

TEACHING VOCABULARY USING MATCHING WORD ON COMPUTER ASSISTED, LANGUAGE LEARNING

Sondang Manik, May Christiani

ABSTRACT: *Studying English in Indonesia is not easy where English as Foreign Language. Teaching English in the city and in the rural a remote area like Siborong-borong is a challenge for teacher. Matching word on computer assisted language learning, was applied to improve the students' vocabulary mastery. This is a way that could make the students easier learning vocabulary, for vocabulary mastery. Using Hot Potatoes is a good program because the students can correct and/or edit their own assignment based on the clues and feedback are given in the target language. Furthermore, by using Hot Potatoes software student can do exercise by themselves. Based on the interview which has been done between with the teacher and the researcher and the students, it was found that the teacher had a problem in teaching vocabulary mastery, they are not interested in studying vocabulary. The English teacher may use computer as a media and matching word as a test of teaching learning process especially in learning vocabulary using hot potatoes software. This is a class action research, Students' score of the test is analysed, the score of pre test, post test of cycles. The last test of cycle II was improved than the test of cycle I and also improved than the orientation test. In the last test of cycle II from 36 students, there were 22 students who got the score ≥ 75 point up and the mean was 78,72 and percentage 61,11%. In the test cycle I, there were 6 students who got the score ≥ 75 point up and the means was 70,91 and percentage 16,66%. While in the orientation test, there were only 3 students who got ≥ 75 point up and the mean was 60,11 and percentage 8.33%. Based on the result of quantitative and qualitative data, it was found that uses matching word in computer significantly improved students' vocabulary mastery of SMA N 1 Siborongborong.*

KEYWORDS: Matching Words, Vocabulary Mastery, Class Action Research

INTRODUCTION

The Background of the Study

Nowadays, as international language, English becomes important language. English helps people to communicate and to have interaction with other people from different countries, to communicate wills and also to develop science, technology, art and culture. Knowing and mastering English language will give the benefits for students.

The students of Indonesia study English as a foreign language in the elementary until university and sometimes from kindergarden level. Students are taught four skills at class: speaking, listening, reading and writing. Students need to develop their ability at these four skills for increasing the knowledge and skill of English language in life. Besides these skills, vocabulary is one of the important component in language. Additionally, every learning process will go on well if there is motivation. It is expected that each student who come to

school has the motivation to study. Therefore, teacher have to make students productively involved using the work in the class. This step requires teacher's creativity to create the most appropriate ways for their students. These skills are learned through selected material based on their development level. However, in a teaching and learning process, a teacher must develop the four language skills interactively. Qualified teacher, good environment, facilities and media also support the success of language learning. Language also has another component, which is called vocabulary.

Vocabulary is a total number of words which with rules for combining them make up a language. In the world of education, students are expected to master enough vocabulary to support their English skill. When the students have known enough vocabulary, it will help them to make their learning process go easier with the maximum result. However, the main problem faced by many students that they are still master a small number of vocabularies that influence their English competence. Vocabulary is very crucial in language learning and one of the important factors in learning English especially in teaching junior high school students.

The using and mastering words well can give the easiness for students to communicate. Having rich vocabularies will make students able to express more ideas because students can learn and understand unfamiliar words and the concept of using the words. Students can not make meaningful sentences in communication without having good vocabulary.

Students lack of understanding the vocabulary they have. Students also lazy to consult the dictionary. They don't try to memorize vocabulary. To solve the problems above and to find the solution, the writers have motivated to do the research entitled Improving Students' Vocabulary Mastery By Using Matching Word On Computer Assisted Language Learning (CALL) At SMA N 1 Siborongborong.

This study focused on the use of the program in language classes to teach new vocabulary in an enjoyable, innovative way. The instruments include a vocabulary test used to measure the students' knowledge of the target vocabulary before and after a teaching period. CALL (Computer Assisted Language Learning) is often considered a language teaching method, however, this is not really the case. In traditional CALL the methodology is often claimed to be based on a behavior approach as in "programmable teaching" where the computer checked the student input and gave feedback, moved on to an appropriate activity exercise. In modern CALL the emphasis is on communication and tasks.

Matching word is suitable to someone and something make or see a connection or relation between two people or things by sentences. Method is one of the cooperative learning methods that makes the students active in teaching and learning process. The implementation of the teaching technique becomes one of the most important strategies in teaching learning process. The writer used matching word method in teaching vocabulary because the writers trust it can be made that the students have fun and it can foster cooperation in answering question by matching words.

Based on the writer's experience at teaching practice in real class (Internship), most of students have low vocabulary mastery and they have difficulties in studying English language. As a foreign language, English words aren't too familiar for studens. It is difficult for them to master English vocabulary because it's not used in daily communication. Most of students have some problems in mastering English words, they have limited vocabulary. They don't comprehend words meaning and the usage of he word in context. They do not

recognize the words when listening to the speaker. They also can't write a composition in English written task successfully and automatically they can not communicate fluently.

Based on the problems above, writers wants to apply a strategy that is Matching Word one of Computer Assisted Learning Language. The writer hopes by using this method, the students can make it easier to improve students' vocabulary.

Looking at the importance of vocabulary, writers decide to do a research entitled "Teaching vocabulary using Matching Word on Computer Assisted Language Learning". writers hope teachers will present the material more enjoyable, interesting and challenging for the students to improve the students' vocabulary.

The research objective are:

1. To find out whether Matching Word on Computer Assisted Language Learning (CALL) improves student's vocabulary mastery at SMA N 1 Siborongborong.
2. To find out how Matching Word on Computer Assisted Language Learning (CALL) could improve students vocabulary at SMA N 1 Siborongborong.

In learning language, students will obviously find many problems in learning vocabulary. One of the tools in teaching English vocabulary is by using Matching Word On Computer Assisted Language Learning (CALL). In this study, the writer uses Computer as media and Matching Word as a Test to test English vocabulary At SMA N 1 Siborongborong. There are kinds of vocabulary, namely, vocabulary in noun, pronouns, verb, adjective, adverb, preposition, conjunction and determiner. The writer limited vocabulary in adjective in this research.

There are many types of CALL related material/activities for teaching to improve vocabulary of students such as cloze word, splite word, word spiral, fill in the blank, multiple choice, matching word-sentence-picture, etc. The writer just focus on matching word as a type of test vocabulary in CALL.

It is expected that the findings of the study are significances in some respect in:

1. Theoretical significances

1. The result of the research can be as one of the alternatif in teaching English vocabulary and learning process.
2. The result of the research can be used to develop teaching media in learning English as a foreign Language .

2. Practical significances

1. The research finding will be used by the readers who are interested in teaching Vocabulary.
2. Students to develop their vocabulary skill. The students can memorize English vocabulary more easily and they are learning in an enjoyable atmosphere.

The hypotheses of the study (Ha), that the Matching word Computer Assisted Language Learning (CALL) improves students' vocabulary mastery at SMA N 1 Siborongborong.

Theoretical Framework

Vocabulary

Vocabulary is basic element of learning English. This is an important factor in reading, listening, writing, and speaking. According to Yun (2005: 68), the field in which vocabulary is commonly used is as follows:

1. All the words as the language.
2. The number of words that an individual can understand and use whether in speaking or writing
3. The word said to be representative of a subject or occupation.
4. List of words to serve a specific purpose

In fact, most people still need some vocabulary rules in order to gain a good sense of language. The words that someone choose affect how good the impression he makes and how people react to serve a specific purpose of the language.

Vocabulary is not only words. When the writer talk about vocabulary, it means that writer talk the words. There are some different ways to think about vocabulary: meaning, pronunciation, collocation, expression, synonym, and homonym.

Kinds of Vocabulary

According to Brown (1945:16), there are two kinds of vocabulary, as follows:

1. Active Vocabulary (Productive Vocabulary). Active Vocabulary is words which the students understand, can pronounce correctly and uses constructively in speaking and writing.
2. Passive Vocabulary (Receptive Vocabulary). Passive Vocabulary is words that recognize and understand when they occur in a context, but he cannot produce correctly himself. It refers to language items that can be recognized and understood in the context of reading or listening and also called as receptive vocabulary.

Teaching Vocabulary

The introduce students about vocabularies, teacher can choose the relevant topic to be studied. Allen (2006:5) also states that in teaching students the teacher should teach the students to recognize and understand the word in multiple context example; use the word in their speaking and writing; connect the word to their own lives and offer examples of its correct and incorrect use; understand subtle shades in the word's meaning; and generate effective contexts to help others understand the word.

Teachers could teach words at different levels depending on their importance, frequency, and applicability in other contexts. Having enough vocabulary can make students able to listen, speak, read and write. It also makes students to be able to produce language easily. When the teachers teach vocabulary, they probably face the problem from many factors related to the word and also the first language learners matches the second language learners.

Cameron(2001:81) exclaims about several principles of teaching vocabulary to young learners which are:

1. Types of words that children find possible to learn with shift.
2. Vocabulary development is not just learning more words but it is also importance about expanding and depending word knowledge
3. Word and words knowledge can be seen as being linked in network of meaning.
4. Basic level words are likely to be more appropriate for children or when learning vocabulary for new concept.
5. Children change in how they can learn words.

According to McCarten (2007:20) there are some ways to teach in class:

1. Focus on vocabulary

One of the first of vocabulary learning strategies for any class room is how to ask for words meaning and unknown words. Teacher can ask students some basic questions to know words meaning and pronunciation. Nation states another way is by using the noticing strategy, it can be as the habit of students in class room and home work assignment.

2. Offer Variety

Offering some activities, learning and material for students can make students interact to study in different way. Teacher should use the appropriate way to teach student by considering the situations, condition and students' characters.

3. Repeat and recycle

Students can memorize vocabulary well by repeating or reviewing of what have learnt to use or recycle the later.

4. Provide opportunities to organize vocabulary

Students can learn to organize vocabularies in some way to group words.

1) Real word games are the words in real words example: country, celebration and so on. Students can group the word base on the concepts that they are already familiar.

2) Language based group of words. Linguistic criteria as ways of grouping, for example, the different parts of speech of a word family, prefix, suffix, or the

same sound, verb, preposition and collocation.

c. Personalized groups. Students make words group by using their own experience, personal habits and personal history example: food they like and do not like.

5. Make vocabulary learning journal

Teachers make materials that can provide students' meaningful vocabulary through their personalisation experience.

6. Do not over do it.

Teachers do not give too many vocabularies. Teachers can ask what items that students want to know

7. Use strategy vocabulary in class

Teachers can use some strategies to teach students. Even it's not a part of syllabus or textbook. Teachers can have more experiences in teaching by using some strategies and techniques.

Teachers should be able to present vocabulary well and effectively. The teacher can do some activities or technics to make students achieve learning goal well. The students can be motivated through new ways that can be suitable for developing their knowledge and skill.

How to Build Vocabulary

Brown and Payne (1994) claim that the first three steps are foundation of in the process of vocabulary acquisition, and the last two steps are critical. O'Connor (2005) gives statement to build a good vocabulary teaching. Generally, there are some items that should be marked as a guidance point. The items are stated as follows:

1. Words

2. Meaning

3. Sentences practice

4. Dictionary

Furthermore, language without vocabulary is like chicken walking around without bones. So, vocabulary is backbone of the language and we cannot ignore it.

Vocabulary Assessment

Assessment is needed to know and to determine the students' development in vocabulary achievement. According to Cameron, (2001:222) "assessment is concerned with pupil's learning or performance and thus provides one type of information that might be used in evaluation. Testing is particular form of assessment that is concern with measuring learning through performance". Furthermore assessment is a part of students' language learning that can motivate them to learn more or not because assessment has effect for children. Westwood(2008:72) states the main function of assessment are:

1. To enable a teacher to evaluate the effectiveness of the teaching program and then to make any necessary modifications to method of delivery, learning activities or resources.

2. To identify any students who are having difficulties mastering the course content, and thus need additional help.
3. To provide information if a student is to be transferred to another school or referred for special education;
4. To be accountable to parents by providing them with evidence of their child's learning.
5. To be accountable to government education authorities by providing hard evidence of achievement levels in school.

Some necessary test is applied to take the data to measure the students' knowledge of what they have learnt before. By doing the test, teachers will know how effective the teaching process before. Teacher and students get feedback from the test. Read (2000:4) states there are some tests can be used to test students' vocabulary: multiple choice, translating and matching.

Computer Assisted Language Learning (CALL)

The computer gives individual attention to the learners at the consulate and replies to his/her. Traditionally, it acts as a tutor assessing the learners reply, pointing out mistakes and giving explanations. It guides the learners towards the correct answer and generally adapt the material to his/her performance

Definition of Computer Assisted Language Learning (CALL)

These idea are very much alive today in a new landscape, that of computer assisted language learning (CALL). (Ken Beatty 2003:1) stated it that Call is filled with areas that are unknown and in need of exploration. Even where much is known, detail have not been made clear or need to be made clearer as other factors and condition change, such as the introduction of new technologies and broader adoption of existing technological.

Given the breadth of what may go on in computer assisted language learning (CALL) that accommodates its changing nature is any process in which a learner used a computer and as a result, improves his or her language. Although this definition might seem unworkably large, it at least encompasses a board spectrum of current practice in this spectrum allow learning of language at the computer. An awareness of this spectrum allows learners, teacher and researcher to recognize appropriate materials and methodologies and adapt other to various teaching and learning styles.

When planning to use CALL it is important to understand how a language is learned, language learning is a cognitive process, i.e. It is the result of the students own processing of language inputs. What is learned is mainly the result of this process and not just explanations, rules and question presented by a teacher or a computer. Based on her/his existing knowledge on the topic being worked on, language, and language acquisition the student processes the input and fits it into the language system he/she processes. Language knowledge is not recorded, but rather constructed by the student.

CALL can offer opportunities for learner direct their own learning. CALL also present opportunities for learner to study on their own, independent of teacher. But such assumption

may be question questionable for many CALL software programs that follow a lock-step scope and sequence. Such programs give learners only limited opportunities to organize their own learning it to their special need. On the other hand, most CALL material, of their design, allow for endless revisiting that can help learners review those parts for which they need more practice.

Advantages And Disadvantages of Computer Assisted Language Learning (CALL)

As Ormrod (2000: 553) wisely comments : A computer can help our students achieve at higher levels only when it provides instruction that the writer cannot offer as easily or effectively by other means.

Advantages of CALL

1. Teaching of science, social studies, mathematics, environmental education, health and the arts can be enhanced by documentaries or simulation programs and by giving access to Internet resources.
2. Programs can stimulate inductive learning through presenting complex and interactive problems.
3. With instructional programs, students make active responses and they are 'in charge' of the learning situation.
4. Working at a computer is motivating, challenging, but non-threatening.
5. Students are helped to move toward greater independence in learning.
6. Immediate corrective feedback is provided in most tutorial-type programs.
7. Learning can be achieved at an appropriate pace for the student.
8. Software can be matched to a student's ability level and is therefore one way of individualising learning.
9. CALL is a private method of responding, and students can self-correctmistakes.
10. Word-processing facilitates the production of high quality, well-presented assignment

Disadvantages associated with CALL

1. Some teachers lack confidence or expertise in integrating ICT into the curriculum.
2. There may be a shortage of computers in the school, with computers only available in a computer lab at limited times each week.
3. Technical failures can occur.
4. CALL places additional demands on teachers' planning and preparation time.
5. Some published software, supposedly for educational purposes, turns out to be entertaining but low in educational value.

6. Students with literacy problems have difficulty comprehending verbal information on the screen.

CALL as a Media of Teaching English

Carefulness in selecting of media applied in the process of teaching and learning is needed in order to reach the satisfactory result of it. One of the media of teaching English vocabulary is Computer. Matching word is chosen as a Test of teaching English vocabulary in this study.

The writer uses Computer Assisted Language Learning (CALL) as a media of Teaching English Vocabulary. In teaching vocabulary, teachers should not give it separately, word by word, but in sentences

Kinds of Teaching Media

the writers found that they used difference definition of media. Hamalik (1980:50-51) defines that teaching media consist of several kinds, such as:

1. Supplementary materials including reading materials: book, comic, newspaper, magazine, bulletin, folder, pamphlet.
2. Audio visual media:
 - 1) Non projector media; blackboard/whiteboard, diagram, graphic, poster, cartoon, comic, picture.
 - 2) Three dimension media; model/natural thing like diorama, doll, mask, map, globe, school museum.
 - 3) Machined media; slides, filmstrip, film, record, radio, television, computer.
3. Society source: people, industry, history, area, custom, politic.
.Material collection: chemist, seed, and leaves.
4. Gesture: all action by the teacher in the class like moving hands, foot, body, and facial expression.

While Suparno (1988:50) defines kinds of teaching media that can be used in the process of teaching and learning process into four types, they are:

1. Non-projector viewing media: the viewing media that cannot be projector object to other surface. For example: flash card, pictures, etc.
2. Projector-viewing media: the viewing media that can be projected of the object of transparency to other surface example OHP (Over Head Projector).
3. Auditory media: the teaching media that confide the message by sound. For example: tape, recorder, etc.
4. Audiovisual media: the teaching media which confide the message though around and also its picture or action can be seen followed its sound. For example: TV, VCD, etc.

5. Game: the teaching media by game which is done by individual, group, or in pairs. For example: puzzles, guessing, the words, etc.

In this study, Computer Assisted Language Learning (CALL) is chosen as a media of teaching English vocabulary. Then The writer instal in computer uses Hot Potatoes Software a test namely Matching word as tests to teach English vocabulary. Matching Word is a related word type which is another very good exercise for all level of students. We can have up to five items with matching items. Items can be word or pictures, this mean I can easily create a word based vocabulary trainer.

Use the generator to make up own worksheets with words, add own text or just a word for students to match the word with computer.

Matching Word

The “Matching Word” has been around for many years, An alternative to the typical matching exercise, the Matching Word is an enjoyable way to assess an initial understanding of words and concepts(Allen 2006:103). To make a Matching Word begin by make two-column list: one column is a lettered list of terms; the other column is a numbered list of definitions. The size of the square is based on the number of terms used.Students match the definitions to the terms and place the number of the definition in the box bearing the letter of the term. Students are able to check the accuracy of their matches, because correct matches will yield the same numerical total for each row across and down. If a given row does not add up to the magic number, students have made an error in matching words and definitions. While students (and teachers) enjoy this activity and find it a helpful way for reinforcing, checking, and testing knowledge of words, the Matching Word is time-consuming to construct unless you follow a template.

Test and Kind of Test

Matching Word as a Test to test English vocabulary. Test is a simple terms, a method of measuring a person's ability knowledge, or performance in a given domain.”The method must be explicit and structured to qualify as a test Brown (2004:3).

Read (2000:4) states there are some tests can be used to test students’ vocabulary: multiple choice, translating and matching. There are two kinds of tests namely base on purpose and base on response. Each test has specific purpose and a particular criterion to be measured.

1. Test Base on Response This paper explained about five kinds of tests based on specific purposes, Those tests are :
 1. Proficiency Test the purpose of Proficiency test is to test global competence in a language.
 2. Diagnostic Test the purpose is to diagnose specific aspects of a language.
 3. Placement Test the purpose of placement test is to place a student into a particular level or section of a language curriculum or school.
 4. Achievement Test the purpose of achievement tests is to determine whether course objectives have been met with skills acquired by the end of a period of instruction.

5. Language Aptitude Test the purpose of language aptitude test is to predict a persons success to exposure to the foreign language.

There are two kinds of tests based on response, They are subjective test and objective test.

1. Subjective Test

Subjective test is a test in which the learners ability or performance are judged by examiners opinion and judgment. The example of subjective test is using essay and short answer.

2. Objective Test

Objective test is a test in which learners ability or performance are measured using specific set of answer, means there are only two possible answer, right and wrong. In other word, the score is according to right answers. Type of objective test includes multiple choice tests, true or false test, matching and problem based questions.

Hot Potatoes Software

Hot Potatoes created by the research and development team at the University of Victoria humanities computing and Media center USA. Cammeria aspects of the software are handled by Haf-Baked software inc. Hot Potatoes has been freeware since october 2009.

Hot Potatoes program, is designed to instructors that make interactive, easily to acces by learners at any place through connection with internet with any standard web browser. Hot Potatoes uses of both HTML and java script, however, learners and instructor do not need to be familiar with these language to make the web-based exercise. The Hot Potatoes program's exercise template to create exercise on web pages which can be uploaded to server where students have access to them.

Hot Potatoes has the capability of producing six sifferent kind of web based exercise which can stand alone or be connected to other exercise or activities to create a sequence of tasks. Hot Potatoes is a good program because the students can correct and/or edit their own assignment based on the clued and feedback are given in the target language. Futhermore, by using Hot Potatoes sofrware, teachers have a choose to specify an e-mail address to which scores are to be sent. Hot Potatoes is actually a software suite consisted of six different programs, referred to as modules in the present study.

Teaching English Vocabulary by Matching Word on Computer

A lot of media can be applied in teaching vocabulary. However, it is a must for teachers to be careful about choosing them so that the process of teaching and learning vocabulary success with the satisfactory result.

One of the media of teaching English vocabulary is by using vocabulary matching word on computer. Matching Word is suitable for students in junior high school because this media often once did start attending elementary school. But there was something different in this work matching word. Here the students will work he sentence matching word is not in note book as usual but on a computer. Of course this test is very interesting because it has never been done before in doing Matching Word on Computer

In this study, Matching Word on Computer is chosen as a test for teaching English vocabulary. The writers assumes the test is appropriate for Senior high school and expected by the English curriculum in which the teaching at school can be more cheerful and encouraging.

The Steps of Teaching English Vocabulary by Matching Word on Computer

In this study, Matching Word on Computer is chosen as a test for teaching English vocabulary. The write assumes this test is appropriate for Senior high school and expected by the English curriculum in which the teaching at school can be more cheerful and encouraging.

Matching Word is chosen as a test of teaching English vocabulary. The writer use Matching word on computer as a test to teach English vocabulary. Matching Word is a related word type which is another very good exercise for all level of students. The writer can have up to five items with matching items. Items can be word or pictures, this mean the writer can easily create a word based vocabulary trainer. The Steps of Teaching English Vocabulary by Matching Word on Computer are:

1. Pre Activity

The teacher greeting and address the students, checking attendance list, and gives motivations.

2. While Activity

Teacher reviews about the last lesson, Teacher explains about Computer Assisted Language Learning (CALL) as a media that they will use and expain Mathcing word as a Test in computer. Teacher expains how to use matching word in computer. Teacher also explains about the advantages of using Matching Word in vocabuary skill than The students listen to the teacher's explanation. Teacher gives the time to the students to ask some questions about the learning media and The students ask some question to the teacher.

3. Post Activity

The teacher asking the students to do the test, asking the students to submit their answers, discussing the test together, gives the students chance to ask and closing the lesson.

Previous Research

Nilufer Berleyen (2001), Dicle University in Turkey in his Thesis "The Impact Of Computer Assisted Language Learning On Vocabulary Teaching: Jing-TM". The purpose of the study is to examine the use of JingTM in the teaching of vocabulary and to find out the students' opinions about this program. This study focused on the use of the program in language classes to teach new vocabulary in an enjoyable and innovative way.

The Thesis Impact Of Computer Assisted Language Learning On Vocabulary Teaching: Jing-TM has a similarity with Improving Students' Vocabulary Mastery By Using Matching Word On Computer Assisted Language Learning (CALL). The similarity are, has the same skill in vocabulary to improve vocabulary of students, has the same media that uses namey CALL (Computer Assisted Language Learning) And the last similarity is the software in computer

jing-tm and Hot Potatoes is a free downloadable computer program that allowed user to take a picture, word, of what they see and do it on their computer monitor.

Research Design

This research design would use the Classroom Action Research. Classroom Action Research was the research in the classroom or other school components. It is useful for improving and modifying teaching-learning process. Teacher will know the situation, students' motivation and student's problems in learning at class.

According to Carr & Kemmis in Burns (2010:5) "self-reflective enquiry" undertaken by participants in order to improve theoretically and justice of their own social or educational practices as well as their understanding of these practices and the situations in which these practices are carried out." While Tomal (2003: 5) states "action research is a systematic process of solving educational problems and making improvements.

The CAR (Class Action Research) process includes seven manageable steps. Instructors may complete small projects within a single semester, while projects more ambitious in scope might require planning ahead or collecting data over several semesters.

Step 1: Identify a question.

A good question has three major qualities :

First, the question is significant to your classroom situation.

Second, the research findings will lead to action, such as keeping or changing a teaching strategy.

Third, the question should lead to a project that is feasible in terms of time, effort, and resources.

Step 2: Review the literature.

You need background information on your question, but a brief review of secondary sources is adequate for these purposes.

Step 3: Plan a research strategy

There is no single best strategy for data collection. Depending on your research question, you might gather data about individual students or an entire class.

Step 4: Collect data

This data could be quantitative (e.g. test scores, grades, survey results) or qualitative (e.g. dialogue from focus groups or class discussions).

Step 5: Analyze data

The goal of data analysis is to look for patterns.

Step 6: Take action based on results

Your research findings should inform your teaching decisions.

Step 7: Share your findings

Teaching can be a solitary activity, with successes and failures rarely acknowledged to others.

It means that class room action research has a goal to improve the system, process, competition and the situation in class through action. The classroom action research is done through cycle process which consists of four steps, namely: planning, action, observation, and reflection.

Population

Population and sample are important elements in research. "Population is total member of research respondent." (Arikunto, 2006:130). In this case, the population is the entire of the Ten Grade Students at SMA N 1 Siborongborong in the academic year 2016/2017. Arikunto (1998:117) says that a sample is a part of population, which is investigated. In this sample research have a purpose to generalize the result of study. In this case, the X class consisted of 30 students, would be chosen as a sample.

Sample

Sample is part of proportion of the population, was used as the source of the real data of the research. The sample of this study would taken from one class which every class consist of 36 students of 10th grade SMA N 1 Siborongborong.

The Instrument of Collecting Data

According to Arikunto (2006:160), research instrument is a device used by the research while collecting the data to make the work become easier and to get better result, complete and systematic in order to make the data easy to process. The data collection is an important part in conducting a research. This data for this study would be collected through quantitative and qualitative way. The data took from vocabulary test (matching word) by answering the question given. Quantitative data was taken from pre-test, treatment, post-test.

Quantitative Data

Quantitative data is collected through test which is administrated by the writer. The students are asked what is matching word. In the first meeting, the writer gave the students explanation about matching word, Computer Assisted Learning Language (CALL) and then practice on the Lab. This test was done in pre-test, post-test in cycle I and post test in cycle II. The writer gave the students writing test about the topic their experience and feeling on yesterday.

1. Pre-test

The writer administrated the pre-test and gives the matching word test to students to get the students' level understanding using Matching Word on Computer.

2. Post-test

The writer administrated the post-test and gave the test using matching word on computer to know the result of the students after getting the material from the writer.

3. Treatment

The research was done in two cycle and each cycle had four steps such as planning, action, observation and reflection. The first cycle had four meetings and the second cycle had two meetings do there is six meetings in this research.

Qualitative Data

The qualitative data was used to describe the situation during the teaching learning process. The qualitative data was collected performed by taking diary notes, observation sheet, and questionnaires.

1. Diary notes

Diary notes were used to record the result of the observing during the action and diary notes as the personal records which usually by the writer that was written up daily.

2. Observation sheet

Observation sheet was used to identify all condition that happens during the teaching learning process.

3. Questionnaire sheet

Questionnaires sheet was used to measure the level of students activities during teaching learning process. Questionnaires are used to know the respond and perception of the students about diary sequences as a media to improve their vocabulary competence.

Procedure of Collecting Data

Action research typically involves four broad phases in the cycle of research namely planning, action, observation, and reflection Kemmis and McTaggart in Burns (2010:8-9). The data were collected with cycle I and cycle II. The first cycle may become a continuing of cycles which recure until the students' score had improved well and the writer felt the time was enough to do the research. Before conducted the cycles, the writer interviewed the students and the English teacher of the class in order to get general information of the students' difficulties in achieving vocabulary. The procedure of research can be seen in this figure

Cycle I

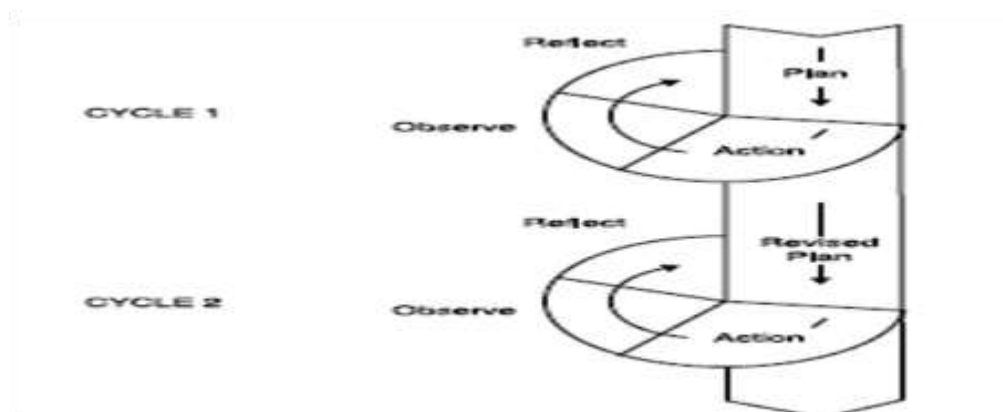


Figure 3.1. Cyclical Action Research Model based on Kemmis and McTaggart (2000) in Anna Burns

1. Planning

The first step in classroom research was planning. In this phase writer identified the problem or issue that was found during the research process. At this part, the writer should be flexible to the situation and condition which might be happened on the field. The writer developed the planning of action in order to achieve about improvements in students vocabulary mastery.

The actions were planned detailed:

1. Knowing the students' problem in learning vocabulary in the classroom
2. Preparing the pre test as instrument for collecting the data
3. Preparing the lesson plan and media
4. Preparing observation sheet and tests

2. Action

In this session the writer applied the planning that had been arranged and designed at the first step of the cycle that had been planned using matching word with computer. The planning was a carefully considered which involves some consideration into the teaching situation for the period of time.

3. Observation

This part involved the writer in observing the teaching and learning process of applying matching word with computer. The writer observed the actions and opinions of those involved in order to collect the happening information that could support the process of research. In collecting the data, the writer observed the studying process, the interaction of students to the topic also the enthusiasm of student to study through Matching Word with computer. This step provided writer to collect the data that are found as the result of acting.

4. Reflection

This phase was the last step of the cycle. The writer could indicated the result that found during the observation at Computer laboratory using the matching word with computer, the writer could use the result of this step as the basic of the next cycle at the points that had been designed and planned in order to bring the improvement of the action of the learning condition of the students.

The writer reflected, evaluated and described what had been found during the action and to understand the issue that writer has explored more clearly. This result could make the writer decide to do the next cycle of the action research or it can be said that this part is as the basic of the next cycle to get improvement of teaching vocabulary using matching word with computer

Cycle II

The writer did the cycle II because students got low scores. The writer designed the teaching planning base on the faced problems in order to get the improvement of students' score. It was also conclude four stages as in the first cycle.

The Validity of the Test

The validity determine how well a test is. A test is said to be good if it is valid and reliable. To ensure that the test is already good, the validity should be established clearly and in accordance with the points of the test. According Arikunto (2013:213) to test the validity, used the correlation formula of product moment.

The Assessment of Vocabulary

The writer would do the matching word test at cyle I and cyle II to get students' score data. It is determined that ranging from 0-100 by accounting the correct answer.

The descriptive technique has been used in this study to analyze the data. To determine the extent of the students' vocabulary mastery, the certain criterion reffering to criterion standard

Table 1: The criterion of students' vocabulary mastery

Score	Category
85-100	Very High
70-84	High
60-69	Average
50-59	Low
0-49	Very Low

Technique of Data Analysis

This action was qualitative data that was used to describe the situation during the teaching process and the quantitative data was used to analyze the score of the students. The qualitative data is analyzed from the observation sheet and the quantitative data is analyzed the computation of the score of vocabulary test.

The pocedure of analyzing data are:

1. Calculating the students' tests cyclce I and II
2. Tabulating the students' score cyclce I and II
3. Comparing the students' score between cycle I and cycle II
4. Making the presentage of the students score
5. Making the conclusion

$$\text{Formula : } \bar{X} = \frac{\sum X}{N} \times 100 \%$$

Where: \bar{X} = The mean of the students

$\sum X$ = The total score

N = The number of the students

The score percentage of each cycle will be calculated by using this formula:

$$\text{Formula: } P = \frac{R}{T} \times 100 \%$$

Where: P = the percentage of the students who get point up 75

R = the number of the students who get point 75 to up

T = the total number of the students who will do the best.

The Quantitative Data

The quantitative data was taken from the result during conducted research in sixth meetings. The test was given three times; a pre-test and post-test in cycle I and cycle II. In the first meeting the students were given test in ending and learning two process by applying two cycles. The students' answer of each item and after it was done, the writer was scoring the test. The total scores is 2,164 of 36 students. There was two student who got the lowest score that is 50. There were three students who got highest 70 score. It can be seen in table 2

After the pre-test was given to the students, the writer gave once treatment before gave the post test I. In treatment, the writer taught the students about matching word. Then, the writer gave explanation how to use matching word in computer.

After conducting some activities, the writer gave the post-test I to the students in order to know students' ability in vocabulary that uses matching word as a test and computer as a media. The total scores is 2,553 of 36 students. There was eight student who got the lowest score that is 65. There were six students who got highest 75 score.

After the post-test cycle I was given to the students, the writer saw that it was not enough to improve their vocabulary skill. It would be better the writer do the cycle II so that the students' score could be improve significantly.. In the last meeting of the cycle II, the writer gave the students the post-test II. In the last of cycle II, the writer gave post-test II to the students in order to know students' ability in vocabulary achievement by using matching word in computer. The total scores of the students is 2,834 of 36 students. There was one student who got the lowest scores that is 65. There was twenty two students who got the highest score 75 until 95.

The scores of the pre-test, post-test cycle I, and post-test cycle II can be seen in the table 5

No	Students' Initial Name	Pre-test	Students' Initial Name	Post-test I	Students' Initial Name	Post-test II
1	SDP	77	DS	85	SOS	95
2	SOS	76	RM	85	SDP	94
3	MHS	75	SDP	84	DS	92
4	CN	70	SOS	84	MHS	90
5	DS	70	MHS	82	RD	90
6	RD	70	CN	80	CN	85
7	ARG	69	AS	75	LH	85
8	NCP	69	ARG	75	AS	82
9	LH	64	LH	75	ARG	82
10	AS	63	LCP	75	IM	82

11	AS	62	AS	74	NCP	82
12	DS	62	DS	74	FS	81
13	IM	61	IM	74	AS	80
14	EM	60	EM	72	GS	80
15	GS	60	GS	72	PS	80
16	HSR	60	HSR	72	YT	80
17	PS	60	PS	71	HSR	79
18	YT	60	YT	71	DS	79
19	EAM	59	EAM	70	EAM	78
20	KH	59	FS	70	KH	78
21	MPN	59	KH	70	MPN	78
22	SN	59	SN	70	SN	78
23	SMS	58	AS	69	AS	75
24	DHS	57	DHS	69	DHS	75
25	FS	56	JT	68	EM	75
26	APS	55	MPN	67	JT	75
27	AS	55	NS	65	NS	75
28	JT	54	SN	65	SMS	75
29	ALT	54	ALT	64	RS	72
30	AT	53	APS	64	ALT	71
31	NS	53	JS	63	APS	70
32	RS	53	RS	63	ALT	70
33	SDL	53	ADT	62	JS	70
34	JS	50	ALT	62	SDL	70
35	YA	47	JNS	57	JNS	67
36	JNS	45	YA	55	YA	65
Total Score		2,164		2,553		2,834
Mean		60,11		70,91		78,72

From the table above, it can be seen the mean of the students' score in vocabulary test kept increasing, where in orientation test the mean was only 60,11, in Cycle I-test the mean was improved because it became 70,91, and then in the Cycle II- test the mean was improved again because it became 78,72. It proved that the students' vocabulary score was improved after the students were matching word in computer.

Qualitative Data

The qualitative data were taken from diary notes, observation sheets, and questionnaire sheets. Diary notes were used to share the evaluation during the research by the writer. Observation sheet was aimed to describe the situation, the responses of the students and the teacher's attitude during teaching-learning process. Questionnaire sheet is used to measure the level of the students' activities during teaching learning process. Questionnaire are used to know the response and perception of the students about diary writing as a media to improve their vocabulary mastery.

Data Analysis

The Analysis of Quantitative Data

The quantitative data were taken from the result of vocabulary test. The first test as pre-test was given without any treatment. The test of the post-test cycle I and cycle II were given to the students after teaching for each cycle had been completely finish.

The total score of the students in Pre-test is 2,164 and the number of the student is 36, the mean 60,11. There were 3 students who got 75 scores and the other got under 75. The percentage of the of the pre-test is 8,33%.

After conducting some activities, the writer gave post-test I to the students in order to know students' matching word using computer. The total score in post-test I is 2,553 of 36 students. So, the students' mean score in post-test I is 70,91. There were 6 students who got 75, and others still low. The percentage of post-test I is 16,66%.

In post-test cycle II, the total score of students in matching word in computer is 2,834 of 36 students. So, the students mean score in Post-test II was 78,72. But the students with got 75 were 22 students. So, the percentage of the students score in post-test II is 61,11%

The figures above showed there was improvement of the students score during the study. The students mean score in cycle I was higher than pre-test. The students mean scores in writing test cycle II was higher from all the students' mean score during the study. The students' mean score improved from 13,33% to 33,33% to 66,66%. The mean from each cycle can be seen in the table 4.5.

Table 4.5 Students' Mean Scores

No	Test Form	Total Score	Mean
1	Pre-Test	2,164	60,11
2	Post-test Cycle I	2,553	70,91
3	Post-test Cycle II	2,834	78,72

In pre-test, there were 3 students who got score 75 whereas in Post-test I were 6 students and in Post-test II where 22 students. The result and percentage in each cycle could be seen in the table 4.6.

Table 4.6 The result of the score 75-100

Test	Students' who got the point 75-100	
	Total of students	Percentage
Pre-test	3	8,33
Post-test Cycle I	6	16,66
Post –test Cycle II	22	61,11

The improvement from the Pre-test to Post-test I is 3, from Post-test I to Post-test II is 6, from the Pre-test to Post-test II is 19. The percentage from the Pre-test to Post-test I is 8,33%, from Post-test I to Post-test II is 44,44 %. From Pre-test to Post-test II is 52,77% . It can be seen in the table 4.7.

Table 4.7 The Improvement of Students' Score

Test Form	Improvement	Percentage
Pre-test - Post-test I	3	8,33
Post-test I - Post-test II	16	44,44
Pre-test - Post-test II	19	52,77

The result in the table, the students' score increased from the first until the last test. The researcher gave the students 20 items vocabulary test for each cycle. It was found out the students' score for the vocabulary test kept interesting. The students' score in the test of cycle I was higher than pre-test, and test of cycle II was higher than the test of cycle I.

The result of all scores can be concluded that the students' vocabulary mastery had been improved. It could be proved from their score which has been improved from each test. All of them have been improved, it was because of teaching and learning by using matching word in computer. All of the students were so active during the teaching process and they always paid attention. In overall, they were really enthusiastic and serious when conducting the method.

Table 4.8: Data Frequency Distribution for Score Pre-test Achievement

No	Score Interval	Frequency	Percentage	The Quality	Category
4	85-100	0	0%	A	Very High
3	70-84	6	16,66%	B	High
2	60-69	12	33,33%	C	Average
1	50-59	16	44,44%	D	Low
0	0-49	2	5,55%	E	Very Low
Total		36	100%		

Table 4.9: Data Frequency Distribution For Score Achievement at Cycle I

No	Score Interval	Frequency	Percentage	The Quality	Category
4	85-100	2	5,55%	A	Very High
3	70-84	20	55,55%	B	High
2	60-69	12	33,33%	C	Average
1	50-59	2	5,55%	D	Low
0	0-49	0	0%	E	Very Low
Total		36	100%		

Table 4.10: Data Frequency Distribution for Score Achievement at Cycle II

No	Score Interval	Frequency	Percentage	The Quality	Category
4	85-100	7	19,44%	A	Very High
3	70-84	27	75%	B	High
2	60-69	2	5,55%	C	Average
1	50-59	0	0%	D	Low
0	0-49	0	0%	E	Very Low
Total		36	100%		

The Analysis of Qualitative Data

The qualitative data were taken from interview sheet, observation sheet, questionnaire sheet. Both teacher and students' behavior during the process of teaching and learning process in classroom were evaluated in the qualitative data.

Diary Notes

Diary notes show that the students have the improvement at the scores and motivation too. The teacher found a problem in teaching vocabulary because some students had low vocabulary mastery and some of them were not interested to study vocabulary. Students felt bored to learn vocabulary because they said that the teacher did the same way, the teacher just had the students to find the meaning by using a dictionary, so it made the students bored to learn vocabulary. So, the English Teacher should use a computer as a media such as Hot Potatoes as a software in media and matching word as a test of teaching learning process especially in learning vocabulary to increase their vocabulary mastery. The explanation of the diary notes were shown in Appendix D.

Observation Sheet

Based on the observer's observation this noted the students' attitude during the teaching learning process. She found that the students were paying attention to the teacher when the teacher explained the procedure using matching word in computer. In the cycle II, the students started to feel enjoy to learn it. The complete information about the observation sheet can be seen in appendix C.

Questionnaire Sheet

Questionnaire sheet is used to measure the level of students' activities during teaching learning process. The writer made question to the students for getting information from observation. From the result questionnaire most of students are not master vocabulary, so the students are difficult to learn English well. Based on the explanation above, the writer conducted that using matching word in computer is not a boring lesson, so the students are spirit and serious in teaching learning process.

The Activities of the Research

The quantitative data were taken from vocabulary test. The qualitative data were taken from observation sheet, questionnaires sheet and diary notes. The data were taken from pre test, post test 1 (cycle 1) and post test 2 (cycle 2)

1. Pre test (Orientation Test)

The writer made an orientation test or pre test in the first meeting. In pre test the writer give a test in paper without use a computer. The writer found the problems that the students had difficulties in studying vocabulary. The main problem that the students found was they were difficult to find words and to manage time. Moreover some of them seemed very difficult to do the test because they could not see the dictionary and also they didn't have preparation.

2. post test I (cycle I)

In this cycle the writer did this first cycle in two meeting. They are:

1) Planning

Before doing this research, the writer did the planning. Firstly, the writer prepared the lesson plan and the test. The software computer and the test had to be related with the topic.

2) Action

In this phase, the writer became a teacher and explained the definition and also the importance of vocabulary. Then she introduced the matching word test and computer as a media for test. After that teacher ask students to instal a software that is Hot Potatoes, then the writer gave the example of matching word test with computer. After that the writer gave them the exercises personally, the students do the test on each computer than print out the result and getting score.

3) Observation

In this step, the writer noted the students' and teachers' behavior. It showed that the students had participated at the teaching learning process even some of students made noisy. The writer observed the condition of class, students' attitude, behavior and their activity at the class. It could be seen that the some students were noisy and other still confused.

4) Reflecting

Based on the result of the first test in cycle I and observation sheet the students' score were increased or better than the orientation test or pre test. The writer still did the second cycle with some changing based on some consideration to get better improvements at scores of the students at the next cycle.

3. Post Test II (cycle II)

The writer found the problem based on the first cycle. The writer gave more motivation and explanation of the material to the students slowly to get the better improvement at the score of second cycle test.

1) Planning

The writer was almost did the same process like the process of first cycle. the writer asked students to search the vocabulary that could be applied through this media.

2) Action

In this step, the writer became a teacher and gave the motivation of the importance of vocabulary. The writer also gave the chance to the students to ask their questions which they still confused. Then the writer introduced the matching word test and computer as a media for test. Then the writer gave the example of matching word test with computer. After that the writer gave them the exercises personally, the students do the test on each computer than print out the result and getting score. At the end of cycle, the writer motivated and asked the students to study at home.

3) Observation

The observation was still done at this phase. The students' activity showed the students were more enthusiastic and interested by learning vocabulary using matching word on computer. It

was because they had been more understood of applying this test and media in learning vocabulary.

4) Reflecting

The writer reflected the students' score evaluation. It showed the second cycle had better score than the first cycle. Based on the observation and the students' score result reflects that the students' vocabulary mastery improved using matching word on computer.

RESEARCH FINDINGS

Matching word in computer was applied to improve the students' vocabulary mastery is one of the ways that could make the students easier in vocabulary, especially vocabulary mastery.

Based on the interview which has been done between on the research with the teacher and the researcher with the students, it was found that the teacher had a problem in teaching vocabulary mastery of them not interested in studying vocabulary. They felt bored to learn vocabulary because they said that the teacher did the same way, the teacher just had the students to found the meaning by using a dictionary, so it made the students bored. The English teacher should use computer as a media and matching word as a test of teaching learning process especially in learning vocabulary.

Students' data in the last test of cycle II was improved than the test of cycle I and also improved than the orientation test. In the last test of cycle II from 36 students, there were 22 students who got the score ≥ 75 point up and the mean was 78,72 and percentage 61,11%. In the test cycle I, there were 6 students who got the score ≥ 75 point up and the means was 70,91 and percentage 16,66%. While in the orientation test, there were only 3 students who got ≥ 75 point up and the mean was 60,11 and percenage 8.33%. Based on the result of quantitative and qualitative data, it was found that uses matching word in computer significantly improved students' vocabulary mastery of SMA N 1 Siborongborong

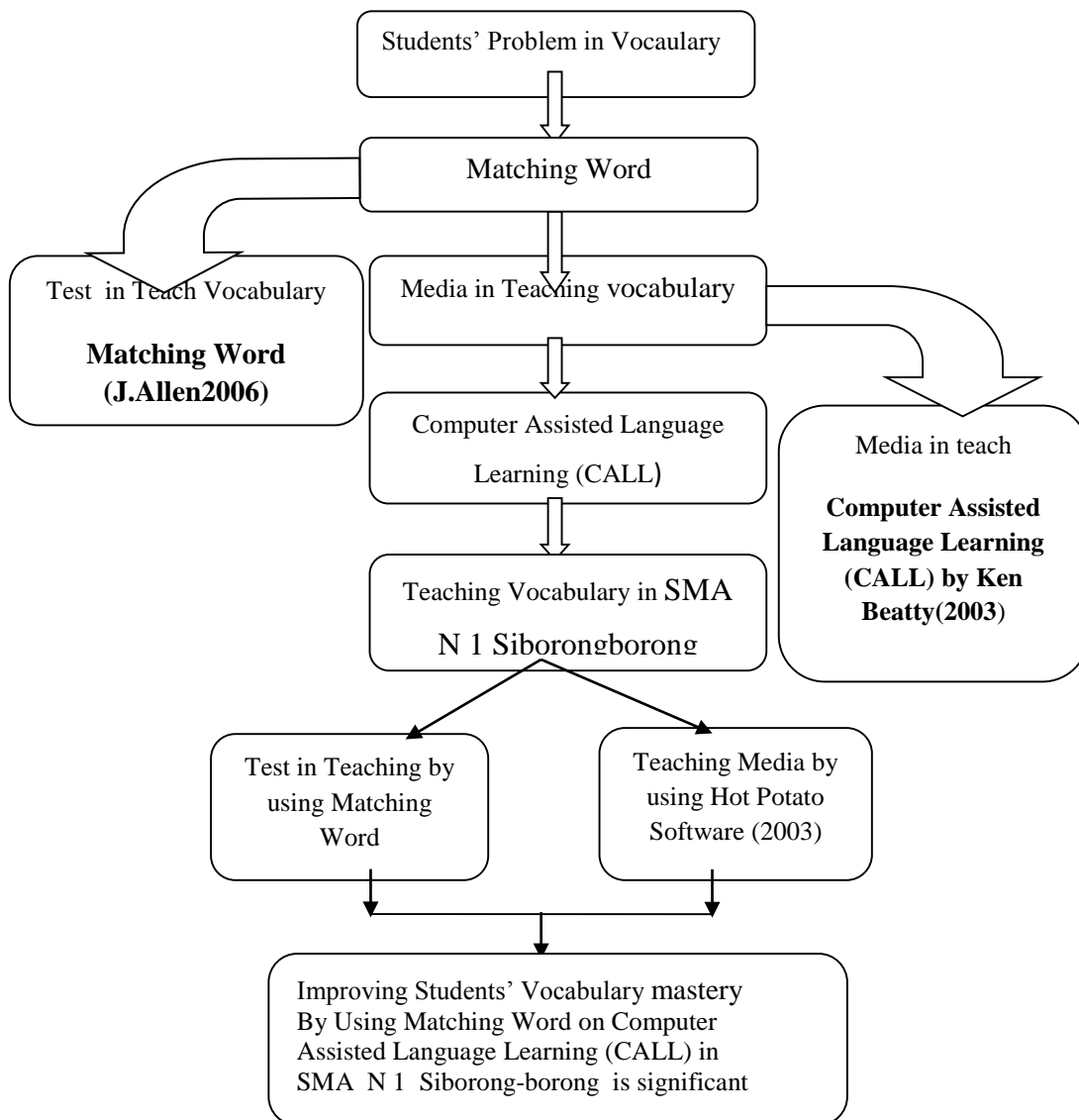


Figure 4.1. Improving Students' Vocabulary Mastery By Using Matching Word on Computer Assisted Language Learning (CALL) in SMA N 1 Siborongborong. (Christiani.M, Sondang M:2016)

CONCLUSIONS

The conclusions of this research are that matching word in computer assisted language learningsignificantly improved students' vocabulary mastery.

The result of quantitative data, it can be seen from the data which showed that the mean score of the students. In pre-test the mean is 60,11, and percentage in pre-test is 8,33%. In the post-test in cycle I the mean is 70,91 and the percentage is 16,66%. In the post-test cycle II the mean score is 78, and the percentage is 61,11%. The percentages of competent students' were also increased from the pre-test until the last test.

The qualitative data analysis from the interview sheet, observation and questionnaire sheet also provide the result indicated the improvement in teaching learning process from cycle I to cycle II. Based on the data, it can be concluded that matching word in computer assisted language learning significantly improved students' vocabulary mastery.

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