MULTIMEDIA TECHNOLOGY:

A Pedagogical Cave of Aladdin

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Las nuevas tecnologías pueden ser utilizadas para educar para la incertidumbre,educar para gozar de la vida, educar para la significación, educar para la expresión, educar para convivir, educar para apropiarse de la historia y la cultura.

(Prieto Castle, 1995)

Computers have been presented as a new resource in education over the last years. In language learning this technologically oriented and in-construction model is named Computer Assisted Language Learning (CALL). Many teachers go with it and strongly believe in CALL as an innovative and useful methodology. Nevertheless, many argue against it and conceive it an anti-humanistic device that can replace and degenerate the essence of education, which should focus mainly on human interaction.

In the practice, experience is showing that by using computers as pedagogical mediators, students have advantages such as the following: their individual needs can be catered for, they can become active partners in the learning process; their learning pace and differences are respected, and solving individual problems that arise in the process can result easier. In other words, learning can become more learners-centered. (For further discussion see COFE project. Doc. 4). Furthermore, *computers are different from other media in that they facilitate tasks such as editing, deleting, inserting, and moving elements or blocks of texts.* (Hardisty & Windeatt, 1992).

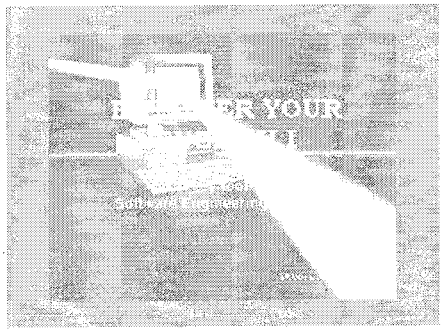
The development of multimedia technology, understood as the integration of text, sound, image, animation, voice and video, is opening new pedagogical possibilities and changing the way teachers used to relate to computers. In fact, teachers' and learners' roles are being transformed. More and more, teachers are becoming materials designers and creators, guides, and researchers. In turn, learners are more autonomous and aware of their own learning processes.

Multimedia technology as a pedagogical mediator can also offer multi-sensory learning experiences. Prieto C. states that "*multimedia is an interactive system that makes it possible to surf in different ways, creates learning settings bringing students the chance to generate knowledge*" (Prieto C, 1995). Consequently English teachers can benefit from introducing multimedia technology into the heart of the classroom at different levels.

Since 1999, the desire to make the learning of English more enjoyable and effective has motivated CALL experiences. One such experience has been successfully carried out with students of different programs at the Universidad de la Amazonía by way of designing a multimedia English course with the use of commercially available software, and leading the students to design multimedia applications and web pages.

Sharing experiences...

As teachers, we are always concerned with how to help our students to cater for their learning needs while motivation is attained and maintained. The courseware **'Empower your English'** to develop reading comprehension



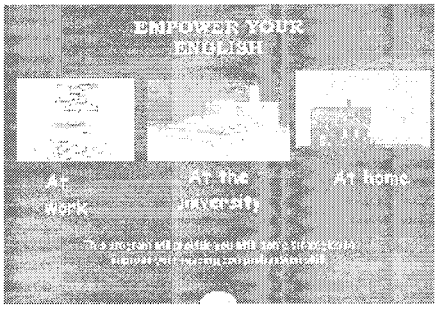
skills with software engineering students was born in such context.

The process began with a training program in multimedia material design sponsored by ICFES. Content was then determined on a needs analysis study, which included finding out "why, who, what how, when and where" the ESP course would take place (Hutchinson and Waters, 1987). Following this, the long process of design was started. This process implied making decisions about materials and appropriate activities to exploit them, planning the units (writing the outline, deciding on images, sounds, texts, etc), and finally, and probably the most complicated of all, the actual multimedia design of the learning units within a framework of an accessible CALL program on the computer. The process was time-

consuming, often going back and starting from scratch, now and then coming up against technical problems that made us feel we were wasting our time.

Three main units are the body of the course. The course adopted the "interactive model to reading comprehension" (Carrel & Easterhold, 1983; Dubin et al, 1986), in which reading is viewed as a construction of meaning. Here, the reading process is regarded as *a purposeful and meaningful one, where the previous knowledge of the reader becomes a significant component when comprehending and interpreting*

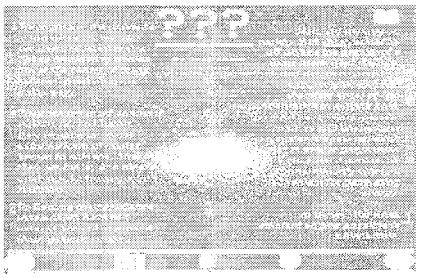
(Esker, 1986).



This frame corresponds to the main menu. The units o bjectives are displayed when passing the cursor on the respective picture. The learner can go to the wanted unit by just clicking on.

The three units responded to the results the needs analysis study, which placed students' needs in three different settings: at the university, at home, and at work.

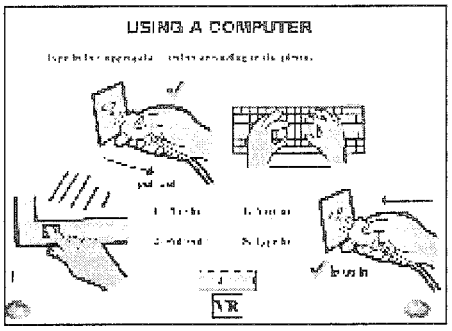
At the university: this unit provides students with some strategies to help them improve their academic reading-comprehension skill on scientific and technological articles. They practice reading comprehension skills such as skimming, scanning, identifying the main idea, understanding coherence of the text, inferring meaning by context,



This frame corresponds to a scientific reading on black holes. The learner can explore possibilities passing the cursor by . He / she can go directly to the exercises or the dictionary, can see more pictures of black holes, search more references on the topic in Internet or listen to audio.

recognizing reference words and interpreting author views, among others.

At work: here, students through reading and exercises can learn



This frame shows an exercise, in which the learner has to match the instructions with the appropriate pictures.

some instructions to follow when working on computers, e.g. start up, turn on, switch on / off, link up, send back, etc.

At home: Here, students can listen to and read the lyrics of songs

This frame corresponds to the Hotel California song. The learner can read the lyrics, check vocabulary and listen to the song. He / she can go to reading comprehension exercises, the story board, the dictionary and to see an Eagles picture by just clicking on the different icons.

and understand their story through different exercises. This unit is mainly aimed at enhancing their motivation, since the needs analysis results showed they are very interested, not only in academic reading but also in non-academic reading, and the activity led them to understand the lyrics of their favorite songs.

Most of the activities are computerized versions of classroom activities such as matching, true false, storyboard, Spanish equivalencies, relating text and pictures, and multiple choice. The program allows the student to be in control, provides positive feedback to the learners and encourage them to continue when they make mistakes. English dictionary frames and verb charts linked to specific readings help them achieve a successful outcome. Additionally, throughout all the units including dictionary exercises and the verb charts, students can explore the audio of the texts and of key vocabulary.

General opinion of students involved in the program refer favorably to the fact that the program offers different interactive activities with a balanced combination of video, text, sounds, voice and pictures. They do not feel anxious or pressed by the lessons, so they can advance freely and at their own pace, getting support from each other and from the teacher at the right moment. Their attitude towards the class and the material has been very positive, they show interest and enjoy the lessons, and value the feedback they get from the program, whether an "excellent" message or a "try again". They feel stimulated and are willing to go back for more.

The program is not a highly developed multimedia technology application, but it

offers a different learning environment to enhance students' language learning and learning environment, thanks to the pedagogical combination of the multimedia elements.

If you plan on starting a design of this kind, it is important to consider team working, and to include a software engineer in the group, whose task is to optimize the work in the technological end. This saves your time for the pedagogical development of the project. Not doing so may make the project very difficult, and perhaps impossible to accomplish.

In the appendix you can see and analyze the different components you should consider when planning a multimedia project.

Commercial software

Even though designing our own multimedia materials is a suitable option, it can become time consuming. It may require special technological training, which may not be readily available. If such is the case, the increasing offer of available commercial software can offer a great variety of possibilities as an additional resource in class. But, ¡be careful! It is very important to remember software should not be used to replace an unplanned lesson. It is necessary to select it according to the specific objectives the course is following. In addition, a pre-, while- and post-computer sessions should be well planned to guarantee an optimal use and profit of the resource.

Before deciding on what kind of software to bring to class, take some time to consider that a communicative program...

1...provides meaningful communicative interaction between the learner and the computer.

2...provides comprehensible input at a level just beyond that currently acquired by the learner

3...promotes a positive self-image in the learner

4...motivates the learner to use the software

5...motivates the learner to learn the language

6...provides a challenge but does not produce frustration or anxiety.

7...does not include overt error correction

8... allows the learner the opportunity to produce comprehensible output

9...acts effectively as a catalyst to promote learner - learner interaction in the target language.

(Hubbard. Ph, 1987. Taken from Modern Media in Foreign Language Education)

Although a number of activities can be planned through commercial software, most of the activities applied at UniAmazonía to different groups have been aimed at helping students to improve their listening and reading skill[1]; and to better understand grammar.

Other experiences

Other different experiences have been developed with students from different programs and semesters. The university only offers two mandatory sixty-four hour English courses to undergraduate students, focusing mainly on academic reading and writing development, but there aren't enough motivating materials available to work with. Given this, and in order to make the most of their short time to the intended goals, it was thought that developing multimedia projects like web pages and applications as complementary activities would help both to motivate them and to improve their reading and writing skills as well.

The objective has been to design **web pages** with information on interesting topics related to subject matters of the students' career. For example, Biology students designed two pages: one on Heliconias in Florencia[2] and the second on bats in Florencia, too. The process included considerable tutorial time to check progress and guide students toward the actual writing process; and then, advising them on how to structure the pages for optimal communication and use of technology. Students got fully engaged and motivated in writing and creating the pages. Since writing is one of the most neglected skills, planning, writing the drafts and revising the papers turned out to be truly useful to make students feel they could write, publish in English and want to do it. In the end they saw their final product as a master-piece to be proud of.

Processes of this kind can be planned in association with computing courses that they must take at the university. The teachers of both subjects can come to agreements and work together.

Multimedia applications

An alternative strategy with students from different careers consists of multimedia application designs about free topics, just to give students the chance to learn English in association with a subject that they really love. Thus, they should first select a topic, a material, or something they want to retell, and then recreate it in a multimedia format. Students choose scientific articles, songs or stories. Then they follow the reading comprehension process, build vocabulary, and decide what kind of application they want to design. At this stage, they re-write in a simple way the original topic, practice its pronunciation, and finally start the application. Microsoft Office programs are as good as any, but they may use other, more sophisticated software if they know it. They use word processors, insert images or animations, record the texts in their own voices, insert sounds and music, buttons, and so forth.

[1] *Some programs include videos and entertainmet sections that can be useful for the class.*

[2] *The web pages can be seen in the site www.uniamazonia.edu.co*

Students' response shows high motivation and visible progress in reading, writing, vocabulary and pronunciation.

Many schools and almost all universities in this country have a computer lab, for which this is a learning strategy that is friendly and enjoyable to apply. Additionally, nowadays many people know very well how to design Power Point applications. For this reason special training may not be required.

This application design strategy was also applied to a group of Ph.D candidates who needed training in planning, explaining, describing, and justifying dissertations on their specific research fields in English oral examinations. It was very fruitful because it helped them to structure and organize the dissertation, to reinforce vocabulary and pronunciation, and to enhance self-confidence.

Concluding remarks

It is important to remark that Multimedia technology as a pedagogical mediator is on its way to demonstrating a high effectiveness in language learning and validity for students, independently of whether or not they are engaged in technological programs. As an Aladdin' cave, it provides many possibilities that can fit every learning need; we must just seek, discover and try things out and determine what is the best.

On the other hand, we must not rush to say that CALL is the 'panacea' in language learning; and that just using high technology will guarantee an improvement in the process. Nevertheless, we should see it as a supporting tool that, well planned and dosified, can help a lot to change our pedagogical practices in favor of our students' learning processes and the learning environment. We should take into account that introducing it into the classroom is not so simple because it requires a change of the teachers' and learners´ roles, which at the same time implies effort, time and the deep desire to give new perspectives to our daily teaching routine. The new millennium is demanding language teachers who are technologically engaged and ready to face the multiple challenges that the new world is imposing

Finally, as Hubbard states, CALL should be properly viewed not as computers teaching people but as people teaching people through the medium of computers to enhance, not to degrade, the learning environment.

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APPENDIX[3]

1. Definición del usuario
2. Objetivos del proyecto
   - De contenido
   - Pedagógicos
   - Lúdicos
   - Otros
3. Marco histórico
   - en dónde
   - qué es lo que pasa
   - quienes son los personajes
4. Historia / Contenido
   - estructura dela historia / contenido
   - como esta construida / secciones / unidades
   - que escenarios la componen / unidades
   - descripción breve de cada escenario / unidades
   - que es lo que puede hacer el usuarios en este escenario / unidades
   - cuales son las tareas que se deben cumplir allí
   - si hay varias tareas, describirlas brevemente
5. sistemas de navegación
   - a través de personajes
   - flechas
   - otros
6. figuras que acompañan a través del programa (que estilo predomina)
7. concepto de imagen (dibujos, fotos, collage, videos)
8. Concepto de audio (Voz, música, sonidos)
9. Concepto de ayudas para el usuario

[3] *Modelo propuesto en el Curso de Capacitaciónd de Diseño de Material Multimedia para la Educación Superior ofrecida por el ICFES. 1999*