

CHAPTER II

LITERATURE REVIEW

2.1 Computer in Language Learning

The use of computer in education and training is relatively new in our society. According to Wyatt (1984:6), a computer has the potential to play a large number of different roles in English as a second language. His statement is supported by Johns and Higgins as quoted by Wyatt (1984:46) who claims that there are three roles of computer in language learning : the roles of instructor, collaborator, and facilitator.

In this instructional role, the computer program presents materials and conducts practice activities as an authority figure. It teaches students in highly pre-planned fashion, and they have only to follow directions and work at producing the anticipated language forms and responses. Students are actively involved in the learning process, but their role is that of responder rather than initiator.

The second main role for the computer collaborative Computer Assisted Instruction, may receive attention to date. This distinguishing characteristic of this approach is that the initiative is turned over to the students or group of students. Sometimes the end result of the activity will be predetermined and sometimes it will be completely unpredictable. More important, the path to the final goal and the language used by the students en route will be very quite wide since they will depend on the students' individual decisions.



The third main category consists of facilitative applications of the computer. Here the computer simply serves as a tool rather than language learning activities in itself, it is essentially empty of instructional content. It should be emphasized that the other activities referred to are not necessarily computer assisted activity at all. If we plan to provide students with more ways to learn English then computer must be part of our approach besides the use of other media such as : lab, OHP, tape, etc.

Instructional drills and practice materials have been available on computer for sometime. The use of computer as instructor is usually referred to as computer assisted instruction. Students usually work alone and they are regularly assessed on their progress.

Some educators still wonder of the use of computer as the medium of instruction, thus nowadays the computer does have a number of broad capabilities and it is an acceptable medium of instruction. A computer is preferable because it combines various capabilities (sounds, graphics, animations, interaction, instruction, etc), which cannot be found among other media such as tape recorders, textbooks, etc. The strength of computer is identified by Young (1986:180) who says “a computer makes possible extensive individualized instruction of an interactive nature. The text book is incomparable in its ability to disperse inexpensively a specific body of information to a very large number of individuals”.

Traditionally, a teacher is the medium of instruction, students rely upon the teacher to bring the interaction. In using computer, students often work

together in small groups and score for completed work is usually optional. A student interacts with the computer by typing and clicking to answer the questions. He or she then receives some sort of response (the form of the questions and the answers are determined by the creator of the computer software), whether his answer is correct or not. He or she will progress his own speed through the instruction without worrying about the computer becoming impatient or giving negative reaction to him because of the errors he makes.

According to Chapelle (1986:27), computer can also be utilized to keep records to an extent that is impractical if not impossible in other instructional settings. The computer is capable of recording non intrusively every interaction with the student, it can also be used to evaluate each student on going performance and to direct future instruction. Such record keeping capabilities offer great potential in studying student learning styles, the effectiveness of instructional design, and suggest different subject matters besides of presentation.

Presented instruction using computer assess fundamentally on the content of instruction and the design and construction of specific instructional tasks. The content of instruction consists of a compilation of facts and figures which the student does his best to memorize, and in most subjects the content of instruction is a combination of information. In reading class, they usually utilize the information by skimming or scanning.

Young (1986:186) says that a teacher as the motivator in the class has the capability of adjusting the complexity of instruction consciously. When the student seems unable to perform as expected, the teacher may determine extra

work on pre-requisite skill, such as vocabulary. Likewise when they become bored of the activity or the topic, the teacher may engage another topic with different activities that the students find more interesting. Usually, a bottom up type of activity found in computer software that uses a timer as an integral element is rate building, so the exercises are mostly to create a sufficient structure rate.

2.2 Computer Assisted Instruction

In this session, we will discuss the principle of Computer Assisted Instruction, the advantages of Computer Assisted Instruction, and the types of Computer Assisted Instruction.

2.2.1 The Principle of Computer Assisted Instruction

According to Mavarech (1987:29), Computer Assisted Instruction is a teaching process directly involving a computer in the presentation of instructional materials in an interactive mode to provide extensive interaction of a group of students continues in the same time.

Computer Assisted Instruction is a new trend of instruction program based on the law of effect (Burke, 1982:37). Law of effect is used as the base of behavioristic psychology. The main assumption of this law is simple, an attitude followed by pleasure is likely to happen or repeated than an attitude which is not followed by pleasure. Based on this law then appears Stimulus Respond theory which consists of stimulus, response and reinforcement. In learning based on this

Stimulus Respond theory, the students are given questions as a stimulus and they then answer the questions or give responses. Based on this theory the main characteristics of Computer Assisted Instruction are small steps, active responding, and immediate feedback (Burke, 1982:39).

Computer Assisted Instruction is usually designed using linear or branching methods. Linear program is also called Skinnerian programs that are based on the behavioristic psychology. Skinner (1989:32) proves that small steps and immediate feedback are good for learning. Program learning that follows Skinner theory has characteristics as follows : priming and prompting, active responding, minimal errors, and knowledge of result.

Branching methods were created by Norman Crowder. It is called branching because there are some alternative ways in learning depending on the questions. This method is preferred to linear method.

2.2.2 The Advantages of Computer Assisted Instruction

Computer is used in learning because of these advantages :

- a. According to Young (1986:180), a computer is preferable because it can combine various capabilities (sounds, graphics, animations, interaction, evaluation, adaptive, instruction, etc), which cannot be found among other media (projector, tape recorders, textbook, etc).**
- b. When computer is used in learning, it can motivate the learner (McClelland 1969:78). The learner enjoys computer work and tend to waste their time in operating computer because of computer challenge.**

- c. Richards (1989:67) says that computer is used as a feedback to the learner. Computer is able to give information about the mistakes and time to learn.
- d. Learning with the help of computer is systematic to overcome the limitations of group learner. This statement is supported by Mavarech research finding (1987:22) which showed that students who learned individually by using computer get better progress.
- e. Learning with the help of computer supports individual learning, the one that suggested in modern education (Tsai and Pohl, 1981:47). Chapelle (1986:28) states that individualization in computer assisted instruction shows that computer can help the learner.
- f. Kearsley's research finding as quoted by Thompson (1980:40) shows that computer is an effective learning information media.
- g. Nelson (1976:29) and Hope (1984:87) concludes that test of students using Computer Assisted Instruction to learn language demonstrates that they perform as well or better than students who use more traditional methods, and in general the students seem pleased with the technique.

2.2.3 The Types of Computer Assisted Instruction

According to Hope, Taylor, and Pusack (1984:17), there are five terms used to describe the computer lessons in any field: tutorial, drill and practice, problem solving, simulation, and game.

Tutorial lessons present new information to the students. They consist of explanations, rules, principles, charts, tables, definitions of terms, exercises, and

appropriate branching. Weak tutorials are very much like textbooks; they are filled with what might be called instructional narrator. Strong tutorials break new concepts down into manageable pieces and check the students' comprehension frequently.

Drill and practice assumes that basic concepts have already been offered to the students who can proceed to apply rules, work with concrete cases, and explore their own grasp of the material. Drill is a fast-paced check on discrete points in the students' knowledge. Weak grammar drill aims at rote memorization of forms; strong drill challenges the students' grasp of principles and teaches through helpful correction of error.

Problem solving is practiced on a higher plan than drill. Larger tasks involving several steps and processes are presented to the students who use the computer as a tool or a resource in a quest for a solution. In good problem solving programs, the computer keeps track of the students' approaches to the problem and analyses their flows.

Simulations are computer analogous of real life situations into which students are catapulted for the purpose of reaching a global understanding of a process. Often, the underlying principles that determine the students' path are not made explicit, but must be deduced from several experiences of the simulations. Simulations may be used to practice a skill, such as learning to fly on airplane or drive a car, or to understand and appreciate systems in economics, ecology, anatomy, urban planning, and other disciplines.

Games are familiar enough from video arcades and need little explanation. Instructional games involve the mobilization of knowledge to overcome obstacles and reach goals. The obstacles can be the students' own imperfect language; the goal can be achievement of subject-matter-mastery. Weak games tend to associate the exercise of skills with situations and rewards extrinsic to the subject matter. Good games are well disguised simulations.

2.3 Computer Assisted Instruction in Structure Teaching

The learning of foreign language usually stresses on the mastery of four skill abilities, which are : listening, speaking, reading, and writing. To master the four skills, ones need language basic knowledge that consists of sounds, vocabulary, culture, and grammar. According to Hope, Taylor, and Pusack (1984:72), in a certain level the development of mastery of four language skills can be helped by computer technology and learning with the help of computer is relatively successful especially in grammatical practices. The same opinion is stated by Holmes and Kidd (1982:508) that it is often when applied to grammar learning situation that the analytical and interactive capabilities of the computer have been used to good advantage. There are no grammatical constructions that do not lend themselves readily to effective treatment by the computer via multiple choice, or constructed formats.

Furthermore, Hope, Taylor, and Pusack (1984:39) states that many experienced and good teacher got frustrated because their meaningful time was wasted just for drilling the grammatical rules. Such a problem can be handled with

the help of computer, so the teacher can use their effective time for communicative activities.

According to Hope, Taylor, and Pusack (1984:12), these are five terms used to describe the way computer lessons in any field can be conducted: tutorials, drill and practice, problem solving, simulations, and games. However many teachers prefer tutorial program to simple drill practices. Here, the students are taught a certain grammatical concept and then are given the applications of drill.

There are many researchers studying about the effectiveness of learning with the help of computer and students' attitude who are learning with the help of computer. According to research findings about the effectiveness of learning with the help of computer conducted by Nelson (1976:42); and Hope, Taylor and Pusack (1984:84), the students who learned using computer software got better result than the students who learned through traditional method. Generally the students felt interested in using computer.

Concerning the students' attitude of learning foreign language with the help of computer software, Olsen (1980:345) states that almost all the departments using computer programs report some positive results. Most conspicuous is the attitude of the students. They are fascinated with the computers and enthusiastic about it.

The research focussing on the students' attitude shows that the learning with the help of computer is satisfying. The research conducted by Ohio University and Iowa University showed that the students were satisfied with

everything they had learned. On the other hand, many teachers who developed and used that computer software had the same opinion that the computer instruction was useful (Hope, Taylor, and Pusack, 1984:78). Furthermore, Kearsly (1976:121) and Thompson (1980:40) states that research shows that computer is an effective teaching media.

From the explanation above, it can be said that learning with the help of computer is suitable for structural practice, and the term which is preferred for the students is tutorial. Research has shown the effectiveness of learning with the help of computer and students' positive attitude who learned the lesson through computer software.

2.4 Noun

A noun is the name of a person, place , thing, idea or quality (Branchaw, 1986:21), e.g.:

A person	:	Diana	Bernard	man	woman
A place	:	Paris	Chicago	city	state
A thing	:	telephone	food	iron	building
An idea	:	capitalism	freedom	patriotism	democracy
A quality	:	love	joy	loyalty	honesty

Deans, professors, and students attended the Fall Fair in Iowa City. Deans, professors, students, Fall Fair, and Iowa City are all nouns. Each word names something.

Our secretary ordered pens, pencils, and folders. Secretary, pens, pencils, and folders are all nouns. Each word names something.

The students at Washington High had the conviction and courage to state their views. Students, Washington High, conviction, courage, and views are all nouns. Each word names something.

2.4.1 Proper Nouns

A proper noun names a particular person, place, or thing. Proper nouns are capitalized (Branchaw, 1986:21).

Names of persons	:	Jason	Nina
		Mr. Doni	Mrs. Lisa
Names of places	:	Surabaya	Washington
		Asia	New Zealand
Names of things	:	Colorado River	United Nations
		Mount Semeru	Lincoln Memorial

Kathy and David purchased a Buick in August. Kathy, David, Buick, and August are all proper nouns. They are all capitalized

In the Oval Office of the White House, dignitaries from England, Africa, Ireland, and Italy met with the President of the United States. Oval Office, White House, England, Africa, Ireland, Italy, President, and United States are all proper nouns. They are all capitalized.

Students from Central High School flew to Washington, D.C., to see the Washington Monument. Central High School, Washington, D.C., and Washington Monument are all proper nouns. They are all capitalized.

Proper names are generally not listed in ordinary dictionaries, because they do not have any meaning definable for the language as such. That is, we can specify the reference of Jones, say, on some particular occasion of its use (as when I say Jones thinks there'll be no problem, using Jones to refer to my bank

manager), but we cannot give a general meaning to it, as we can to a common noun like *dog*, for example (Huddleston, 1984:231).

Proper nouns lack both the contrast in number and definitions (e.g. *Sue*, but not normally *a Sue*, *the Sue*, *Sues*). The overwhelming majority of proper nouns are both definite and singular (Biber, 1994:241).

2.4.2 Common Nouns

A *common noun* does not refer to a particular person, place, or thing. Common nouns refer to *general* persons, places, or things. They are not capitalized (Branchaw, 1986:22).

Name of person :	man	woman	child	adult	painter
Name of places :	city	state	country	plaza	gym
Name of things :	napkins	equipment	hallway	map	telephone

The salesperson in our office sell many products, such as plates, cups, and napkins. Salespersons, office, products, plates, cups, and napkins are all common nouns. They refer to any one of a class of persons, places, or things. They are not capitalized.

The neighbors traveled to several foreign countries and returned with many souvenirs. Neighbors, countries, and souvenirs are all common nouns. They refer to any one of a class of persons, places, or things. They are not capitalized.

Managers from national headquarters traveled by plane, bus, or car to attend the meeting. Managers, headquarters, plane, bus, car, and meeting are all common nouns. They refer to any one of a class of persons, places, or things. They are not capitalized.

There is an important distinction between common and proper nouns. Common nouns can be countable or uncountable (Biber, 1999:241).

Countable nouns refer to entities which can be counted; they have both singular and plural forms (a cow, two cows, etc). Both in the singular and the plural there is a contrast between *definite* and *indefinite* forms (a cow v. the cow, cows v. the cows).

Uncountable nouns refer to entities which cannot be counted and do not vary for number. Though they do not combine with the indefinite article, they allow a contrast between an indefinite and a definite form (e.g. milk v. the milk). The most typical uncountable nouns are singular, but we also find plural nouns which do not vary for number and do not combine with numerals.

2.4.3 Abstract Nouns

An *abstract noun* is a common noun that names an idea or a quality. Abstract nouns cannot be seen, heard, smelled, touched, or tasted (Branchaw, 1986:25). The following are examples of abstract nouns:

goodwill	justice	loyalty	freedom	sadness
harmony	love	personality	democracy	happiness

2.5 Plural

A noun may be singular or plural. A noun that refers to *one* person, place, or thing is *singular* in number. A noun that refers to *more than one* person, place, or thing is *plural* in number (Branchaw, 1986:29).

The plural is regularly formed by the addition of the ending *-(e)s*, but a small number of native words have irregular plural forms (Biber, 1999:286)

2.5.1 Formation of Plurals

(a) The simplest method of forming a plural is by adding “-s” to the singular, e.g.: (i) *book - books*; (ii) *tree - trees*; (iii) *boy - boys*; (iv) *girl - girls*; (v) *table - tables*. *Note:* It is clear from the above examples that when a noun ends with a consonant or with “e” or with “ee” it can generally be changed to the plural form by simply adding “-s” to it (Bhatia, 1995:16).

(b) When the last letter in a noun is “y” and it is preceded by a consonant, it may be changed into the plural form by changing “-y” into “i” and adding “-es” to it, e.g.: (i) *city - cities*; (ii) *baby - babies*; (iii) *army - armies*; (iv) *story - stories*; (v) *copy - copies*.

But when the “-y” at the end of noun is preceded by a vowel, the plural will be formed by adding only “-s” to it, e.g.: (i) *toy, -toys*; (ii) *buy - buys*; etc.

(c) Nouns ending in “-o” generally form plurals by adding “-es” to them, e.g.: (i) *hero - heroes*; (ii) *negro - negroes*; (iii) *mango - mangoes*; (iv) *cargo - cargoes*; (v) *buffalo - buffaloes*; (vi) *potato - potatoes*; (vii) *tomato - tomatoes*; (viii) *echo - echoes*; (ix) *torpedo - torpedoes*.

(d) The following nouns ending in “-o” (or “-oo”) can be changed into the plural form, simply by adding “-s” to them: (i) *Hindoo - Hindoos*; (ii) *piano - pianos*; (iii) *momento - momentos*; (iv) *dynamo - dynamos*; (v) *photo - photos*. *Note:* some nouns that end in “-o” add either “-es” or “-s” to form the plural, e.g.: the plural of *mosquito* is both *mosquitos* and *mosquitoes*; of *motto*, both *mottos* and *mottoes*; of *volcano*, both *volcanos* and *volcanoes*; of *buffalo*, both

buffalos and *buffaloes*; of cargo, both *cargos* and *cargoes*; of commando, both *commando* and *commandoes*.

- (e) Nouns ending in “-ss”, “-ch”, “-sh” and “-x” generally form plural by adding “-es” to them, e.g.: (i) *glass - glasses*; (ii) *class - classes*; (iii) *branch - branches*; (iv) *crutch - crutches*; (v) *dish - dishes*; (vi) *match - matches*; (vii) *watch - watches*; (viii) *box - boxes*; (ix) *tax - taxes*; (x) *bush - bushes*.

Note:

- (i) The plural of *ox* is *oxen* and not *oxes*.
- (ii) The plural of *child* is *children*.
- (iii) The plural of *brother* is *brothers*, but it is *brethren* when it denotes fellow members of one (usually a religious) society.

- (f) The nouns ending in “-f” or “-fe” usually have “-ves” ending in plural form (i.e. voiced plurals), e.g.: (i) *calf - calves*; (ii) *wife - wives*; (iii) *leaf - leaves*; (iv) *knife - knives*; (v) *thief - thieves*; (vi) *life - lives*; (vii) *loaf - loaves*, etc.

Note:

- (i) The following nouns have regular plurals only:
roof, roofs; belief, beliefs; chief, chiefs; safe, safes; proof, proofs, etc.
- (ii) The following plurals have both regular and voiced plurals:
dwarf - dwarfs or dwarves (rarely used); hoof - hoofs or hooves; scarf - scarfs or scarves; handkerchief - handkerchiefs or handkerchieves; etc.
- (iii) The plural form of the painting term “still life” is “still lifes” and not “still lives”

- (g) The following nouns are changed into their plural form through the method of “mutation” (i.e. changes of inside vowel): (i) *foot - feet*; (ii) *goose - geese*; (iii) *louse - lice*; (iv) *man - men*; (v) *mouse - mice*; (vi) *toot – teeth*.
- (h) Some nouns have the same singular and plural form, e.g.: *deer, fish, means, series, sheep, species*.
- (i) Some nouns that English has borrowed from other languages have foreign plurals, e.g.: (i) *criterion - criteria*; (ii) *phenomenon - phenomena*; (iii) *stimulus - stimuli*; (iv) *formula - formulae/formulas*; (v) *analysis - analyses*; (vi) *crisis - crises*; (vii) *hypothesis - hypotheses*; (viii) *thesis - theses*; (ix) *index – indices/indexes*; (x) *bacterium - bacteria*; (xi) *datum - data*; (xii) *medium - media*.

2.6 Related Studies

2.6.1 A Study by Pramono (1996)

One related study is a thesis written by Pramono. In his thesis entitled “Pengembangan Pembelajaran Berbantuan Komputer Dalam Pokok Bahasan Present Perfect Tenses Mata Kuliah Structure II Pada Program Studi Pendidikan Bahasa Inggris FKIP Universitas Katholik Widya Mandala Surabaya”, Pramono discusses the development of a software for CAI (Computer Assisted Instruction) to help students to learn structure. The topic developed in the CAI software is the present perfect tense.

Pramono focuses his study on the development of the software itself. While Pramono in his thesis deals with how to develop CAI software, the writer

in this study tries to find out whether there is any significant different effect of teaching Nouns by means of CAI software on the students' structure achievement.

2.6.2 A Study by Harianto (1999)

Another related study is a thesis about the effect of CAI on the present perfect tenses achievement of the English Department students of Widya Mandala Catholic University Surabaya by Harianto (1999), one of the students of English Department, Faculty of Letters, Widya Mandala Catholic University.

The writer wants to know the effect before and after the treatment. The instrument used to get the data was structure test consisting of 30 questions about present perfect tense in the form of multiple choice types with four options and used as the pre-test and post-test. Then, the writer applied the CAI to the students to help them to understand more about the present perfect tense. To know about the significant differences, the t-test formula was employed. From the result he concludes that CAI gives significant effect on the present perfect tenses achievement.

CHAPTER III

PRESENTATION AND ANALYSIS OF THE DATA