



## Multimedia instruction on English language Latin/Greek etymologies: effects on L2 vocabulary development

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### **Abstract (in-progress paper)**

The purpose of the study is to examine whether the ESL proficiency of multimedia application users can mediate vocabulary learning resulting from multimedia instruction on English Latin/Greek roots words.

The paper includes the description of the method, the organization of the study and its possible contribution to the recent theoretical and empirical knowledge which it pretends to be the use of Latin/Greek roots etymology presented through multimedia environments as an efficient strategy to increase Learners' Second language Vocabulary.

The research will be based on one experimental environment with two 2L proficiency levels, in addition to a control group. Both groups will be provided with explicit instruction on the English Latin/Greek roots of the English words and will be implemented in the "Etimologías" course of the B.A. in Modern Language Studies at the UJAT's learners of languages degree from two proficiency levels of English Language: Low and Intermediate.

The impact of the multimedia environment on the 2L vocabulary learning of participants will be documented through qualitative and quantitative instruments based on the following research questions: Does the students' level of English mediate the effects of multimedia instruction?, Can multimedia instruction on the Latin/Greek roots of English words help learners increase their understanding of L2 vocabulary? And, If multimedia instructions on the Latin/Greek roots of English words increase students' understanding of 2L vocabulary, are the gains maintained over time?

Findings from this study will be of great interest for Second Language Vocabulary Acquisition and Language degree learners from UJAT's university will be favored with contributions of the etymologies multimedia software.

### **Introduction**

In February 2004, after fourteen years of its opening, the Language Degree of the Universidad Juárez Autónoma de Tabasco entered a process of modernization with the implementation of the flexible curriculum. During this time, events like The Olympic Games in Athens, the European Union amplification in Dublin, the ratification of the Free Trade Treaty (Tratado de Libre Comercio) by El



Salvador, and continuous human being commuting (i.e., the Globalization) brought up the need of helping students develop skills to face the rapid transformation of the world. These transformations are based on the Mass Media development which has had Internet (a miracle advance for information, knowledge and relations among people), as the main relationship instrumental among cultures.

Encarta Premium Encyclopedia (2007) mentioned that Mass Media development is a consequence of “Technology”, which has been defined as a process of designing tools and machines (by human beings) to increase control and comprehension of the environment. Who does not remember the age when we had the piles of books filling our libraries? Today, just a Cd or a USB memory to carry all this value information is required. But technology is not just a means of control, technology is an agent of change which has facilitated the storage of large amounts of information. For instance, Internet (Interconnected Networks) or Red Interna in Spanish, a connection between thousand of networks from round the world, allow computers to communicate and to transfer information from one place to thousands. Access to these networks has helped students from all levels and cultures work with information. Educational System has had the necessity of establish a connection with technology to bring updated information to schools.

In spite of this necessity, theorist like Bitter and Pierson (2005) have pointed that, with technology, “knowledge (cognition) and knowing how to learn and think (metacognition) increase in global importance, significance and value” (p. 2). The Universidad Juárez Autónoma de Tabasco (UJAT) is not exempt of this need and it has included in its curricula subjects like Derechos Humanos, Cultura Ambiental, Pensamiento Matemático, Herramientas de Computación, Filosofía, Lectura y Redacción, Ética y Metodología, among other courses, to provide students with tools that foster continuous learning along their lives. Herramientas de Computación subject, is an evidence of the importance of the relationship between technology and education.

But the incorporation of these subjects to Language curricula was not a magic trick, it laid the foundation of the Mexican Educational System’s mission is not just to provide students with a set of tools to acquire, transmit and increase



knowledge, rather, it must contribute towards human beings' development and society's change. Our university has accepted this mission providing learners with an integral formation which includes a set of general subjects to contribute to values formation.

The UNESCO (1998) has recognized the following: "Along centuries Higher Education has left proof of its feasibility and capability to transform itself and to originate society change and transformation. In spite of the reach and the rhythm of transformations, every time society tends to look for a theoretical foundation based on reason that Higher Education and searching shape the main part of cultural, socio-economical and ecological development of people, communities and nations. Therefore, and granted that Higher Education has to face to more radical renovation that has never faced, so that contemporaneous society, that nowadays live a crisis of values, could far-reaching economical considerations and face moral and spiritual dimensions. (p. 40)

The first fact that has made evident universities transformation is the introduction to technology in Mexican classrooms what has motivated the emerging of numerous studies, thesis and congresses (<http://mcu.es/TESEO>, <http://www.edutec.es>) centered on the effects of technology on students; they recommend us to put attention in the effect of the use of educational technology on teaching.

Cabero (2003) pointed the following: The educational technology has been presented along its history like an alive discipline, conceptualized in diverse ways, contradictory and significant. Mentioning with her to the importance that has had, the transformations in those that it has been introduced and the diverse forms of understanding it with the one that we are. In the last time, this discipline has suffered different orientations that have taken it to be located in a more realistic perspective for its use, as the one of being centered in the design, the use and the evaluation of the technologies of the information applied to formative actions, be these formal, informal or not formal. (p. 1)

The current use of technology in education requires competences different to those required last decade. Now, the learners must know how to use a



computer, how to surf, surf to hypertext, for instance, to download information to access e-mail boxes to criticize the amount of multiple images, sounds and audiovisual sequences, etc. among other new competences to become autonomous in this digital era. Cabero (2003), had called this situation the technology paradigm from which terms like Multimedia Learning and Multimedia Environments had emerged to show a new form to act in education.

Nowadays, the Technology-Education conjunction is seen like the spine of society's development and according to Bitter and Pierson (2005), "Educational system is regarded as the force that, when functioning properly, promotes literacy or, when failing, allows illiteracy" (p. 3). To make it function properly, the use of technology is indispensable.

Last decade, the field of multimedia learning emerged as a discipline with a range research base that contributes to significant experiences and knowledge. Multimedia learning has been defined as learning from words and pictures; in other words, multimedia involves the process of learning through oral or written words in combination with pictures, photos, maps, graphs, imagination, illustrations or videos (Mayer, 2005, p. ix). The previous definition brings to our minds the impact of multimedia learning in current classes because nowadays most of the teachers and even students when presenting contents use this tool.

The impact of field of multimedia learning has extended to language education where the purpose of first or second language is the communication of ideas, maintenance of social interactions, and creation of discourse, all of which require the development of several competences. These competences include macro-level skills, in which the focus is on the processing of content encoded in the L2. This process may relate to the decoding of input as listening and reading, on the one hand, or to the generation of a message through output-based competences, such as writing and speaking. They also may include an understanding of the cultural and situational context of such communication (Plass & Jones, 2005, p. 467). Imagine a student of languages who knows the L2 very well but, who does not know anything about the U.S.A. trying to have a conversation with an American tourist, or worst!, a student who knows so much



about history and cultures but nothing about English. In both cases the successful of communication could be unreachable.

Cultural and situational context bringing near of the second language to native language is at least one of the main contributions of multimedia learning in language education. Computers seem to realize the dream of every language teacher which is “to bring the language and culture as close and as authentically as possible to students in the classroom”. Through multimedia in particular, language is no longer just a list of grammatical paradigms or lexical or even phonetically items. Rather, it is intimately associated with all kinds of verbal and paraverbal behaviors, an acoustic and visual context that is indissociable from the larger societal context in which the words are uttered. Language, in a sense, has become culture, it is sticked; for instance, when a person talks, his accent, his idioms and particular phrases help us identify the place where he come from, his customs and attitudes. Similarly, culture is no longer just the factual pieces of information that textbooks present in the form of culture capsules on foreign mores, (sometimes understandable for students) but is produced and reproduced under our very eyes, on the screen, through what people say and how they say it. In multimedia, culture is inscribed in language use. (Andersen & Kramsch, 1999).

*According to Ellis (2003)*, “L2 acquisition”, then, can be defined as the way in which people learn a language other than their mother tongue, inside or outside of a classroom, and ‘Second Language Acquisition’ (SLA) as the study of this” (p. 3). Different are the ways used by teachers and learners to acquire a L2, and multimedia is one of this ways. Mayer pointed that Second Language Acquisition with Multimedia is “...the use of words and pictures to provide meaningful input, facilitate meaningful interaction with the target language, and elicit meaningful output” (Mayer, 2005, p. 468).

Previous studies on multimedia in Second Language Acquisition have emerged to cause a well-foundation to this alliance. In 1999, Claire Kramsch (from the University of California) in his study about multimedia contribution, “Teaching Text and Context through Multimedia” wrote about the double challenge for LS learners and teacher.



Kramersch's (1999) study pointed the following: On the one hand, the computer gives learners access to authentic video footage and other cultural material that can help them get a sense of the sociocultural context in which the language is used. On the other hand, CD-ROM multimedia textualizes this context in ways that need to be "read" and interpreted. Learners are faced to other features to arrive at some understanding of language in use. (p. 1)

In 2002, Peter J. M. Groot (from the University of Utrecht) in his study "Computer Assisted Second Language Acquisition" showed us the importance of technology in the acquisition of a second language through the implementation of a software in L2 learning (CAVOCA) which unintentionally evidenced the differences between first and second language learning.

Concerning to Second Language Vocabulary Acquisition (our central motif), we have the Horst, Cobb and Nicoliar study "Expanding Academic Vocabulary with an Interactive On-Line Database" in which researchers found that many of the words processed through Word Banks were not only processed but also learned, both receptively and productively.

The studies presented above, previous literature about multimedia and education and personal experiences in Latin/Greek etymology teaching at UJAT contributed to the origin of this study centered in the impact of multimedia application in Latin/Greek roots etymology learning among LS learners with different English proficiency level.

This paper also includes the description of the method to be used in the study, the organization and its contribution to the recent theoretical and empirical knowledge which it pretend to be the use of Latin roots etymology presented through multimedia environments as an efficient strategy to increase Learners' Second language Vocabulary.

The following study tries to examine whether the ESL proficiency of multimedia application users can mediate vocabulary learning resulting from multimedia instruction on English Latin/Greek roots words.



The proposed research will analyze the impact of a multimedia application on 2L vocabulary learning among university ESL learners from different proficiency levels in addition to a control group.

## 1. Research Questions

This study addresses two general research questions:

- (i) Does the students' level of English mediate the effects of multimedia instruction?
- (ii) Can multimedia instruction on the Latin/Greek roots of English words help learners increase their understanding of L2 vocabulary?

The study aims at answering the following specific research questions.

- a) Are university students aware about the presence of Latin/Greek roots in English language vocabulary?
- b) Can multimediated explicit instructions drive students to increase their understanding of English vocabulary including the Latin/Greek roots presented in the environment?
- c) Does the proficiency level of learners influence in the comprehension of Latin/Greek roots?
- d) If multimedia instructions on the Greek/Latin roots of English words increase students' understanding of 2L vocabulary, are the gains maintained over time?

## 2. Hypotheses

H1:Learners' proficiency level drives learners to a better understanding of Latin/Greek roots.

H2:Multimedia instruction helps learners increase their understanding of new L2 vocabulary.

H3:Learners' understanding of English Latin/Greek roots help them to maintained the new vocabulary over time.

In order to answer the research questions and test the hypotheses, this experiment will document the impact of a multimedia environment application in



English Latin etymologies learners from two proficiency levels through the reaction of learners to multimediated instruction and the correctness of their answers.

To test the hypotheses, learners will be observed in the following conditions.

(L-M) Low-Proficiency Level learners who will be exposed to the English Latin etymologies through a multimedia software.

(I-M) Intermediate-Proficiency Level learners who will be exposed to the English Latin etymologies through a multimedia software.

### **3. Method**

The study proposes a multimedia-based experiment investigating the effects of multimedia instruction on English Latin/Greek etymologies learning to facilitate L2 vocabulary learning among English as a Second Language learners (ESL) from two different proficiency levels (Low and Intermediate).

#### **3.1 Context and participants**

Two intact classes with university level ESL learners at the Universidad Juárez Autónoma de Tabasco's (UJAT) will participate in the study during the spring 2009 term. Participants will be attending "Etimologías" subject in the first semester of language degree. Based on the enrollment facts and figures for February-June 2008, about 100 students could potentially participate in this study.

Etimologías subject is part of the general curriculum area and the linguistics disciplinary field of the Language Degree at the Universidad Juárez Autónoma de Tabasco. Learners receive four credits from this course; 2 theoretical and 2 practical. Etimologías classes are held 2 days per week and are 120 minutes long. The Etimologías program is organized into three sections, in the first one learners have to see information about the definition and importance of Latin/Greek etymologies aside from the language origin and classification, in the second one learners have to learn about Spanish Latin and no-Latin means, and finally in the third one, learners see the influence of Latin in English language vocabulary; this information is taught at the end the semester. It is during this term that learners



will be exposed to the multimediated instruction through a software containing information and activities about Latin roots.

The classroom and the computer lab setting will not be altered in any way during the implementation of the project, in order to explore potential integration of educational software into regular teaching practices of the language degree, to provide learners with rich and stimulating learning activities.

### **3.2 Design**

To achieve the main purpose of this study, the researcher will observe the attitude of participants around multimedia applications, the influence of proficiency level of learners in the understanding of English Latin/Greek roots and the impact of multimedia application in the long term.

### **3.3 Treatment procedures**

The study will be based on two experimental conditions: Multimedia application and classroom application.

- a) Experimental group (Multimedia instruction)
- b) Control group (Classroom application)

#### **3.3.1 Multimedia Instruction**

The experimental English Latin roots explicit instruction will be delivered in CDROMs that learners will use in class. The software will be available to the learners the day of the implementation of the multimediated lessons only. In each session, learners will have two Latin/Greek roots which will be presented through four different activities.

Ethóks is a computer programme for vocabulary acquisition in a foreign language which takes the learners systematically through the sequence of mental operations which make up the acquisition process. The stages of this program are based on the stages suggested by Peter J. M. Groot in his study Computer Assisted Second Language Vocabulary Acquisition.

Groot (2000) pointed the following:



They cannot always be clearly distinguished because learning a word is an incremental process that gradually develops with repeated exposure and because there is constant interaction between the various stages. However, for clarity's sake, they will be briefly described as if they were separate stages independent of one another.

1. Notice of the various properties of the new word: morphological and phonological, syntactic, semantic, stylistic, collocational, and so forth.
2. Storage in the internal lexicon in networks of relationships that correspond to the properties described in (1).
3. Consolidation of the storage described in (2) by means of further exposure to the word in a variety of contexts which illustrate its various properties. This results in a firmer embedding in the memory needed for long term retention.”  
(p. 64)

The current programme is organized into four sections, in the first one we can find the presentation of the programme including its objective and contributions to vocabulary acquisition, the second section contains an introduction to the software, here students can know the organization of the program, section three includes the five roots sessions with activities and the last section contains evaluations to test learners' advances. In the third section, each session contains 10 words which are derived from the same Latin root taking about 50 minutes to complete each.

The session is divided into four parts. The first contains the Latin root and its meaning in Spanish and English, the pronunciation of the words and the syntactic property. The second part has the intention of storing the lexicon; here learners can see the use of the words in two different sentences. In the last part, learners are presented to different kind of activities which illustrate the various properties of the words.

The Latin roots included in the programme are “Ped, Man, Sect, Dict and Port, the roots were selected at random from the source book “Greek and Latin Roots” by Trisha Callela , in which there are 27 Greek and Latin roots presented by the author.

### **3.3.2 Participant grouping**

Prior to the implementation of the multimedia software, learners participating in the experimental group will complete a proficiency test and a vocabulary test, to



determine their proficiency level of English and their English Latin/Greek vocabulary proficiency.

Based on the percentage of English proficiency, learners will be identified as part of one of two levels: Low and Intermediate English proficiency level.

### **3.3.3 Experimental Conditions**

The experiment will be held at Ujat's computer center, four sessions will be necessary to collect data, the first session is an introductory session and the others for implementation. The immediately after and the long term tests will be held in a classroom. One computer per students must be available and a technician should be required to attend technical problems.

The environment will be identical in terms of the amount of roots and the sequence of activities to the control group, but they will differ in the types of activities.

### **3.3.4 Data collection instruments**

Data documenting the impact of multimedia application on English Latin/Greek etymologies learning will be collected through quantitative and qualitative instruments.

#### **3.3.4.1 Proficiency Test**

According to the British Council of Colombia, the Cambridge Key English Test (KET) is the first level of Cambridge tests for ESOL (English for Speakers of Other Languages). KET is a Low-level test which certifies the Low proficiency English level, a good opportunity for learners who wants to get PET (Preliminary English Test)

To attend to the purpose of this study, KET will be the test to get data about the English proficiency of learners. The Key English Test consists of three papers: Reading and writing; listening and Speaking.

This test will be applied to learners during the introduction course to the university with the license of the teaching department of DAEA's division at UJAT



University. The data resulting from this test will be used to identify the proficiency level of learners.

#### **3.3.4.2 Vocabulary Test**

Five will be the roots assigned for this experiment, to know whether the English proficiency level of learners influences in the understanding of new English Language vocabulary as a result of a multimediated exposure, it becomes necessary to know whether learners already know the vocabulary they will face during the experiment.

A home-made test including fill-in the blanks exercises will be made to collect data about the vocabulary proficiency of learners. The test includes twenty five different context with blanks that learners have to fill with the thirty possible words suggested by the test maker.

#### **3.3.5 Treatment Reports**

##### **3.3.5.1 Teacher Reports**

To test the hypotheses of this study, it is necessary to know whether learners best understand Latin/Greek roots through a multimedia instruction or classroom instruction, in spite of this, teacher working with the control group will complete a report sheet each session in which they will indicate the root presented in class, the description of the strategy used to teach the root, the materials they used and learners attitude.

A total of four report sheets will be collected from the teacher due to four are going to be the multimediated sessions and the classes observed.

##### **3.3.5.2 Classroom Observation**

During the implementation of the project, the researcher will visit all the participating classes, sit in a classroom corner and take notes on sessions episodes in which classroom and multimedia environments teachers or students focus on English Latin roots learning. The observation will focus on students'



attitude in front of English Latin etymologies, the amount of explanation given by teachers, the number of examples used, the amount of questions made by students and the number of explanations given by teachers. The researcher will not participate in the class.

### **3.3.5.3 Students attitude Questionnaires**

At the end of each session, classroom and multimedia, students will answer a questionnaire which is focus on learners' attitudes towards the use of technology in etymologies subject. All the questionnaires will be administered in Spanish. The purpose of this questionnaire is to know learners opinion about the incorporation of multimediated lessons in a traditional class.

## **4. Timeline of the study**

The study will be conducted from February to June 2009.

## **5. Expected results and contributions**

This experimental study builds on the assumption that multimedia environments in language degree curriculum, especially in Etimologías subject can provide learners with a different strategy to help students to increase their knowledge of English. The effectiveness of the multimedia environment is hypothesized to depend on one variable: English proficiency level learners in a classroom environment using a multimedia software with respect to their understanding of English Latin roots.

The quantitative findings of this study may provide support to these hypotheses showing the effectiveness of the application of multimedia environments in Etimologías subject with diversity in the English proficiency level of learners. Results from the qualitative instruments may provide indications that learners' attitudes and interest in the Latin/Greek roots learning will also be dependent on the learning condition they are exposed to.



Findings from this study will be of great interest for Second Language Vocabulary Acquisition and Language degree learners from UJAT's university will be favored with contributions of the multimedia software.

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