AGUNG P
21	T1-21	ISNA RAHMATUL LAILY
22	T1-22	CATUR NUGROHO P
23	T1-23	AMBAR FITRIYAH
24	T1-24	EKA SETYANINGRUM
25	T1-25	SYAHRINA NURUL H
26	T1-26	HENDRO CAHYO S.
27	T1-27	DESHINTA SELINA
28	T1-28	M. SATRIA PRATAMA

Appendix 2

**THE EXPERIMENTAL GROUP 1 (CROSSWORD PUZZLES)
PRE-TEST AND POST-TEST RESULT**

No	Code	Name	Pre-Test Score	Post-Test Score
1	E1-01	AHMAD ARIYANTO	30	85
2	E1-02	FERI ARDIANSYAH	15	85
3	E1-03	UMA AGUS FITRIYONO	35	80
4	E1-04	DANANG ADITYA N.	55	90
5	E1-05	FAHRUL ARDIANSYAH	70	100
6	E1-06	A. NUROKHIM	65	90
7	E1-07	DEDE KHORIzUL F.	45	85
8	E1-08	ELVINA FIJRI F.	55	85
9	E1-09	RIKI KURNIA AJIE P.	55	90
10	E1-10	LINDA AYUNINGTYAS	60	70
11	E1-11	CHABIBUL WAHAB	50	90
12	E1-12	AHMAD MARFU'IN	40	75
13	E1-13	NIKEN NUR FITRIANI	65	90
14	E1-14	FINA WINEKE N	50	100
15	E1-15	ANDIKA PUTRIANA	55	100
16	E1-16	EGA TARISA N.	50	85
17	E1-17	TITI ANA NINGRUM	50	85
18	E1-18	FAJAR TRI NUGROHO	55	90
19	E1-19	TAZKIYATUN NAFSIYAH	65	100
20	E1-20	KHASAN ARJUNA	50	85
21	E1-21	SINTA NUR R	65	85
22	E1-22	INDAH SETIAWATI	55	100
23	E1-23	SALMA KURNIADI	45	60
24	E1-24	AYU AMBARWATI	70	100
25	E1-25	AHMAD NUR HIDAYAT	55	90
26	E1-26	TUCHFATUN NI'MAH	50	85
27	E1-27	ULI ARIF FAJAR	55	95
Σ	=		1410	2375
\bar{x}	=		52,22	87,96
Var	=		148,72	90,88
SD	=		12,19	9,53

Appendix 3

**THE EXPERIMENTAL GROUP 2 (QUARTET CARD)
PRE-TEST AND POST-TEST RESULT**

No	Code	Name	Pre-Test Score	Post-Test Score
1	E2-01	FATCHUL YUSUF	50	70
2	E2-02	INTAN VIVIANA	60	75
3	E2-03	ROY FIRMANSYAH	20	60
4	E2-04	MILHAH TSIHATI T.	60	85
5	E2-05	AQSAI QUMAR	50	85
6	E2-06	AHMAD CANDRA F.	60	100
7	E2-07	LULUK NUR SAFITRI	55	75
8	E2-08	DANANG WAHYU D. S.	65	80
9	E2-09	MERDIANA DESTI P.	35	85
10	E2-10	SATRIO PRADANA U.	45	75
11	E2-11	ELSA SEPTIANINGRUM	65	90
12	E2-12	M. RIO NUR SADEWO	45	85
13	E2-13	FAHMI NISYAK	65	90
14	E2-14	DANIS HENDRAWAN	50	85
15	E2-15	DANIATUR ROHIMAH	60	85
16	E2-16	ARIF MAULANA	65	90
17	E2-17	RIFKI FILLAH H.	35	85
18	E2-18	DEWI SRI AGUSTINA	50	85
19	E2-19	KUSNIATUN RUZIAH	45	75
20	E2-20	ALI MUNFIQIH	65	100
21	E2-21	USTUTIK ALAWIYAH	60	75
22	E2-22	ANDRE KURNIA SANDI	70	85
23	E2-23	INTAN PERMATA SARI	70	90
24	E2-24	RIZKI PURWATI	50	90
25	E2-25	RIA RESTUNINGSIH	60	95
26	E2-26	FERI SETIAWAN	50	60
27	E2-27	WILI ARTINA PUTRI	50	70
28	E2-28	A. SYUKRON	60	70
Σ	=		1515	2295
\bar{x}	=		54,11	81,96
Var	=		133,43	106,18
SD	=		11,55	10,30


Appendix 4

Try out-test

Nama :

No. Siswa :

Choose the correct answer by crossing (X) a, b, c, or d!

1.  I like to play.....
 a. doll c. robot
 b. kite d. mask



2. This is not a ball. This is a.....
 a. marbles c. toy car
 b. yoyo d. kite

6. is my favorite toy.
 a. toy train
 b. toy gun
 c. toy ship
 d. toy car



3. Do you have a..... ? Yes, I do.
 a. doll
 b. toy train
 c. sword
 d. toy ship



7. They are Andi and Melani. They like to play.....
 a. swing c. seesaw
 b. slide d. chess



4. My sister likes to play.....
 a. kite
 b. mask
 c. toy gun
 d. doll



8. Doni and Desi are playing.....
 a. walking on stilts
 b. rope skipping
 c. slide
 d. hide and seek



5. I want to play.....
 a. marbles
 b. kite
 c. doll
 d. card



9. Look at the children!
 They are playing..... now.
 a. slide
 b. swing
 c. seesaw
 d. gunny sack race



- The girl in the picture is Tina.
 She is playing..... in the park.
 a. snake and ladder c. chess
 b. rope skipping d. swing



The children are in the park now. They are playing.....

- a. hide and seek
- b. tug of war
- c. swing
- d. slide



Look at the picture!
The children are playing in the backyard.
They play happily.

- a. tug of war
- b. gunny sack race
- c. chess
- d. swing



A : "Do you like.....?"
B : "Yes, I do."

- a. jackfruit
- b. guava
- c. mangosteen
- d. apple



A : "What fruit do you like?"
B : "I like....."

- a. strawberry
- b. mangosteen
- c. banana
- d. blueberry

..... contains a lot of vitamin C.



- a. Orange
- b. Apple
- c. Pear
- d. Mango

A : "Is it melon?"
B: "No, it is not. It is....."

- a. grape
- b. mangosteen
- c. watermelon
- d. pineapple



17. Monkey likes to eat.....



- a. watermelon
- b. banana
- c. pear
- d. jackfruit

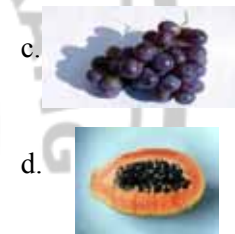
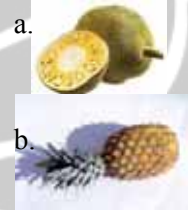
18. My favorite fruit is.....



- a. melon
- b. grape
- c. avocado
- d. starfruit

19. Lina : "Do you like **jackfruit?**"
Ika : "Yes, I do."

Lina likes.....



20. Dion doesn't like tomato, but he likes.....



- a. cucumber
- b. potato
- c. eggplant
- d. mushroom

21. is my favorite vegetables.



- a. Celery
- b. Broccoli
- c. Spinach
- d. Cabbage

22. A : "What vegetables do you like?"
B : "I like....."



- a. bean c. celery
b. potato d. broccoli

23. Nirma likes to eat fried.....



- a. tomato
b. potato
c. carrot
d. garlic

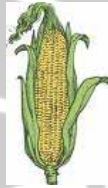
24. contains a lot of vitamin A.



- a. carrot
b. spinach
c. potato
d. cabbage

25. Dina: "What vegetable do you like?"
Rani : " I like....."

- a. carrot c. cabbage
b. corn d. celery



26. A: "What is this?"
B: "This is a....."



- a. toy car
b. toy plane
c. toy ship
d. toy truck

27. I like to play very much.



- a. snake and ladder
b. swing
c. tug of war
d. slide

28. I don't like apple, but I like.....



- a. apple
b. papaya
c. mango
d. pear

29. A: "What vegetable does Sita like?"

B: "She likes cabbage."

Sita likes.....



30. Dion: "Is it your"?

Toni: "Yes, it is."

Dion: "May I borrow yours?"

Toni: "Sure."



- a. toy sword
b. yoyo
c. catapult
d. doll

*Appendix 5***KEY ANSWER OF TRY OUT TEST**

1. C	11. A	21. B
2. B	12. A	22. A
3. B	13. C	23. B
4. D	14. A	24. A
5. B	15. A	25. B
6. B	16. C	26. A
7. C	17. B	27. A
8. B	18. B	28. D
9. D	19. A	29. B
10. D	20. C	30. C



Appendix 6

THE RESULT OF TRY-OUT ANALYSIS

No	Code	Item									
		1	2	3	4	5	6	7	8	9	10
1	T1-16	1	1	1	1	1	1	1	1	1	1
2	T1-04	1	1	1	1	1	1	0	0	1	0
3	T1-21	1	0	1	1	1	1	1	0	1	0
4	T1-28	1	1	0	0	1	0	0	1	1	0
5	T1-15	1	1	0	0	1	0	0	1	1	1
6	T1-06	1	1	0	1	1	0	0	0	1	0
7	T1-09	1	0	1	1	1	0	0	0	1	1
8	T1-11	1	1	1	0	1	0	0	1	1	0
9	T1-13	1	1	1	0	1	1	1	0	1	0
10	T1-23	0	1	1	0	1	1	0	1	0	0
11	T1-10	1	1	1	1	1	1	0	0	0	0
12	T1-12	1	1	1	1	1	1	0	1	1	0
13	T1-14	1	1	1	0	0	1	0	0	1	0
14	T1-19	1	1	1	1	0	0	0	1	1	1
15	T1-25	0	1	0	0	1	1	1	0	1	0
16	T1-20	0	1	0	0	1	1	1	0	0	0
17	T1-03	1	1	0	1	1	1	0	0	0	0
18	T1-05	1	1	1	0	0	1	0	0	1	0
19	T1-07	0	1	1	1	0	1	1	0	0	0
20	T1-08	1	1	1	0	0	0	0	0	0	0
21	T1-18	0	0	0	1	1	0	1	0	0	0
22	T1-02	1	1	1	0	1	0	1	1	1	0
23	T1-17	1	1	0	0	0	0	0	0	1	0
24	T1-24	1	0	1	0	0	0	0	0	1	0
25	T1-26	0	0	0	0	1	0	0	0	0	0
26	T1-27	0	0	0	0	1	0	1	0	0	0
27	T1-01	1	0	0	0	1	0	1	0	0	0
28	T1-22	0	0	0	0	1	0	1	0	0	0
Validity	ΣX	20	20	16	11	21	13	11	8	17	4
	ΣXY	366	372	302	216	365	254	169	161	326	89
	r_{xy}	0,433	0,528	0,449	0,435	0,157	0,485	-0,251	0,404	0,558	0,434
	r_{tabel}	0,308	0,308	0,308	0,308	0,308	0,308	0,308	0,308	0,308	0,308
	Criteria	Valid	Valid	Valid	Valid	Invalid	Valid	Invalid	Valid	Valid	Valid
Discriminating Power	BA	13	12	11	8	12	8	3	7	12	4
	BB	7	8	5	3	9	5	8	1	5	0
	JA	14	14	14	14	14	14	14	14	14	14
	JB	14	14	14	14	14	14	14	14	14	14
	DP	0,43	0,29	0,43	0,36	0,21	0,21	-0,36	0,43	0,50	0,29
	Criteria	Good	Fair	Good	Fair	Fair	Fair	Very Poor	Good	Good	Fair
Item Difficulty	B	20	20	16	11	21	13	11	8	17	4
	TK	0,71	0,71	0,57	0,39	0,75	0,46	0,39	0,29	0,61	0,14
	Criteria	Easy	Easy	Medium	Medium	Easy	Medium	Medium	Difficult	Medium	Difficult
Reliability	p	0,71	0,71	0,57	0,39	0,75	0,46	0,39	0,29	0,61	0,14
	q	0,29	0,29	0,43	0,61	0,25	0,54	0,61	0,71	0,39	0,86
	pq	0,204	0,204	0,245	0,239	0,188	0,249	0,239	0,204	0,239	0,122
Criteria	Used	Used	Used	Used	Used	Used	Unused	Used	Used	Used	

Item										Y	Y ²
21	22	23	24	25	26	27	28	29	30		
1	1	1	1	1	1	1	1	0	0	28	784
1	1	1	0	1	1	1	1	1	1	23	529
1	1	1	1	1	1	0	1	0	1	22	484
1	1	1	1	1	1	0	1	0	1	22	484
1	1	1	1	1	1	1	1	0	1	21	441
1	0	1	1	1	1	1	1	0	0	20	400
1	1	1	0	0	1	1	1	1	1	21	441
1	1	1	1	1	1	0	1	0	0	20	400
1	0	1	0	1	1	0	1	1	0	20	400
1	1	1	1	0	1	1	0	0	1	20	400
1	1	1	1	1	1	1	1	0	1	20	400
1	1	1	1	1	1	0	1	0	0	19	361
1	1	1	1	1	1	0	0	0	1	19	361
1	1	1	0	1	1	0	1	0	1	19	361
1	1	1	1	1	1	0	1	0	0	18	324
1	1	1	0	1	1	0	1	1	0	17	289
1	0	1	1	0	1	0	1	0	0	16	256
1	0	1	0	1	1	0	1	0	0	17	289
1	0	1	1	0	1	0	1	1	0	15	225
1	1	1	0	1	1	0	0	0	1	14	196
1	0	1	1	0	1	0	1	0	0	13	169
1	0	0	0	0	0	0	0	0	0	12	144
1	0	1	0	0	0	0	1	0	1	12	144
1	1	1	0	1	0	0	1	0	1	13	169
1	0	1	0	1	1	0	0	1	0	9	81
1	1	1	1	1	0	0	0	1	0	9	81
1	0	0	0	1	0	0	0	0	0	8	64
0	0	0	0	1	0	0	0	0	1	7	49
27	17	25	15	21	22	7	20	7	13	474	8726
302	238	290	163	234	277	112	142	96	212		
0,382	0,544	0,549	0,402	0,157	0,705	0,568	0,591	-0,074	0,185		
0,308	0,308	0,308	0,308	0,308	0,308	0,308	0,308	0,308	0,308		
Valid	Valid	Valid	Valid	Invalid	Valid	Valid	Valid	Invalid	Invalid		
14	12	14	10	12	14	7	12	3	9		
13	5	11	5	9	8	0	8	4	4		
14	14	14	14	14	14	14	14	14	14		
14	14	14	14	14	14	14	14	14	14		
0,07	0,50	0,21	0,36	0,21	0,43	0,50	0,29	-0,07	0,36		
Poor	Good	Fair	Fair	Fair	Good	Good	Fair	Very Poor	Fair		
27	17	25	15	21	22	7	20	7	13		
0,96	0,61	0,89	0,54	0,75	0,79	0,25	0,71	0,25	0,46		
Easy	Medium	Easy	Medium	Easy	Easy	Difficult	Easy	Difficult	Medium		
0,96	0,61	0,89	0,54	0,75	0,79	0,25	0,71	0,25	0,46	k	= 30
0,04	0,39	0,11	0,46	0,25	0,21	0,75	0,29	0,75	0,54	□pq	= 6,023
0,034	0,239	0,096	0,249	0,188	0,168	0,188	0,204	0,188	0,249	Vt	= 25,066
Unused	Used	Used	Used	Used	Used	Used	Used	Unused	Used	r ₁₁	= 0,786

Appendix 7

THE COMPUTATION OF ITEM VALIDITY

Formula:

$$r_{XY} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\} \{N\sum Y^2 - (\sum Y)^2\}}}$$

Criteria:

The item is considered to be valid if $r_{XY} > r_{\text{tabel}}$

For example, lets take item number 1, The rest of the calculation is calculated in the same way.

No	Code	X	Y	X ²	Y ²	XY
1	T1-16	1	28	1	784	28
2	T1-04	1	23	1	529	23
3	T1-21	1	22	1	484	22
4	T1-28	1	22	1	484	22
5	T1-15	1	21	1	441	21
6	T1-06	1	20	1	400	20
7	T1-09	1	21	1	441	21
8	T1-11	1	20	1	400	20
9	T1-13	1	20	1	400	20
10	T1-23	0	20	0	400	0
11	T1-10	1	20	1	400	20
12	T1-12	1	19	1	361	19
13	T1-14	1	19	1	361	19
14	T1-19	1	19	1	361	19
15	T1-25	0	18	0	324	0
16	T1-20	0	17	0	289	0
17	T1-03	1	16	1	256	16
18	T1-05	1	17	1	289	17
19	T1-07	0	15	0	225	0
20	T1-08	1	14	1	196	14
21	T1-18	0	13	0	169	0
22	T1-02	1	12	1	144	12
23	T1-17	1	12	1	144	12
24	T1-24	1	13	1	169	13
25	T1-26	0	9	0	81	0
26	T1-27	0	9	0	81	0
27	T1-01	1	8	1	64	8
28	T1-22	0	7	0	49	0
□		20	474	20	8726	366

$$r_{xy} = \frac{28(366) - (20)(474)}{\sqrt{\{28(20) - (20)^2\} \{28(8726) - (474)^2\}}} = 0,433$$

For $\alpha = 5\%$ with $n = 28$ it was obtained that $r_{\text{tabel}} = 0,3081$
 Because $r_{XY} > r_{\text{tabel}}$, so the item number is considered to be valid.

Appendix 8

THE COMPUTATION OF ITEM DIFFICULTY

Formula

$$P = \frac{B}{JS}$$

Note:

- P : Index of difficulty
 B : The number of students who answered correctly
 Js : The total number of the students

Criteria

Interval P				Criteria	
0,00	<	IK	≤	0,30	Difficult
0,30	<	IK	≤	0,70	Medium
0,70	<	IK	<	1,00	Easy

For example, lets take item number 1, The rest of the calculation is calculated in the same way.

Upper Group			Lower Group		
No	Code	Score	No	Code	Score
1	T1-16	1	1	T1-25	0
2	T1-04	1	2	T1-20	0
3	T1-21	1	3	T1-03	1
4	T1-28	1	4	T1-05	1
5	T1-15	1	5	T1-07	0
6	T1-06	1	6	T1-08	1
7	T1-09	1	7	T1-18	0
8	T1-11	1	8	T1-02	1
9	T1-13	1	9	T1-17	1
10	T1-23	0	10	T1-24	1
11	T1-10	1	11	T1-26	0
12	T1-12	1	12	T1-27	0
13	T1-14	1	13	T1-01	1
14	T1-19	1	14	T1-22	0
Total		13	Total		7

$$P = \frac{13}{28} + \frac{7}{28}$$

$$= 0,71$$

Based on the calculation above, it is clear that item number 1 is considered to be easy.

Appendix 9

THE COMPUTATION OF ITEM DISCRIMINATION

Formula

$$D = \frac{BA - BB}{JA - JB}$$

Note:

- D : Discrimination index
 BA : The number of students in the upper group who answered the item correctly
 BB : The number of students in the lower group who answered the item correctly
 JA : The number of students in upper group
 JB : The number of students in lower group

Criteria

Interval DP			Criteria
	DP	≤ 0,00	Very Poor
0,00	< DP	≤ 0,20	Poor
0,20	< DP	≤ 0,40	Fair
0,40	< DP	≤ 0,70	Good
0,70	< DP	≤ 1,00	Excellent

For example, lets take item number 1, The rest of the calculation is calculated in the same way.

Upper Group			Lower Group		
No	Code	Score	No	Code	Score
1	T1-16	1	1	T1-25	0
2	T1-04	1	2	T1-20	0
3	T1-21	1	3	T1-03	1
4	T1-28	1	4	T1-05	1
5	T1-15	1	5	T1-07	0
6	T1-06	1	6	T1-08	1
7	T1-09	1	7	T1-18	0
8	T1-11	1	8	T1-02	1
9	T1-13	1	9	T1-17	1
10	T1-23	0	10	T1-24	1
11	T1-10	1	11	T1-26	0
12	T1-12	1	12	T1-27	0
13	T1-14	1	13	T1-01	1
14	T1-19	1	14	T1-22	0
Total		13	Total		7

$$DP = \frac{13}{14} - \frac{7}{14} = 0,43$$

Based on the calculation above, it is clear that item number 1 is considered to be good.

Appendix 10

THE COMPUTATION OF ITEM RELIABILITY

Formula:

$$r_{11} = \left(\frac{k}{k-1} \right) \left(\frac{S^2 - \sum pq}{S^2} \right)$$

Note:

- k : the number of the test items
 $\sum pq$: the sum of pi multiplying qi
 s^2 : the total variants

Criteria:

If $r_{11} > r_{\text{tabel}}$, it means that the instrument is considered to be reliable.

Based on the tabel of the try-out analysis, it was obtained that:

$$\begin{aligned} \sum pq &= pq_1 + pq_2 + pq_3 + \dots + pq_{30} \\ &= 0,2041 + 0,2041 + 0,2449 + \dots + 0,2487 \\ &= 6,0230 \end{aligned}$$

$$\begin{aligned} S^2 &= \left[\frac{30}{30-1} \right] \left[\frac{25,066 - 6,023}{25,066} \right] \\ &= 0,786 \end{aligned}$$

For $\alpha = 5\%$ with $n = 30$ it was obtained that $r_{\text{tabel}} = 0,3338$

Because $r_{11} > r_{\text{tabel}}$, it can be concluded that the instrument is considered to be reliable.

Appendix 11

Pre-test

Nama :

No. Siswa :

Choose the correct answer by crossing (X) a, b, c, or d!

1.



er

2.



3.



4.



5.



a
erry

10. contains a lot of vitamin C.

6. Look at the children!

They are playing..... now.



- e. slide
- f. swing
- g. seesaw
- h. gunny sack race

- a. Pear
- b. Orange
- c. Mango
- d. Apple



11. A : "Is it melon?"

B: "No, it is not. It is....."



- a. grape
- b. mangosteen
- c. watermelon
- d. pineapple

16. Nirma likes to eat fried...



- a. potato
- b. tomato
- c. carrot
- d. garlic

12. Monkey likes to eat



17. contains a lot of vitamin A.



- a. spinach
- b. carrot

13.



14.



15.

- d. celery
- e. bean
- f. broccoli



- g. mango
- h. pear

*Appendix 12***KEY ANSWER OF PRE-TEST**

- | | |
|-------|-------|
| 1. B | 11. C |
| 2. A | 12. D |
| 3. D | 13. C |
| 4. C | 14. A |
| 5. D | 15. C |
| 6. D | 16. A |
| 7. B | 17. B |
| 8. C | 18. B |
| 9. D | 19. A |
| 10. B | 20. D |



Appendix 13

PRE-TEST NORMALITY OF THE EXPERIMENTAL GROUP 1
(CROSSWORD PUZZLES)

Hypothesis: H_0 : Data is in the normal distribution
 H_a : Data is not in the the normal distribution

To test the hypothesis of normality test, the formula used is:

$$\chi^2 = \sum_{i=1}^k \frac{(f_o - f_h)^2}{f_h}$$

The criteria used is: H_0 is accepted if χ^2 hitung $<$ χ^2 tabel

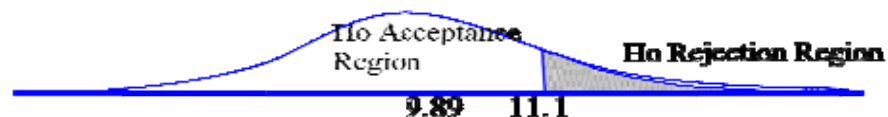
To test the hypothesis above, the computation can be computed as follows:

The highest score	= 70	Length of interval class	= 10
The lowest score	= 15	Means	= 52,22
Range	= 55	s	= 12,19
Total interval class	= 6	n	= 27

Interval Class	Limit of Interval Class	Z for Limit of Interval Class	P values for Z	Width of Interval Class for Z	fh	fo	$\frac{(fo - fh)^2}{fh}$
15 - 24	14,5	-3,09	0,4990	0,0106	0,2862	1	1,78026
25 - 34	24,5	-2,27	0,4884	0,0619	1,6713	1	0,269637
35 - 44	34,5	-1,45	0,4265	0,1929	5,2091	2	1,976995
45 - 54	44,5	-0,63	0,2336	0,1582	4,2706	8	3,25681
55 - 64	54,5	0,19	0,0754	0,2684	7,2468	9	0,424147
65 - 74	64,5	1,01	0,3438	0,1226	3,3102	6	2,185676
	74,5	1,83	0,4664				9,89352

From the computation above, we obtain that χ^2 hitung is **9,89352**

For $\alpha=5\%$ with $dk = 6-1=5$ we obtain that χ^2 tabel is **11.1**



Because $\chi^2_{hitung} < \chi^2_{tabel}$, so H_0 is accepted. It means that the data is in the normal distribution.

Appendix 14

PRE-TEST NORMALITY OF THE EXPERIMENTAL GROUP 2

(QUARTET CARD)

Hypothesis: H_0 : Data is in the normal distribution
 H_a : Data is not in the normal distribution

To test the hypothesis of normality test, the formula used is:

$$\chi^2 = \sum_{i=1}^k \frac{(f_o - f_h)^2}{f_h}$$

The criteria used is: H_0 is accepted if χ^2 hitung $<$ χ^2 tabel

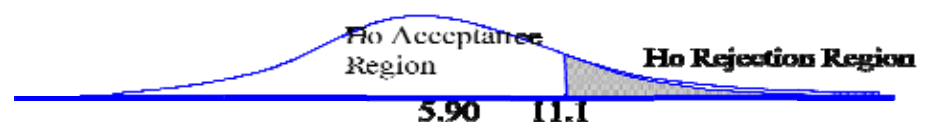
To test the hypothesis above, the computation can be computed as follows:

The highest score	= 70	Length of interval class	= 9
The lowest score	= 20	Means	= 54,11
Range	= 50	s	= 11,55
Total interval class	= 6	n	= 28

Interval Class	Limit of Interval Class	Z for Limit of Interval Class	P values for Z	Width of Interval Class for Z	fh	fo	$\frac{(fo - fh)^2}{fh}$
20 - 28	19,5	-3,00	0,4987	0,0119	0,3332	1	1,3344
29 - 37	28,5	-2,22	0,4868	0,0617	1,7276	2	0,042951
38 - 46	37,5	-1,44	0,4251	0,1797	5,0316	3	0,820295
47 - 55	46,5	-0,66	0,2454	0,1976	5,5328	8	1,10018
56 - 64	55,5	0,12	0,0478	0,2681	7,5068	7	0,034215
65 - 73	64,5	0,90	0,3159	0,1376	3,8528	7	2,570823
	73,5	1,68	0,4535				5,90287

From the computation above, we obtain that χ^2 hitung is **5,90287**

For $\alpha=5\%$ with $dk=6-1=5$ we obtain that χ^2 tabel is **11.1**



Because $\chi^2_{hitung} < \chi^2_{tabel}$, so H_0 is accepted. It means that the data is in the normal distribution.

Appendix 15

PRE-TEST HOMOGENEITY BETWEEN TWO VARIANCES OF THE EXPERIMENTAL GROUP 1 AND EXPERIMENTAL GROUP 2

Hipotesis

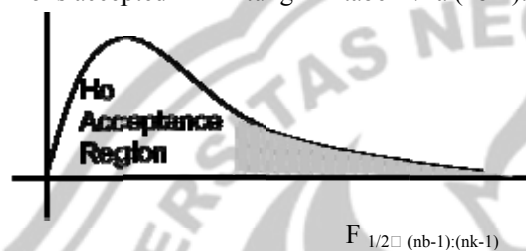
$$H_0 : \sigma_1^2 = \sigma_2^2$$

$$H_a : \sigma_1^2 \neq \sigma_2^2$$

To test the hypothesis of homogeneity test, the formula used is:

$$F = \frac{\text{The highest variance}}{\text{The lowest variance}}$$

Ho is accepted if $F_{\text{hitung}} < F_{\text{tabel } 1/2\alpha (nb-1):(nk-1)}$



From the pretest data, we obtain:

Variance Source	Experimental 1 (CROSSWORD PUZZLES)	Experimental 2 (QUARTET CARD)
Sum	1410	1515
n	27	28
\bar{x}	52,22	54,11
Variance (s^2)	148,72	133,43
Standard deviation (s)	12,19	11,55

Based on the formula above, the calculation can be computed as follows:

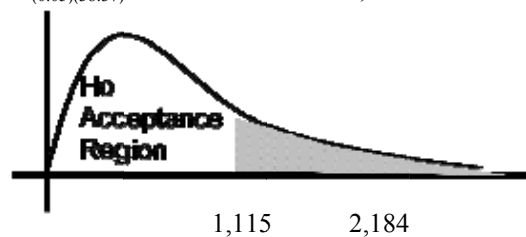
$$F = \frac{148,72}{133,43} = 1,115$$

For $\alpha = 5\%$ with:

$$dk \text{ numerator} = nb - 1 = 28 - 1 = 27$$

$$dk \text{ denominator} = nk - 1 = 27 - 1 = 26$$

$$F_{(0,05)(38:37)} = 2,18$$



Because F is in the H_0 acceptance region, it can be concluded that both of the two groups have homogenous variance.

Appendix 16

INITIAL DATA SIMILARITY TEST BETWEEN THE MEANS OF THE EXPERIMENTAL GROUP 1(CROSSWORD PUZZLES) AND THE MEANS OF THE EXPERIMENTAL GROUP 2 (QUARTET CARD)

Hypothesis:

$$H_0 : \mu_1 = \mu_2$$

$$H_a : \mu_1 \neq \mu_2$$

To test the hypothesis of similarity test between two means, the formula used is:

$$t = \frac{x_1 - x_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

with,

$$s = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

The criteria used is: H_0 is accepted if $-t_{\text{tabel}}(1-1/2\alpha) < t_{\text{hitung}} < t_{\text{tabel}}(1-1/2\alpha)(n_1+n_2-2)$

Variance Source	Experimental 1 (CROSSWORD PUZZLES)	Experimental 2 (QUARTET CARD)
Sum	1410	1515
\bar{n}	27	28
\bar{x}	52,22	54,11
Variance (S^2)	148,72	133,43
Standard deviation (S)	12,19	11,55

Based on the formula above, the calculation can be computed as follows:

$$S = \sqrt{\frac{(27 - 1) 148.72 + (28 - 1) 133.43}{27 + 28 - 2}} = 11.8714$$

$$= \frac{52.22 - 54.11}{11.8714 \sqrt{\frac{1}{27} + \frac{1}{28}}} = -0.589$$

For $\alpha = 5\%$ with $dk = 27 + 28 - 2 = 53$ we obtain that $t_{\text{tabel}(0.975)(75)} = 2,01$



-2,01 -0,589 2,01

Because t is in the H_0 acceptance region, it can be concluded that there is means similarity of the pretest between the experimental group 1 and experimental group 2.

Appendix 17

Post-test

Nama :

No. Siswa :

Choose the correct answer by crossing (X) a, b, c, or d!

1.



er

2.



3.



4.



5.



a
erry

10. contains a lot of vitamin C.

6. Look at the children!

They are playing..... now.



- i. slide
- j. swing
- k. seesaw
- l. gunny sack race



- a. Orange
- b. Pear
- c. Mango
- d. Apple

11. A : "Is it melon?"

B: "No, it is not. It is....."



- e. grape
- f. mangosteen
- g. watermelon
- h. pineapple

16. Nirma likes to eat fried...



- a. tomato
- b. potato
- c. carrot
- d. garlic

12. Monkey likes to eat



17. contains a lot of vitamin A.



- a. carrot
- b. spinach

13.



14.



15.

- h. celery
- i. potato
- j. broccoli



- k. mango
- l. papaya

*Appendix 18***KEY ANSWER OF POST-TEST**

- | | |
|-------|-------|
| 1. C | 11. C |
| 2. B | 12. B |
| 3. C | 13. B |
| 4. D | 14. A |
| 5. B | 15. A |
| 6. D | 16. B |
| 7. D | 17. A |
| 8. C | 18. A |
| 9. A | 19. A |
| 10. A | 20. B |



Appendix 19

POST-TEST NORMALITY OF THE EXPERIMENTAL GROUP 1 (CROSSWORD PUZZLES)

Hypothesis: H_0 : Data is in the normal distribution
 H_a : Data is not in the the normal distribution

To test the hypothesis of normality test, the formula used is:

$$\chi^2 = \sum_{i=1}^k \frac{(fo - fh)^2}{fh}$$

The criteria used is: H_0 is accepted if χ^2 hitung $<$ χ^2 tabel

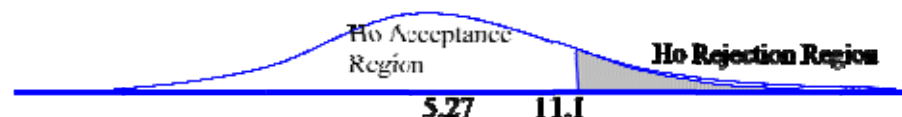
To test the hypothesis above, the computation can be computed as follows:

The highest score	=	100	Length of interval class	=	7
The lowest score	=	60	Means	=	87,96
Range	=	40	s	=	9,53
Total interval class	=	6	n	=	27

Interval Class	Limit of Interval Class	Z for Limit of Interval Class	P values for Z	Width of Interval Class for Z	fh	fo	$\frac{(fo - fh)^2}{fh}$
60 - 66	59,5	-2,99	0,4986	0,0108	0,2916	1	1,720955
67 - 73	66,5	-2,25	0,4878	0,0308	0,8316	1	0,034101
74 - 80	73,5	-1,52	0,4570	0,1747	4,7169	2	1,564915
81 - 87	80,5	-0,78	0,2823	0,2624	7,0848	9	0,517727
88 - 94	87,5	-0,05	0,0199	0,2350	6,3450	7	0,067616
95 - 101	94,5	0,69	0,2549	0,1673	4,5171	7	1,364768
	101,5	1,42	0,4222				5,27008

From the computation above, we obtain that χ^2 hitung is **5,27008**

For $\alpha=5\%$ with $dk = 6-1=5$ we obtain that χ^2 tabel is **11.1**



Because χ^2 hitung $<$ χ^2 tabel, so H_0 is accepted. It means that the data is in the normal distribution.

Appendix 20

POST-TEST NORMALITY OF THE EXPERIMENTAL GROUP 2

(QUARTET CARD)

Hypothesis: H_0 : Data is in the normal distribution
 H_a : Data is not in the normal distribution

To test the hypothesis of normality test, the formula used is:

$$\chi^2 = \sum_{i=1}^k \frac{(f_o - f_h)^2}{f_h}$$

The criteria used is: H_0 is accepted if χ^2 hitung $<$ χ^2 tabel

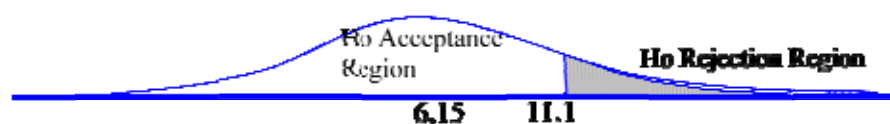
To test the hypothesis above, the computation can be computed as follows:

The highest score	= 100	Length of interval class	= 7
The lowest score	= 60	Means	= 81,96
Range	= 40	s	= 10,30
Total interval class	= 6	n	= 28

Interval Class	Limit of Interval Class	Z for Limit of Interval Class	P values for Z	Width of Interval Class for Z	f _h	f _o	$\frac{(f_o - f_h)^2}{f_h}$
60 - 66	59,5	-2,18	0,4854	0,0522	1,4616	2	0,198327
67 - 73	66,5	-1,50	0,4332	0,1393	3,9004	3	0,207856
74 - 80	73,5	-0,82	0,2939	0,2382	6,6696	6	0,067225
81 - 87	80,5	-0,14	0,0557	0,1497	4,1916	9	5,515963
88 - 94	87,5	0,54	0,2054	0,1834	5,1352	5	0,00356
95 - 101	94,5	1,22	0,3888	0,0855	2,3940	3	0,153398
	101,5	1,90	0,4743				6,14633

From the computation above, we obtain that χ^2 hitung is **6,14633**

For $\alpha=5\%$ with $dk = 6-1=5$ we obtain that χ^2 tabel is **11.1**



Because χ^2 hitung $<$ χ^2 tabel, so H_0 is accepted. It means that the data is in the normal distribution.

Appendix 21

POST-TEST HOMOGENEITY BETWEEN TWO VARIANCES OF THE EXPERIMENTAL GROUP 1 AND EXPERIMENTAL GROUP 2

Hipotesis

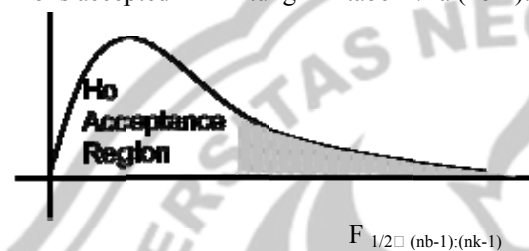
$$H_0 : \sigma_1^2 = \sigma_2^2$$

$$H_a : \sigma_1^2 \neq \sigma_2^2$$

To test the hypothesis of homogeneity test, the formula used is:

$$F = \frac{\text{The highest variance}}{\text{The lowest variance}}$$

Ho is accepted if $F_{\text{hitung}} < F_{\text{tabel } 1/2\alpha (nb-1):(nk-1)}$



From the pretest data, we obtain:

Variance Source	Experimental 1 (CROSSWORD PUZZLES)	Experimental 2 (QUARTET CARD)
Sum	2375	2295
n	27	28
\bar{x}	87,96	81,96
Variance (s^2)	90,88	106,18
Standard deviation (s)	9,53	10,30

Based on the formula above, the calculation can be computed as follows:

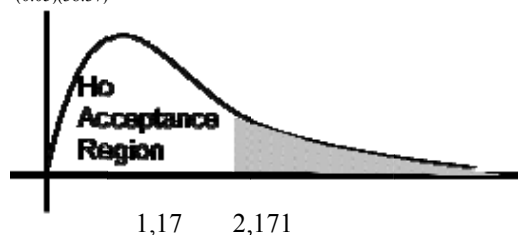
$$F = \frac{106,18}{90,88} = 1,168$$

For $\alpha = 5\%$ with:

$$dk \text{ numerator} = nb - 1 = 27 - 1 = 26$$

$$dk \text{ denominator} = nk - 1 = 28 - 1 = 27$$

$$F_{(0.05)(38:37)} = 2,17$$



Because F is in the Ho acceptance region, it can be concluded that both of the two groups have homogenous variance.

HYPOTHESIS TEST

Hypothesis:

$$H_0 : \mu_1 \leq \mu_2$$

$$H_a : \mu_1 > \mu_2$$

To test the hypothesis of similarity test between two means, the formula used is:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

with,

$$s = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

The criteria used is: H_0 is accepted if $t \leq t_{(1-1/2\alpha)(n_1+n_2-2)}$

Variance Source	Experimental 1 (CROSSWORD PUZZLES)	Experimental 2 (QUARTET CARD)
Sum	2375	2295
<u>n</u>	27	28
<u>x</u>	87,96	81,96
Variance (S ²)	90,88	106,18
Standard deviation (S)	9,53	10,30

Based on the formula above, the calculation can be computed as follows:

$$S = \sqrt{\frac{(27 - 1) 90,88 + (28 - 1) 106,18}{27 + 28 - 2}} = 9,93367$$

$$= \frac{87,96 - 81,96}{9,93367 \sqrt{\frac{1}{27} + \frac{1}{28}}} = 2,239$$

For $\alpha = 5\%$ with $dk = 27 + 28 - 2 = 53$ we obtain that $t_{\text{tabel}(0,975)(75)} = 2,01$



2,01 2,24

Because t is in the H_0 rejection region (H_a acceptance region), H_0 is rejected and H_a is accepted. It means that the post-test means of experimental group 1 (*Crossword Puzzles*) is greater than or not equal to the post-test means of experimental group 2 (*Quartet Card*).

Appendix 23

LESSON PLAN
“TOYS AND GAMES”

School : MI Al Iman Banaran

Class/ Semester : IV/ 2

Aspect : Reading

Standard Competence: Memahami tulisan Bahasa Inggris sangat sederhana dalam konteks kelas.

Basic Competence : Memahami kalimat dan pesan tertulis sangat sederhana

Time Allotment : 2 x 35

Objectives : The purpose of the study is:

- 80% of all students are able to identify 5 among 6 kinds of toys and games.
- 80% of all students are able to mention 5 among 6 kinds of toys and games.
- 80% of all students are able to answer 4 among 5 questions related to toys and games.

MATERIALVocabulary:

- | | |
|-------------|-------------------|
| - Robot | - Hide and seek |
| - Doll | - Rope skipping |
| - Kite | - Tug of war |
| - Marbles | - Gunny sack race |
| - Mask | - Chess |
| - Toy plane | - Swing |

METHOD

- Drill
- Question and answer

OPENING

1. Teacher greets the students. (5')
2. Teacher checks the students' attendance list. (5')

EXPLORATION

1. Teacher shows some pictures relate to "Toys and Games" and asks them:
 - What is this?
 Then teacher shows the correct answer of it. (10')
2. Teacher asks the students to guess what they are going to learn. (2')
3. Teacher asks what kind of toys and games that they know. Teacher writes students' answers on the blackboard by giving them know their meanings in English. (10')

ELABORATION

1. Teacher pronounces those words written on the blackboard one by one and asks the students to repeat after her. (5')
2. Teacher divides students into 6 groups. Some of them consist of four students and the other consists of 5 students. (4')
3. Teacher gives them a piece of paper containing crossword puzzles (1 group 1 paper) (3')
4. Teacher explains the rules of the game (3')
 - The students are asked to do the crossword puzzles with their groups.
 - The teacher gives them 10 minutes to do the crossword puzzles.

- The group that can answer the most correct answer will be the winner.
5. Teacher asks the students to start doing the crossword puzzles.

CONFIRMATION

1. Teacher exchanges students' work with other group to be checked. (3')
2. Teacher discusses the correct answer classically by asking the delegation of each group to write down the words in the crossword puzzles that is drawn on the blackboard. (10')

CLOSING

1. Teacher asks the students whether they find any difficulties during the lesson. (2')
2. Teacher reviews the words that have been learnt by showing some pictures to check the students' understanding of the lesson. (5')
3. Teacher closes the lesson. (3')

SOURCE AND MEDIA

- Picture
- Crossword puzzles
- Buku Ajar Acuan Pengayaan (Fokus)

Appendix 24**LESSON PLAN****“FRUIT AND VEGETABLES”**

School : MI Al Iman Banaran

Class/ Semester : IV/ 2

Aspect : Reading

Standard Competence: Memahami tulisan Bahasa Inggris sangat sederhana dalam konteks kelas.

Basic Competence : Memahami kalimat dan pesan tertulis sangat sederhana

Time Allotment : 2 x 35

Objectives : The purpose of the study is:

- 80% of all students are able to identify 5 among 6 kinds of fruits and vegetables.
- 80% of all students are able to mention 5 among 6 kinds of fruits and vegetables.
- 80% of all students are able to answer 4 among 5 questions related to fruits and vegetables.

MATERIALVocabulary:

- | | |
|--------------|------------|
| - Watermelon | - Carrot |
| - Mango | - Broccoli |
| - Pineapple | - Celery |
| - Durian | - Beans |
| - Grapes | - Tomato |
| - Starfruits | - Mushroom |
| - Banana | |
| - Mangosteen | |
| - Cabbage | |
| - Potato | |

METHOD

- Drill
- Question and answer

OPENING

3. Teacher greets the students. (5')
4. Teacher checks the students' attendance list. (5')

EXPLORATION

4. Teacher shows some pictures relate to "Fruit and Vegetables" and asks them:

- What is this?

Then teacher shows the correct answer of it. (10')

5. Teacher asks the students to guess what they are going to learn. (2')
6. Teacher asks what kind of fruit and vegetables that they know. Teacher writes students' answers on the blackboard by giving them know their meanings in English. (10')

ELABORATION

6. Teacher pronounces those words written on the blackboard one by one and asks the students to repeat after her. (5')
7. Teacher divides students into 6 groups. Some of them consist of four students and the other consists of 5 students. (4')
8. Teacher gives them a piece of paper containing crossword puzzles (1 group 1 paper) (3')
9. Teacher explains the rules of the game (3')
 - The students are asked to do the crossword puzzles with their groups.
 - The teacher gives them 10 minutes to do the crossword puzzles.

- The group that can answer the most correct answer will be the winner.

10. Teacher asks the students to start doing the crossword puzzles.

CONFIRMATION

3. Teacher exchanges students' work with other group to be checked. (3')
4. Teacher discusses the correct answer classically by asking the delegation of each group to write down the words in the crossword puzzles that is drawn on the blackboard. (10')

CLOSING

4. Teacher asks the students whether they find any difficulties during the lesson. (2')
5. Teacher reviews the words that have been learnt by showing some pictures to check the students' understanding of the lesson. (5')
6. Teacher closes the lesson. (3')

SOURCE AND MEDIA

- Picture
- Crossword puzzles
- Buku Ajar Acuan Pengayaan (Fokus)

Appendix 25**LESSON PLAN
“TOYS AND GAMES”**

- School : MI Al Iman Banaran
 Class/ Semester : IV/ 2
 Aspect : Reading
 Standard Competence: Memahami tulisan Bahasa Inggris sangat sederhana dalam konteks kelas.
 Basic Competence : Memahami kalimat dan pesan tertulis sangat sederhana
 Time Allotment : 2 x 35
 Objectives : The purpose of the study is:
- 80% of all students are able to identify 5 among 6 kinds of toys and games.
 - 80% of all students are able to mention 5 among 6 kinds of toys and games.
 - 80% of all students are able to answer 4 among 5 questions related to toys and games

MATERIALVocabulary:

- Robot
- Doll
- Kite
- Marbles
- Mask
- Toy plane
- Hide and seek
- Rope skipping
- Tug of war
- Gunny sack race
- Chess
- Swing

METHOD

- Drill
- Question and answer

OPENING

5. Teacher greets the students. (5')
6. Teacher checks the students' attendance list. (5')

EXPLORATION

7. Teacher shows some pictures relate to "Toys and Games" and asks them:
 - What is this?
 Then teacher shows the correct answer of it. (10')
8. Teacher asks the students to guess what they are going to learn. (2')
9. Teacher asks what kind of toys and games that they know. Teacher writes students' answers on the blackboard by giving them know their meanings in English. (10')

ELABORATION

11. Teacher pronounces those words written on the blackboard one by one and asks the students to repeat after her. (5')
12. Teacher divides students into 7 groups. Each group consists of four students. (2')
13. Teacher explains the rules of the game (5')
 - Each group receives one set of quartet card which consists of seven families. And each family has four members.
 - Students have to collect all of the members of each family by asking their friends.
 - One student shuffles the cards and gives each player 4 cards.
 - If the student who is asked has the card, he/she has to give it and the one who ask for the card can keep on asking for the other cards to the other students.
 - If the student who is asked doesn't have the card, the one who ask for the card can't continue the game because the turn goes to the next student and he/she can take a card from the pile.

- If one player can collect one family which consists of four cards, he/she has to put the cards down.
- And the one who can collect a lot of families; he/she will be the winner.

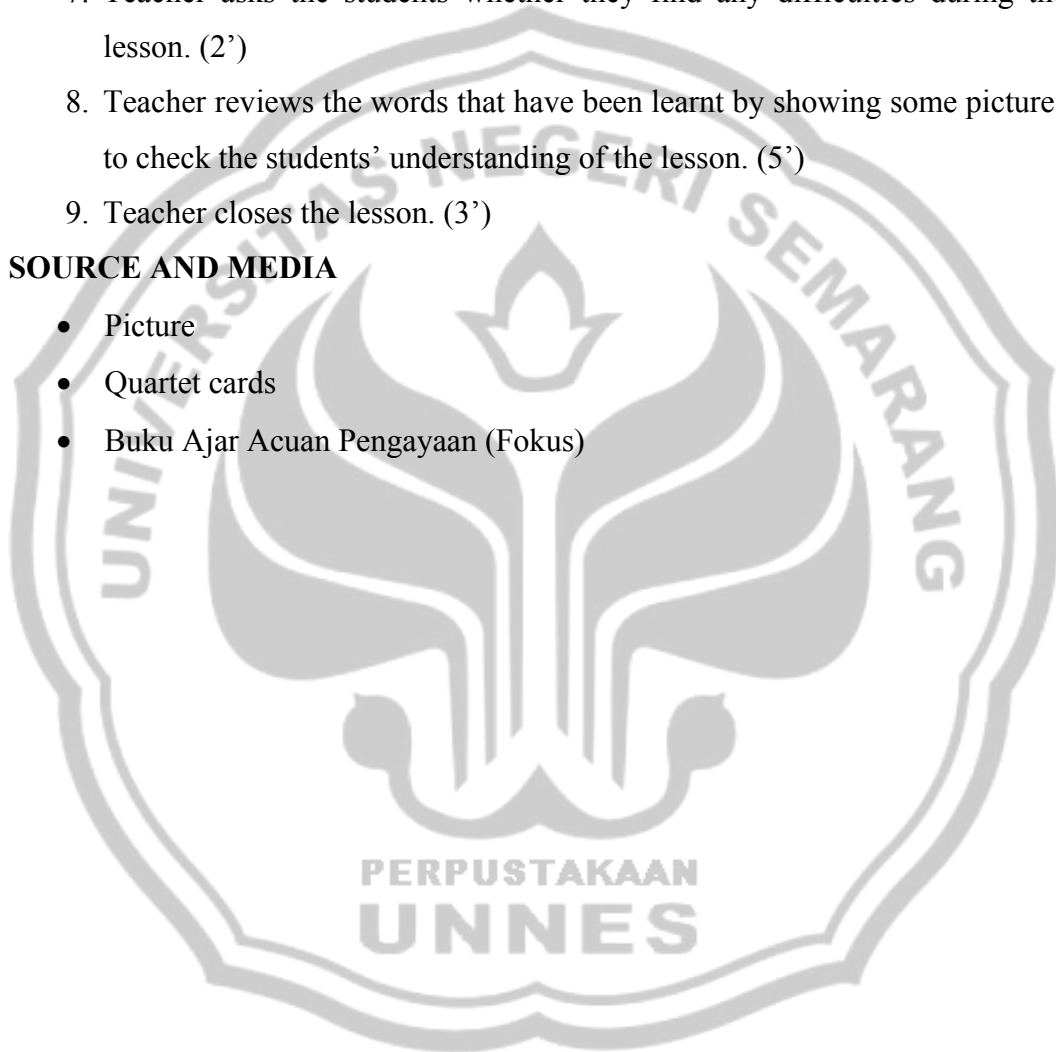
14. Teacher gives the sets of the cards to each group and asks them to start the game.

CLOSING

7. Teacher asks the students whether they find any difficulties during the lesson. (2')
8. Teacher reviews the words that have been learnt by showing some pictures to check the students' understanding of the lesson. (5')
9. Teacher closes the lesson. (3')

SOURCE AND MEDIA

- Picture
- Quartet cards
- Buku Ajar Acuan Pengayaan (Fokus)



Appendix 26

**LESSON PLAN
“FRUITS AND VEGETABLES”**

- School : MI Al Iman Banaran
 Class/ Semester : IV/ 2
 Aspect : Reading
 Standard Competence: Memahami tulisan Bahasa Inggris sangat sederhana dalam konteks kelas.
 Basic Competence : Memahami kalimat dan pesan tertulis sangat sederhana
 Time Allotment : 2 x 35
 Objectives : The purpose of the study is:
- 80% of all students are able to identify 5 among 6 kinds of fruits and vegetables.
 - 80% of all students are able to mention 5 among 6 kinds of fruits and vegetables.
 - 80% of all students are able to answer 4 among 5 questions related to fruits and vegetables.

MATERIALVocabulary:

- Watermelon
- Mango
- Pineapple
- Durian
- Grapes
- Starfruits
- Banana
- Mangosteen
- Cabbage
- Potato
- Carrot
- Broccoli
- Celery
- Beans
- Tomato
- Mushroom

METHOD

- Drill
- Question and answer

OPENING

7. Teacher greets the students. (5')
8. Teacher checks the students' attendance list. (5')

EXPLORATION

10. Teacher shows some pictures relate to "Fruits and Vegetables" and asks them:
 - What is this?
 Then teacher shows the correct answer of it. (10')
11. Teacher asks the students to guess what they are going to learn. (2')
12. Teacher asks what kind of fruits and vegetables that they know. Teacher writes students' answers on the blackboard by giving them know their meanings in English. (10')

ELABORATION

15. Teacher pronounces those words written on the blackboard one by one and asks the students to repeat after her. (5')
16. Teacher divides students into 7 groups. Each group consists of four students. (2')
17. Teacher explains the rules of the game (5')
 - Each group receives one set of quartet card which consists of seven families. And each family has four members.
 - Students have to collect all of the members of each family by asking their friends.
 - One student shuffles the cards and gives each player 4 cards.
 - If the student who is asked has the card, he/she has to give it and the one who ask for the card can keep on asking for the other cards to the other students.
 - If the student who is asked doesn't have the card, the one who ask for the card has to give his turn to the next student and he/she can take a card from the pile.

- If one player can collect one family which consists of four cards, he/she has to put the cards down.
- And the one who can collect a lot of families, he/she will be the winner.

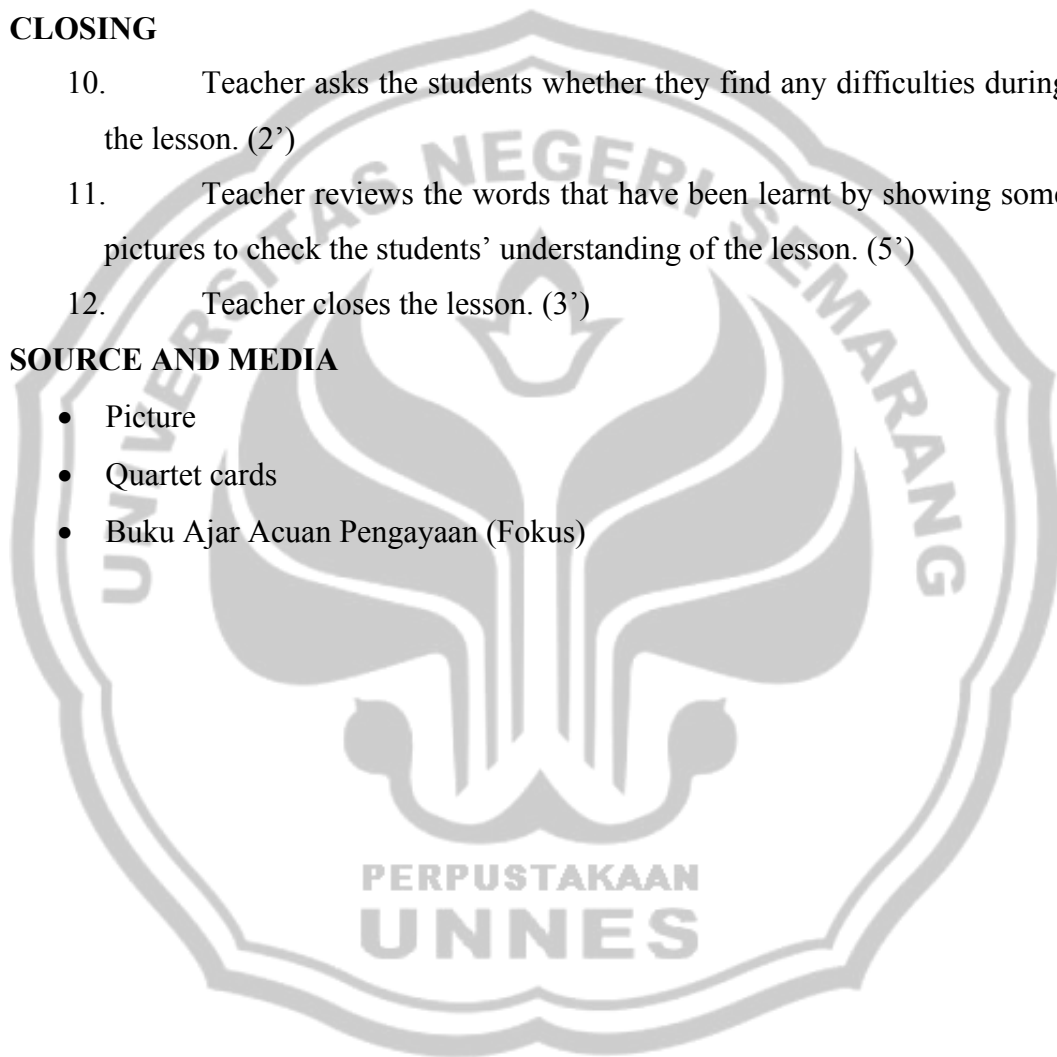
18. Teacher gives the sets of the cards to each group and asks them to start the game.

CLOSING

10. Teacher asks the students whether they find any difficulties during the lesson. (2')
11. Teacher reviews the words that have been learnt by showing some pictures to check the students' understanding of the lesson. (5')
12. Teacher closes the lesson. (3')

SOURCE AND MEDIA

- Picture
- Quartet cards
- Buku Ajar Acuan Pengayaan (Fokus)



Appendix 27



^CROSS^

ZZLE^



(Teka Teki Silang)

ST:

5	
---	--

7	
---	--

0	
1	

t

ipping

d seek

war

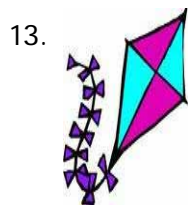
/



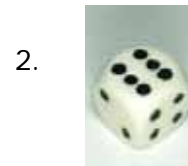
--



ACROSS



DOWN



Appendix 28

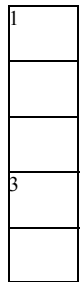
^^CROSSWORD PUZZLE^^



(Teka Teki Silang)

WORD LIST:

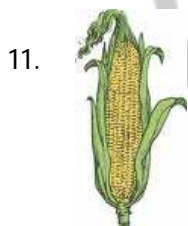
- guava



er
e
it
le











ACROSS






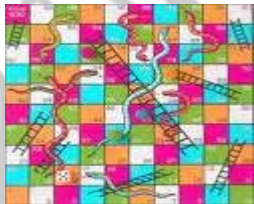




DOWN






Appendix 29

TOYS		TOYS	
<p><u>toy sword</u> catapult</p> 	<p>toy gun toy ship</p>	<p><u>catapult</u> toy sword</p> 	<p>toy gun toy ship</p>
<p><u>toy gun</u> toy ship</p> 			<p>sword catapult</p>
<p><u>robot</u> yoyo</p> 			<p>train doll</p>
<p><u>toy train</u> doll</p>  <p>Kereta mainan</p>	<p>robot yoyo</p>	<p><u>doll</u> toy train</p>  <p>Boneka</p>	<p>robot yoyo</p>

TOYS		TOYS	
<p><u>toy plane</u> toy tank</p> 	<p>card ball</p>	<p><u>toy tank</u> toy plane</p> 	<p>card ball</p>
<p><u>card</u> ball</p> 			<p>plane y tank</p>
<p><u>gunny</u> swing</p> 			<p>slide eesaw</p>
<p><u>slide</u> seesaw</p> 	<p>gunny sack race swing</p>	<p><u>seesaw</u> slide</p> 	<p>gunny sack race swing</p> <p>Jungkat-jungkit</p>









<p style="text-align: center;">GAMES</p> <p><u>hide and seek</u> rope skipping</p> 	<p style="text-align: center;">GAMES</p> <p><u>rope skipping</u> hide and seek</p> 
<p><u>tug of war</u> snake and ladder</p> 	<p><u>tug of war</u> snake and ladder</p> 
<p><u>toy truck</u> toy car</p> 	<p><u>toy boat</u> gassing</p> 
<p><u>gassing</u> toy boat</p> 	<p><u>toy truck</u> toy car</p> <p><u>toy boat</u> gassing</p> 











TOYS	TOYS
<p><u>kite</u> marbles</p> 	<p><u>marbles</u> kite</p> 
<p><u>mask</u> dice</p> 	<p>kite arbles</p> 

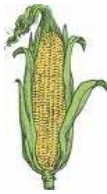













Appendix 30

FRUITS		FRUITS	
<p><u>pineapple</u> mangosteen</p> 	<p>mango banana</p>	<p><u>mangosteen</u> pineapple</p> 	<p>mango banana</p>
<p><u>mango</u> banana</p> 			<p>apple mangosteen</p>
<p><u>grapes</u> jackfr</p> 			<p>apple mangosteen</p>
<p><u>starfruit</u> apple</p>  <p>Belimbing</p>	<p>grapes jackfruit</p>	<p><u>apple</u> starfruit</p>  <p>Apel</p>	<p>grapes jackfruit</p>

FRUITS		FRUITS	
<p><u>watermelon</u> guava</p> 	<p>avocado longan</p>	<p><u>guava</u> watermelon</p> 	<p>avocado longan</p>
<p><u>avocado</u> longan</p> 			<p>watermelon guava</p>
<p><u>papaya</u> orange</p> 			<p>durian pear</p>
<p><u>durian</u> pear</p> 	<p>orange durian</p>		<p>papaya orange</p>
<p>Durian</p>		<p>Pir</p>	



VEGETABLES		VEGETABLES	
<p><u>corn</u> eggplant</p> 	<p>broccoli celery</p>	<p><u>eggplant</u> corn</p> 	<p>broccoli celery</p>
<p><u>brocc</u> celery</p> 			<p>corn gplant</p>
<p><u>carrot</u> potato</p> 			<p>chili bbage</p>
<p><u>chili</u> cabbage</p>  <p>Cabai</p>	<p>potato</p>	<p>chili</p>  <p>Kubis</p>	<p>carrot potato</p>

VEGETABLES		VEGETABLES	
<p><u>bean</u> mushroom</p> 	<p>cucumber spinach</p>	<p><u>mushroom</u> bean</p> 	<p>cucumber spinach</p>
<p><u>cucumi</u> spinaci</p> 			<p>bean hroom</p>



Appendix 31

t-table (Scores in the t distribution)

α untuk uji dua pihak (two tail test)						
	0,50	0,20	0,10	0,05	0,02	0,01
α untuk uji satu pihak (one tail test)						
dk	0,25	0,10	0,05	0,025	0,01	0,005
1	1,000	3,078	6,314	12,706	31,821	63,657
2	0,816	1,886	2,920	4,303	6,965	9,925
3	0,765	1,638	2,353	3,182	4,541	5,841
4	0,741	1,533	2,132	2,776	3,747	4,604
5	0,727	1,476	2,015	2,571	3,365	4,032
6	0,718	1,440	1,943	2,447	3,143	3,707
7	0,711	1,415	1,895	2,365	2,998	3,499
8	0,706	1,397	1,860	2,306	2,896	3,355
9	0,703	1,383	1,833	2,262	2,821	3,250
10	0,700	1,372	1,812	2,228	2,764	3,169
11	0,697	1,363	1,796	2,201	2,718	3,106
12	0,695	1,356	1,782	2,179	2,681	3,055
13	0,692	1,350	1,771	2,160	2,650	3,012
14	0,691	1,345	1,761	2,145	2,624	2,977
15	0,690	1,341	1,753	2,131	2,602	2,947
16	0,689	1,337	1,746	2,120	2,583	2,921
17	0,688	1,333	1,740	2,110	2,567	2,898
18	0,688	1,330	1,734	2,101	2,552	2,878
19	0,687	1,328	1,729	2,093	2,539	2,861
20	0,687	1,325	1,725	2,086	2,528	2,845
21	0,686	1,323	1,721	2,080	2,518	2,831
22	0,686	1,321	1,717	2,074	2,508	2,819
23	0,685	1,319	1,714	2,069	2,500	2,807
24	0,685	1,318	1,711	2,064	2,492	2,797
25	0,684	1,316	1,708	2,060	2,485	2,787
26	0,684	1,315	1,706	2,056	2,479	2,779
27	0,684	1,314	1,703	2,052	2,473	2,771
28	0,683	1,313	1,701	2,048	2,467	2,763
29	0,683	1,311	1,699	2,045	2,462	2,756
30	0,683	1,310	1,697	2,042	2,457	2,750
40	0,681	1,303	1,684	2,021	2,423	2,704
60	0,679	1,296	1,671	2,000	2,390	2,660
120	0,677	1,289	1,658	1,980	2,358	2,617
∞	0,674	1,282	1,645	1,960	2,326	2,576

Appendix 32

r-table (Scores of r Product Moment)

N	Tarf Signifikan		N	Tarf Signifikan		N	Tarf Signifikan	
	5%	1%		5%	1%		5%	1%
3	0,997	0,999	27	0,381	0,487	55	0,266	0,345
4	0,950	0,990	28	0,374	0,478	60	0,254	0,330
5	0,878	0,959	29	0,367	0,470	65	0,244	0,317
6	0,811	0,917	30	0,361	0,463	70	0,235	0,306
7	0,754	0,874	31	0,355	0,456	75	0,227	0,296
8	0,707	0,834	32	0,349	0,449	80	0,220	0,286
9	0,666	0,798	33	0,344	0,442	85	0,213	0,278
10	0,632	0,765	34	0,339	0,436	90	0,207	0,270
11	0,602	0,735	35	0,334	0,430	95	0,202	0,263
12	0,576	0,708	36	0,329	0,424	100	0,195	0,256
13	0,553	0,684	37	0,325	0,418	125	0,176	0,230
14	0,532	0,661	38	0,320	0,413	150	0,159	0,210
15	0,514	0,641	39	0,316	0,408	175	0,148	0,194
16	0,497	0,623	40	0,312	0,403	200	0,138	0,181
17	0,482	0,606	41	0,308	0,398	300	0,113	0,148
18	0,468	0,590	42	0,304	0,393	400	0,098	0,128
19	0,456	0,575	43	0,301	0,389	500	0,088	0,115
20	0,444	0,561	44	0,297	0,384	600	0,080	0,105
21	0,433	0,549	45	0,294	0,380	700	0,074	0,097
22	0,423	0,537	46	0,291	0,376	800	0,070	0,091
23	0,413	0,526	47	0,288	0,372	900	0,065	0,086
24	0,404	0,515	48	0,284	0,368	1000	0,062	0,081
25	0,396	0,505	49	0,281	0,364			
26	0,388	0,496	50	0,279	0,361			

Appendix 34

Table of Chi Square Score

dk	Tarf signifikansi					
	50%	30%	20%	10%	5%	1%
1	0,455	1,074	1,642	2,706	3,841	6,635
2	1,386	2,408	3,219	4,605	5,991	9,210
3	2,366	3,665	4,642	6,251	7,815	11,341
4	3,357	4,878	5,989	7,779	9,488	13,277
5	4,351	6,064	7,289	9,236	11,070	15,086
6	5,348	7,231	8,558	10,645	12,592	16,812
7	6,346	8,383	9,803	12,017	14,067	18,475
8	7,344	9,524	11,030	13,362	15,507	20,090
9	8,343	10,656	12,242	14,684	16,919	21,666
10	9,342	11,781	13,442	15,987	18,307	23,209
11	10,341	12,899	14,631	17,275	19,675	24,725
12	11,340	14,011	15,812	18,549	21,026	26,217
13	12,340	15,119	16,985	19,812	22,362	27,688
14	13,339	16,222	18,151	21,064	23,685	29,141
15	14,339	17,322	19,311	22,307	24,996	30,578
16	15,338	18,418	20,465	23,542	26,296	32,000
17	16,338	19,511	21,615	24,769	27,587	33,409
18	17,338	20,601	22,760	25,989	28,869	34,805
19	18,338	21,689	23,900	27,204	30,144	36,191
20	19,337	22,775	25,038	28,412	31,410	37,566
21	20,337	23,858	26,171	29,615	32,671	38,932
22	21,337	24,939	27,301	30,813	33,924	40,289
23	22,337	26,018	28,429	32,007	35,172	41,638
24	23,337	27,096	29,553	33,196	35,415	42,980
25	24,337	28,172	30,675	34,382	37,652	44,314
26	25,336	29,246	31,795	35,563	38,885	45,642
27	26,336	30,319	32,912	36,741	40,113	46,963
28	27,336	31,391	34,027	37,916	41,337	48,278
29	28,336	32,461	35,139	39,087	42,557	49,588
30	29,336	33,530	36,250	40,256	43,773	50,892



YAYASAN PENDIDIKAN AL MA'ARIF
AKTE No. 103 Th.1986
MADRASAH IBTIDAIYAH (MI)
AL-IMAN BANARAN
 Telp. 024 8508021 Status : Terakreditasi B

Alamat : Jl.Taman Siswa Banaran Ke... Sekaran. Kec. Gunungpati Semarang 50229

SURAT KETERANGAN
Nomor : /MI.AI/VI/2011

Yang bertanda tangan di bawah ini :

Nama : Sri Maryatun, S.Pd.I.
 Jabatan : Kepala Madrasah
 Alamat : Jl. Taman Siswa Banaran Kel. Sekaran Kec. Gunungpati Kota Semarang.

Menerangkan bahwa:

Nama : Chubbi Millatina Rokhuma
 NIM : 2201407172
 Jurusan : Pendidikan Bahasa Inggris UNNES Semarang

Nama tersebut di atas benar- benar telah melaksanakan penelitian di MI Al-Iman Banaran Kelurahan Sekaran Kecamatan Gunungpati Kota Semarang pada tanggal 8 Maret-20 April 2011 dengan baik dalam rangka menyelesaikan Skripsi.

Demikian surat keterangan ini dibuat, untuk dapat dipergunakan sebagaimana mestinya..

Semarang, 21 April 2011

Kepala MI Al Iman



Sri Maryatun, S.Pd.I.