COMPUTER-ASSISSTED LANGUAGE LEARNING

In short, the previous survey has clearly pointed out the fact that the question tag intonation used by the speaker has a substantial effect on the meaning of what is said. As ELLIS explains in the ~~section devoted to "~~*How Explicit Knowledge Affects Implicit Language Learning*" of his Studies in Second Language Acquisition: *"Instruction needs to ensure that learners are able to connect grammatical forms to meanings they realize in communication."* (ELLIS, 2005). Therefore, the teaching and learning of question tag intonation should be considered as a part and parcel of those of the grammatical question tag. In other words, when dealing with question tags, the grammatical rules ("what the language is") as well as the functions associated with their intonation ("what the language does") should be well-stressed.

Furthermore, in the present age of globalisation, students may find classical language teaching in classroom monotonous, boring, and sometimes frustrating. Researchers have worked hard to settle new methods in order to keep the students' interest and motivation in learning. Among others, C.A.L.L. or Computer-Assisted Language Learning is a student-centred method which has been introduced ever since the 1960's.

The following section will emphasize the various features of Computer-Assisted Language Learning.

COMPUTER-ASSISSTED LANGUAGE LEARNING (C.A.L.L.):

We shall attempt to define the term "computer" in the following few paragraphs before dealing with Computer-Assisted Language Learning.

1.2.1 Generalities about a computer:

1.2.1.1 Definition of a computer:

The Dictionary of Information Technology refers to a computer as "*a machine that receives or stores or processes data very quickly according to a stored program.*" (COLLIN, 1987). This definition suggests that only the computer program can make the computer work. In other words, the computer program, that is a complete set of instructions fed into the computer, directs it to carry out a particular piece of work. Therefore, first, the computer is given instructions and information (input); then its central processing unit obeys the instructions to get a result from the

information (output) (JONES, 1986). Moreover, a computer can find, treat, store and arrange information, as well as calculate amounts and control other machines at the same time. Besides, a computer can solve some problems faster than people can. Hence, this speed in solving problems helps people become more efficient or do more work in less time.

The adjective "*user - friendly*" is used to refer to a computer or a machine that is easy to understand and to use.

1.2.1.2 The different parts of a computer:

A computer is made up of two main parts which are the hardware and the software.

The Computer Hardware consists in physical units, components, integrated circuits, disks, and mechanisms that compose a computer or its peripherals. So, these components are mainly electronic circuit boards and mechanical devices. They can include the computer itself, the disks and disk drive, printer, mouse, and the Visual Display Unit (V.D.U.[56]) (COLLIN, 1987). A peripheral is a piece of hardware that can be added to a computer. It is not a necessary item, but it can make the computer more convenient or easier to use.

As opposed to that, Software refers to any program or group of programs which instructs the hardware on how it should perform its task, including operating systems, word processors and application programs. Indeed, the computer software includes the instructions which control what a computer does. (Cambridge International Dictionary of English, 1995). Computers cannot operate without these programs. To know how to use a piece of software, the user can refer to an instruction manual which gives information that describes the function, use and operation of a piece of software.

1.2.1.3 How computers work?

Neil Ardley in his book entitled Computers (ARDLEY, 1983) brings explanations about how these machines work.

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[56] The Visual Display Unit normally consists of a keyboard to input information and either a printing terminal or V.D.U. screen to display messages and results. The V.D.U. is a device used with a computer that displays information in the form of characters and drawings on a screen.

All computers, no matter the size, work in the same basic way. As a matter of fact, the easiest way to understand how a computer works is to think of it as a system. First, the computer should be given instructions and information called "programs" which are written in a language that the computer understands. Then, the central processing unit obeys the instructions to get a result from the information.

How to write a computer program?

It is possible to write one's own program i.e. a list of instructions that is fed into the computer. Each program instructs the computer to perform a particular task. To write a computer program, every step in the task that the computer has to perform must be taken into account. The program must be told exactly what to do; otherwise it will not work correctly. The diagram that shows all the steps needed in a program is called "a flowchart". The latter displays the connections between different stages of a computer program process. In other words, creating a program means translating the information in the flowchart into one or more programming languages[57]. These languages include notably BASIC, PASCAL, TURBOPASCAL, COBOL, FORTRAN, C++, Actionscript, HTML, etc. Once written, the program must be tested in the computer. In case there are any problems, the errors in the program must be corrected at once. The main purpose of this process which is called "debugging" is to make sure that the program will perform as intended. Therefore, programming requires logic, imagination, accuracy and patience.

As the computer is a machine that can accomplish various tasks in a short time and because the use of computer is widespread in many fields, it carries great potential for educational use as well. More specifically, its implementation in language teaching and learning is, then, worth considering. The following section will be devoted to the use of computers as didactic materials, hence the concept of Computer-Assisted Language Learning.

1.2.2 Computer-Assisted Language Learning (C.A.L.L.):

Historically, computers have been used for language teaching ever since the 1960's. From then on, researchers have been searching for and studying applications of the

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[57] A programming language is a piece of software that allows a user to write a series of instructions to define a particular task, which will then be translated to a form that is understood by the computer.

computer that evolve corresponding to a certain level of technology in language teaching and learning.

1.2.2.1 <u>Definition of Computer-Assisted Language Learning:</u>

The adjective "computer-assisted" or "computer-aided" means "*which uses a computer to make the work easier*" (COLLIN, 1987). As such, the concept "Computer-assisted language learning" or C.A.L.L. can merely be glossed as the use of computers in language learning. C.A.L.L. programs may include: implicit grammar teaching, gap-filling, cloze programs, multiple choice programs, sentence reordering, explanatory, free format (text entry), adventures, simulations, etc. B instruction), but the change is mainly due to the fact that the word "instruction" implies a teacher-centred approach which was rejected at the time. Gradually, in the 1990's C.A.L.L. was also referred to as T.E.L.L. (technology-enhanced language learning). The main objective of C.A.L.L. or T.E.L.L. is the implementation of student-centred materials such as computer applications or software or internet or other technologies that allow learners to work on their own. In addition, C.A.L.L. or T.E.L.L. embodies two important features: interactive learning and individualised learning.

1.2.2.2 <u>Elaboration of a Computer-Assisted Language Learning program:</u>

As far as the English language teaching and learning is concerned, the development of a computer program is managed by a programmer and a subject specialist.

On the one hand, as it has been pointed out previously, to write a computer program, every step in the task that the computer has to accomplish must be taken into account. Therefore, a set of instructions must be fed into the computer, and this must be done in a language that the computer understands. That is the main function of a programmer. As such, a programmer who is familiar with the chosen programming language or authoring tool plays a key role in the elaboration of a C.A.L.L. program. Indeed, he or she is in charge of designing the program in a way that it will contain substantial amounts of sound, video, icons, fonts, screen layout and animations according to the subject specialist guidelines.

On the other hand, the subject specialist, also known as the content provider, is usually a language teacher, more specifically a teacher of English. This person is responsible for providing the content and pedagogical input. Moreover, developing a C.A.L.L. package is more than just putting a text book into a computer. As such, the content provider who is to design the instructions should know the appropriate use of the chosen technology and should also have a background in cognitive psychology based on language teaching methodology.

The principal rationale in selecting a C.A.L.L. program is without a doubt the content and above all the methodology of the program. C.A.L.L., constantly evolving with time, has witnessed three stages according to the language teaching methodology being applied: behaviouristic, communicative, integrative C.A.L.L. Each stage is related to a certain level of technology.

1.2.2.3 The various C.A.L.L. methodologies:

Behaviouristic C.A.L.L. was first introduced in the 1960's. It is based on behaviourism, a language teaching and learning methodology based on drill-and-practice or stimulus-response materials. In other words, the computer gives the drills and the learner provides the response. Behaviouristic C.A.L.L. is mainly implemented for the implicit teaching of grammar. That is why it is also called "structural C.A.L.L.". Later on, with the introduction of the communicative approach, communicative C.A.L.L. was also brought in. Unlike the behaviouristic C.A.L.L., communicative C.A.L.L. focuses on language use rather than language analysis. In the third place, by the development of multimedia technology, integrative C.A.L.L. was created. The latter, unlike the two other types of C.A.L.L. mentioned previously, can provide texts, graphics, sounds and animations.

1.2.2.4 Uses of CALL in English language teaching :

As it has been mentioned previously, the main aim of CALL is to find ways for using computers for the sake of teaching and learning a language. More specifically, CALL is the use of computer technologies that promote educational learning, including word processing, guided drill and practice, tutor, simulation, problem solving, games, multimedia CD-ROM, and internet applications such as e-mail, chat and the World Wide Web (WWW) for language learning purposes. This

section gives a brief overview of how CALL can be used for the purpose of language learning and teaching.

First of all, computers can be used for Drill and Practice. The learning principles behind Drill and Practice are the Behaviourism Learning Theory and the Audio-lingual approach language to teaching. The main purpose of Drill and Practice is to review the content or background knowledge, and to assist the learners to master separate language skills (such as reading, listening, speaking or writing). Drill and practice consists of three steps: Providing stimulus, receiving active response from the learner, and giving immediate feedback. Paired Associate (Matching), Sentence Completion, Multiple Choice, Part Identification, True-False, and Short-Answer questions can be considered as types of drill and practice activities (exercises). However, drill and practice programs do not produce enough authentic communication for the learners as their activities lack interaction and as their content materials are not authentic, meaningful and contextualised.

Secondly, computers can be used for tutoring. The role of the computer as tutor is to present to the learners the content of the lesson as text graphics, video, animation, or slides, including learning activities, drills and practice. Therefore, the computer may serve as a means for delivering instructional materials. The program consists of the following stages: Introduction stage (stating aims, background knowledge), Presentation of the content, exercises and/or testing and Giving the feedback. Examples of CALL tutorial programs include *"Longman Grammar Software"; "See It, Hear It, Say It!"; "Active English"* and so on. As a tutorial is a computer program, it must be elaborated and written in one or more programming language.

Thirdly, CALL may be implemented for simulation and problem solving. Simulations and problem solving are used to foster analysis, critical thinking, discussion and writing activities. The computer is not used much for tutorial purposes. The program is designed to create language interaction through problematic situations, conditions or problems challenging for the learner to solve. Many simulation programs are problem solving games, which are entertaining and educational ("edutainment"). Educational simulation problem solving games include

"Amazon Trail"; "Carmen Sandiego"; "A Day in the Life" (1995); and *"Carmen Sandiego Word Detective"* (1999)*,* which helps learners to master essential language skills; *"Amazon Trail II"* (The Learning Company) which is a simulation of a trip up the Amazon River.

Besides, computers can be used for gaming. The main principle behind computer gaming is that "Learning is Fun." The main target is to introduce a pleasurable learning environment and to motivate the language learner. However, good educational games should have clear educational objectives. CALL games and simulation games are similar in that both are designed to motivate students to learn through entertainment. However, they are different in some ways. For instance, simulation games always use simulations (real life situations) in the presentation of a game, whereas CALL games focus on providing fun. Though CALL games have clear learning objectives, they are different from Tutorials and Drill and Practice. The main function of CALL games is not so much to present the language content as tutorials do but to provide challenging environment and entertainment to the learner. Examples of CALL vocabulary games are *"Spelling Games"*, *"Spelling Bee and Magic Hat"*, *"Scrambled Word"*, *"Hangman"*, *"Word Order"*, *"Word Puzzles"*, *"Cross Words"*, *"Scrabble Deluxe"* (Virgin Games) (Computerized version of the board game), etc.

A computer can serve as a tool for teachers and learners as well. Indeed, the most common tool used by teachers and learners in CALL is probably a word processor. The latter operates as a tool for creating documents, for making handouts, sheets, letters, and flyers for language teaching and learning. In other words, a word processor can accomplish the tasks of a type-writer with many improvements. *Microsoft Word* is a well-known example of word processor. In addition, Spelling checkers are tools for teachers and learners for conducting spelling check (E.g.: *"Spell it Deluxe"(1997)*), whereas Grammar checkers are programs used to check and point out grammatical problems in writing (E.g.: *"Grammatik").* Moreover, at present many CD versions of encyclopedias, dictionaries, thesauruses, maps and other references are available to the teachers and learners. Among these reference programs, we can cite *"Microsoft Encarta", "Longman Dictionary of American English", "Roget's thesaurus.com", "Longman Multimedia Dictionary", etc.*

Last but not least, Computers can be connected to the internet and can incorporate interactive multimedia such as text, graphics, audio, video, and animation. As a matter of course, the explosive growth of the internet has given new life to interactive media and CALL. To access a file containing a text or graphics, audio, video, and animation published on the internet, the teacher and learner need to use "Web browser" software, a computer based graphical program that allows users to search and explore information on the internet. Common Web browsers are "*Mozilla Firefox*" and "*Microsoft Internet Explorer*". It is expected that the internet will become one of the most popular media for CALL because it allows world-wide distance education. The reason for this is that the use of the internet is exceedingly easy as the user usually interacts just by clicking the mouse. As a matter of course, easy navigation is an advantage of using the internet in linking to different sites around the world. As such, computer networks have allowed connecting to information around the world and share millions of documents - texts, graphics, sounds, and video - via hypertext keywords or links. W.W.W. (World Wide Web) now can do e-mail, chat and voice chat, and MOOs (Multiple-user-domains Object Oriented), which allows for real time communication. Therefore, WWW provides a rich resource of "authentic materials" for language teaching and learning.

Although there are many advantages of computer, the application of current computer technology still has its limitations and disadvantages.

1.2.2.5 <u>**The advantages and disadvantages of C.A.L.L.:**</u>

LEVY's seminal work concerning the search for and study of applications of the computer in language teaching and learning highlights the advantages and disadvantages of implementing C.A.L.L. applications. This section is then meant to review these advantages and disadvantages.

On the one hand, embracing both interactive and individualised learning, C.A.L.L. is a tool that helps teachers to facilitate the learning process as the computer can analyse the students' input, give immediate feedback (open C.A.L.L.[58]) and react to students' mistakes by branching to help screens and remedial activities. Indeed, C.A.L.L. can provide additional supports for reinforcement or remediation

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[58] Open in terms of feedback given to the students

and can be at the same time educating and entertaining since it can make drills more interesting and more exciting. In addition to that, individualised learning with computers allows the learners to decide on their own the speed and the level of their work. Consequently, C.A.L.L. provides the learners with an optimal use of learning time. As students have different learning styles and as an incompatible style for students will cause serious conflicts to them, computers can provide an exciting "fast" drill for one student and "slow" for another. Furthermore, the aim of C.A.L.L. is to create an atmosphere for learners' independence, so the teacher's role is limited to that of a tutor or facilitator. Nevertheless, the teacher can continue to address the students' needs due to his/her natural feelings of responsibility. It is worth noticing that the combination of face-to-face teaching and C.A.L.L. is called "blended learning". The latter is designed to increase learning potential.

On the other hand, since the advent of C.A.L.L., computers are perceived as taking over the teacher's role in the language learning process, and computers will only benefit those who are familiar with computer technology. As a matter of fact, as the teacher acts as a tutor in case he/she decides to resort to C.A.L.L., he/she then has to be very familiar with the computer applications being used and has to be ready to answer any question asked by the learners. Before using C.A.L.L. programs, it is also essential to train the learners in computer literacy[59] beforehand, yet time constraints do not always permit this. Besides, low-ability learners may not feel comfortable with computers and may not be able to cope effectively with the new environment. These students may even become more dependent on the teacher than ever for fear of using and damaging the machine.

Apart from that, the CALL program is different from traditional books that can be carried around and studied wherever and whenever the learners wish: on a train, at home, in the middle of the night, and so on. School computers or language laboratory can only be accessed in restricted hours, so CALL program mostly benefits people who have computers at home or personal notebook. Moreover, C.A.L.L. programs are expensive and then are not at everybody's hands. Consequently, CALL will increase educational cost, since computers become a basic

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[59] Computer literacy : understanding the basic principles of computers related expressions and concepts and being able to use computers

requirement for students to purchase, and low-budget school and low income students cannot afford computers of their own.

One important fact that cannot be neglected with C.A.L.L. program implementations is that computers are electrical appliances. Hence, it is not then possible to use them in the areas where there is no electricity. This is the case of most Malagasy *lycées* which are situated in remote places in the countryside. On the whole, only the urban *lycées* can benefit from CALL programs.

To conclude, CALL has certain advantages and disadvantages, and before applying CALL programs to improve their teaching or to help student learning, teachers should know the strengths and weaknesses in implementing such programs, that constitute a tremendous technological advance and development in their teaching. Undeniably, even if CALL has become a new trend recently, computer technology still has its limitations and weaknesses.

All in all, the first part of the present work was meant to provide some theoretical background which will serve as reference and support for the different key words throughout the study. The following part will focus on the collection of factual information concerning the current teaching of question tag intonations and the implementation of Computer Assisted Language Learning at the Malagasy *lycées*.