CHAPTER II

REVIEW OF RELATED LITERATURE

A. Vocabulary Exercise

Language learning has several different aspects¹. They are supported by existing web-based which can be classified into seven categories: vocabulary, grammar, reading, listening, writing, pronunciation, and speaking. Vocabulary helps learners to build their knowledge of words and master the meanings. To support these language learning activities, there are variety types of exercising.

- 1. There are some types of exercising that can be used for vocabulary language learning activities, those exercise types are²:
 - a. Multiple-choice exercises is the form of a question, the learners have to select the correct answer. This is a traditional language learning exercise that is generally used for grammar, listening, and reading. Questions and answers can be made as text or images.
 - b. Matching exercises is used to find two matching items, they have the same definition or antonyms. There are four kinds of matching exercise such as follows:
 - Matching picture and word
 - Matching text and pronunciation
 - Matching word and definition

¹Edge, J. Addison Wesley. Essentials of English Language Teaching. (1993) page 63

²Waschauer, M. Healey, D. Computers and Language Learning. An overview" Language Teaching. (1998).page 57

- Matching word and word.
- c. Permutation exercises are used to require the students selecting items into some order. They can be letters, words, events, and phrases or sentences.
- d. Fill-in-the-blank exercises are used to require the students to fill in gap questions. They are used for learning grammar constructions and for developing reading and listening skills.
- e. Type-the-answer exercises are required the learner to build the answers and type them. The learners must type in what they hear including words, sentences, a conversation, song or story.
- f. Spelling exercises are used to require learners to find a word correctly.
 They are used for vocabulary learning.
- g. Category exercises require the learner to put words into groups according to text. They are usually used to help the learners to be master vocabularies in countable and uncountable words.
- 2. Teachers should make good exercise for their student to get the goal in language learning, in creating exercise there are five elements that should be had in it. Those are instructions, level, hint, check and feedback. The explanation of the elements such as follows³:
 - a. Instructions explain how to do the exercise. By the instructions the students or learners can understand well what they should do in this

³Chapelle, C.A. Computer Aplication in second Language Acquisition. (Cambridge university press: 2001) page 56

- activity, for example "Click the matching words or picture with the meaning".
- b. Level elements specify the exercise in a difficulty level from beginner, intermediate and hard for each exercise.
- c. Hints include for many exercise, it helps the learners to get the answer.
- d. Check elements give to the learner judge correctness according to the answers. It can be provided by the teacher. Check elements usually provides both active and passive checking mechanisms.
- e. Feedback elements give information about the learner's performance and support them to continue to the next exercise.
- 3. Carles Anderson categorizes the criteria of good vocabulary exercise in five types⁴.
 - a. Focusing on useful word, preferable high frequency words that have been met before.
 - b. Focusing on a useful aspect of learning, it has a useful learning good.
 - c. Getting learners to meet or use the word in ways that establish new mental connections for the word. It sets up useful learning condition involving generative use.
 - d. Involving the learners are more actively searching and evaluating the target words in the exercise.
 - e. It does not bring related unknown or partly known words together.

⁴J. Charles Aderson, caroline Clapham, Dianne wall. *Language test construction and evaluation*.(university press.cambridg.1995) page 9

B. Software Exercise

Technology has entered to the language classroom. It would come to the rescue of less than totally effective methods. Educational institutions have a promising new technology that can offer linguistic input and output, feedback, student collaboration, interactivity and fun. Educational application of computer hardware and software have provided a rapidly growing resource for language classroom the practical applications of CALL, they are growing at such a place that it is almost impossible for a classroom teacher.

1. The Benefit of Technology Computer

The useful of technology computer has been explained by Waschaverand Healy, there are several profits of including a computer component in language instruction⁵:

- a. It is practiced with feed back
- b. Students can be individual in a large class
- c. Pair and small group work on projects either collaboratively or competitively
- d. It is fun
- e. Students skill are build using computer

2. Good Software Exercise

 It is the primary method by which testers establish confidence in the correctness of software. This confidence is ordinarily established by

⁵Brown H. Douglas. Teaching By Principles An Interactive Approach To Language Pedagogy second Edition. 2000.page 145

executing the software. There are six items that should be observed in choosing software exercise⁶.

Your needing

You should choose software that is appropriate with your business, if you know and understand your needing, you can choose the right software.

• Vendor overview

After you understand your business and how software can help you to get your goal, you should review the qualification of software vendor.

Contracts review

Software contract is the key, because you are not finding a software vendor that matches with your requirement, but you should have software contract which can save your money.

Software fit

You know your software is reliable or no based on software contract questionnaire.

Vendor review

In this part, you are disqualify your product, how the product implement your application, service your account, they are used to negotiated while making sure, it is good software or no.

⁶ Richard. A. Demillo. A, Jefferso Cffutt. Constraint based automatic test data generation. Page 3

Total cost ownership

The last criteria is total cost owner ship, you should know where the money can be saved.

b. Chad R. Fisher categorize software evaluation criteria, there are six criteria that should be considered in software decision. Selection process is better if knowing the right information from the software⁷.

Functionality

It has function for many people, so it will give positive effect. Software also has to being known well, but it does not have specific functionality.

Technology

It is important to remember that you should have a forward looking for technology that has momentum for the future, and also you make sure that it is suitable with other system in your house.

Software Vendor

The software vendor is a part of the software selection process. It makes you interesting, because the software can make new enhancements the product. You get the advantage of the software.

⁷ Fisher . R. Chad " Software Evaluation Criteria" (http://EzineArticles.com, accessed on may 20, 2012)

Implementation Vendor/VAR

The software should give tow needing of the user.

Generally there are two interesting. First it can be implemented in education. Second it is for reseller.

Maintenance & Support.

You should make sure that the software can be expected maintenance for the cost this investment.

Total Cost of Ownership

The software criteria can consider the total cost of ownership. It means software that you have been chosen able to use for many years in the future, because software license, software license, software maintenance and implementation service, those are components that should be had by the software.

- c. Cinoy Ravindran categorizes good software exercise in to seven criteria. Those are⁸:
 - It should be reliable, it should function accurately for a long period of time and also function correctly over all ranges and combination of data.
 - It should be robust, unwanted inputs or data should be identified and proper error message should be flashed.

⁸ Ravindran cinoy. "Basic and criteria for good software". (http://ezincarticles.com Basics-and-Criteria-for-Good-Software. Accessed, on 30 july 2012)

- It should be friendly, the software with enough comments, tips, on or off line help and short cut options.
- It should be efficient. The software has minimum memory and quality of output.
- It should be interested. The software should be simple so that it can be understood.
- It should be portable so that the program can be executed on different machines.
- It should follow all standards and have proper documentation

3. Criteria good language software exercise

There are some criteria of language software exercise should be considered. Those are:

- a. Philip Hubbard categorizes good language software in to seven criteria. Those are⁹:
 - The screen layout or interfaces is concerned with all aspects of the basic on screen, including fonts, color, controls, video and audio.
 - Timing is a relevant category for some software, it is used for a student to perform some action.

⁹ Hubbard Philip. Evaluating call software. (stanford university :2006) page. 12

- The control options category is used to know the ability of students to go to next level.
- User input is used to how the learner responds to implicit or explicit prompts from
- The program should has Input judging for handling user input, which can involve such actions as recording a mouse click, various types of pattern matching.
- The software should have feedback of the program as the result of the input judging.
- Options represent the final element to be considered in software exercise to help the students.
- b. Clayton R. Wright divides criteria good software language exercise in to seven categorizes. Those are¹⁰:
 - General information:

The learners are provided the general information that is assist them in completing and understanding the course.

Wright. R. Clayton.. Criteria For Evaluating The Quality Of Online Course. (Edmonton: 2001) page 7

· Accessibility:

It is has function to explain the natural evident to the learner, and every page is linked to the previous page.

• Organization:

It has organizing that the learners can differentiate between parts of the course.

• Language:

It is about the writing style of the text, it should be clear and understandable.

• Layout:

It has simple layout, because it is best.

Goal and objective:

It has the goal and objectives specify learning outcomes.

Instructional:

Software language exercise has the instructional to learn effectively in variety of ways, and also to engage in activities that promote practice and transfer of skills.

C. Review Tool for Software Exercise

1. Memory Game Maker

Memory game maker is intuitive drag and drop programming system that is very easy to start. You can create your own simple game. It is also possible to make very professional looking game¹¹.

a. Kind of memory game maker¹².

i. Tetris game maker

Language online Tetris is game like other versions of the game, it is completed with different shaped blocks fall from the top of the screen. The blocks can move to the left or right. It can be rotated to form uncompleted row. The language task for students can be created by using the Tetris game maker. There are many ways to give the clues those are text, picture or voice recordings.

ii. Sentence game maker

Language online sentence game is a sentence that includes some words missing and numbers of possible answer words. Students have to choose the true answer word to complete the sentence. Students can learn sentence structure, grammatical points and word order.

iii. Comprehension Task maker

¹¹ Jacob Habgood, Nana Nielson, Martin Rijiks and KevinsGrossley. *The Game Maker'sCompanion*, (New York: 2010) page 21

Overmars. Mars .game maker.(http://www.eduweb.vic.gov.au/languagesonline-games-portal-index.htm. Accessed on june 25,2012)

comprehension task maker. First it is information for comprehension. Second question can be created multiple choice and true or false.

iv. Portal Maker

It is part of memory game maker, it usually uses for a general resource index page. And also link to useful material on a range of topic or class. So it is a great way to organize the files in to one folder for easy access and management.

b. The versions of memory game maker

- i. Version 1.6
 - It is included with toll for preventing sound recording on XP fixed
 - It is released 2-aplril-2012

ii. Version 1.5

- It is compatible for Windows 7 version
- The game can be saved as EXE files
- XML files now saved as UTF-8 making games compatible with more web server

iii. Version 1.4

 This version has been included some system for fixing the game

iv. Version 1.3

- It has Improved save process allows easier navigation to common locations
- There is no file name required when saving new sound recording
- It is included with Panel to accent characters
- Games can be saved as a HTML file, exe file (Self executing zip) or standard zip file
- Audio control panels can worked in vista

v. Version 1.2

- The players can restart the game during they use all their bullets.
- The maker can load all the games after bug in maker is fixed.

vi. Version 1.1

- Changes made to allow game to work when uploaded to live webservers. (XML files renamed to 'sentence.xml' - rather than 'Sentence.xml' - to accommodate case sensitive web servers).
- Path notation in XML corrected enabling completed games to be played on Macs.
- The game can be played on Macs, because path notation is corrected to get completing games.

c. The Advantages of Memory Game Maker

Memory game maker has many advantages for the user, such as follow¹³:

• Fast development

The game maker can be developed fast. Because it has fully playable, it is included complete mechanics.

• It is very flexible and pretty capable.

You can create game with 2D game

Performance is okay

Memory game maker is very simple to use, because it is included all the art

• It is cheap

Memory game maker is very cheaper commercially viable engine

It is easy to learn

Memory game maker is designed as a teaching tool. It is supported many tutorials available, so the game maker will be easy to learn.

Good multi-platform prospects

The memory game maker is tool that going to get even more universal because IOS, Android and a few others are coming latter this year.

¹³. TeeGee. *Professional Developer's Look at Game Maker*. (http:///www. Professional-developer's-look-ay-game maker. Accessed on 5 june 2012)

d. The Disadvantages of Memory Game Maker.

Ashley Cullen categorizes the disadvantages of memory game maker, such as follow¹⁴:

Impression

The game maker looks like as kids tool, because it is same as poop

Versions sucks like atom- powered dyson.

Some of versions do not work, because they are only compatible with high resolution. So it is impossible to make game in computer with low resolution.

Issues with full screen on windows 7

Game maker gets lazy on windows 7. It does not want to use interpolation for scaled image.

Sprite loading issues in game maker 8.1

The older computer, note book and net book with integrated video cord can be crashed by the game during scene loading.

Awkward dev. schedule.

Sometime the memory game maker versions have not been update since several months, so the programmer focuses on game maker studio.

Built in editors are bad

^{14.} TeeGee. Professional Developer's Look at Game Maker. (http:///www. Professional-developer's-look-ay-game maker. Accessed on 5 june 2012)

The game maker just uses normal graphics software for the art, because it is unwieldy if you built in editors for art assets and level designs.

• Lack of portability

There are exporters for MAC, ION and Android that are not pretty unfavorable deal with memory game maker.

Team work on game maker is hard
 Memory game maker only uses a single file, so it is difficult to operate with several team members.

2. Hot Potatoes

Hot Potatoes is software that contains five applications, they are suitable in an educational. Hot potatoes are a simple way of creating attractive, web-based interactive exercises with student feedback. The program can create interactive Web-based teaching exercises which can be delivered to any Internet-connected computer with a browser. The exercises use HTML and JavaScript to implement their interactivity. The program creates the Web pages for you, and you can upload them to your folder on the server¹⁵.

- a. There are five basic programs in the Hot Potatoes suite:
 - The JQuiz program creates question-based quizzes. Questions can be made different types, including multiple-choice and shortanswer. It has Specific feedback that can be provided both for right

¹⁵ Research and Development.team. *hot potatos version 6.*((http://www.halfbakedsoftware.com. Accessed on 23 march. 2012)

answers and predicted wrong answers or distractors. In short-answer questions, the student can ask for a hint in the form of the answer.

- The JCloze program creates gap-fill exercises. It has automatic scoring, the program is automatically gapping every word in a text.
 The user can ask for a hint and see a letter of the correct answer.
- The JCross program is used to create crossword puzzles that can be completed online. Students can request a hint to get a free latter of the correct answer.
- The JMix program creates jumbled-sentence exercises. You can specify as many different correct answers as you want, based on the words and punctuation in the base sentence, the student can ask a hint to know the next correct word or segment of the sentence.
- The JMatch program is program that used to create matching or ordering exercises. The exercise can be pictures or text, with jumbled items on the right. This can be used for matching vocabulary to pictures or translations, ordering sentences to form a sequence or a conversation.
- b. There are several things that is needed to use the program
 - Windows 95, 98, 2000 or NT 4.0 or above, the version of the suite is also available for the Macintosh.
 - A recent version of Netscape Navigator or MS Internet Explorer.

 Access to a Web server if you want to deliver your exercises on the Internet

3. Text Toys

The program is used to create interactive language learning exercises. It is developed by John and Muriel Higgins. You can download and install free of charge.

a. There two Programs on the text toys, those are 16:

Web rhubarb

It is created a web page and displays with the text. Web rhubarb has character with most of words are blanks, so the students used to work finding the best word to complete the text.

Web sequitur

Sequitur is created a web with text that splits in to the segments. The parts are random so students should choose the best word to sequence the sentence based on grammatical.

D. Review of Previous Study

The study relates to the using of technology, it is conducted by some researches: Astiti, she discusses about the use of computer or technology in language learning. She describes the implementation of computer in teaching speaking at the class room, computer as part of technology improves the ability in speaking. Those studies indicates the same fact, computer and

¹⁶.Jonh. Muriel Higgins. Creative Technology. (http://www.cict.co.uk/texttoys/example. Accessed on April 21,2012)

memory game maker as part of technology are used to the new way in learning proses. Because technology is part of their life.

In language learning, several studies have been attended to implement technology to help students learning English as second language. According to Gonzales in his study computer as language learning tool is used to design task for student, it is importance to supporting integral education. It promotes collaborative learning using computer¹⁷.

Meanwhile, Marina Papastergiou, in her study initiated a study about digital game which is developed by memory game. It can give impact for student learning process, the result of her study during their interaction with the game. They are very absorbed and interested in the task. The student also demonstrated that digital game approach was more effective in promoting student's knowledge and more motivational for students than nongaming approach¹⁸.

Digital library can be alternative means to gaining successfully in language learning exercise. The study relates by Shoqun Wu, his study concluded that exercise can be developed by technology using digital library that is shared by online. The teacher and student are the user because they only do the exercise in online¹⁹.

 $^{^{17}}$ Lorent .M .Gonzalez,(2003)"designing game-based call to promote interaction. Vol 7 No.1, 86-104.p1

¹⁸ Papastergiou.Marina, (2008) "Digital Game- Based Learning in high school Computer Science Education".Greece:University of Thessaly.

¹⁹ Wu Shoqun (2006)."Digital Library of Language Learning Exercises".New Zeland. Univercity of Waikato.