Abstract

In building a knowledge ecology we need to move from a generation which handled traditional resources and the sense of ownership of information and knowledge to one where the emphasis is on effective use and usefulness of information in order to create, use, share and advance knowledge. In the future successful teachers in Latin-America might be those who can mediate knowledge online. However, the traditional information transmission model will play a crucial role and lots of digitalized information will be transmitted by telematics.

Knowledge ecologies might develop at an amazing speed. The most challenging role of teachers might be to redefine their roles as e-moderators and promote change in how knowledge is built, used, disseminated, shared and recycled. Online education will foster learning through participation in debates and information exchange, and knowledge will be built on critical thinking and collaborative work.

Education and economic growth are already being fueled by knowledge and ideas. Documents are the vehicle for sharing information and knowledge, conducting and publishing research. Discussion groups with e-moderators are plagiarism-free think tanks where people exchange ideas and construct knowledge on the basis of critical thinking.

Telematics provides education with the opportunity to become a highly networked organization. It is a very powerful tool to deliver education and training, because in the field of education it enables parties to conduct interactions of any kind. As a result, students may learn or supplement formal curricula at their own pace.

Teachers who mediate their students work through e-moderated threads may have a thorough assessment of how learners build knowledge. My hypothesis is: students who are active participants in online discussion are members of knowledge ecologies: the gatekeepers of the future.

During the talk the presenter will explain the development of knowledge ecologies and will provide examples of how knowledge is built in computer mediated conferencing.

The presenter will also show the audience recorded material from discussion groups, chats, threads and e-moderated lessons. The approach will be from distant to close, providing theoretical background and pinning it down with real life examples in online education.
Introduction

The development of an internet delivered virtual learning environment which included a language learning software for Latin-American speakers of English as a Foreign Language (EFL) with focus on English for Specific Purposes and creating a language learning community in cyberspace is as much about language learning as it is about Information and Communication Technologies. The main goal of the long–term project on which the author embarked three years ago, was to create a virtual community of EFL in which teachers and students could interact across boundaries at any place, any time. The vast Spanish speaking population in Latin-America claimed for more appropriate pedagogies to be devised for its EFL learning community, in response to the form of EFL teaching imposed by globalization, which is either American or British centered. The first ESP modules were developed for adult and young adult Latin-American learners who needed English for Business and for international communication. Several processes were involved in the selection of the contents and the creation of a learning environment for the students: determining the full picture by conducting needs analysis and analyzing students’ mistakes, weighing the communicative relevance of the linguistic data, observing the frequency of occurrence of the forms in everyday usage, comparing the tables of contents, priorities and patterns of presentation of these features in different textbooks and deciding on the possibility of creating online learning activities around a certain feature.

In these modules students deal with all the English language needed to do Business (telephone calls, meetings, presentations, negotiations, market research, written communication: letters, e-mails, memos) and the language needed for socializing and travelling abroad on business. These modules give young adults great pre-occupational opportunities and provide adults and professionals with on the job, on demand language learning.

Within the virtual classroom, in order to create a virtual learning environment through the use of computer mediated conferencing (CMC) technologies, the focus is mainly on communication skills. The aims are not only accuracy and fluency (as in a standard English course), but efficiency as well, i.e. how well meaning is negotiated. Since Business English is transactional, participants need to develop communicative skills to achieve their goals efficiently through different tasks in a number of business like scenarios brought into the virtual classroom by the tutor.

This virtual community was primarily thought for individual users who needed a special program that would cater for their specific language needs as well as for their work, family, time and travel constraints. Over the past year, the program was adapted to access a wider range of users on a larger scale.
Content became more varied including Legal English and English for Medical Purposes. The objectives are to deliver on-the-job, on-demand ESP training and coaching so as to reduce training costs and to improve university students/employees’ language performance, and to provide a new learning environment that builds a knowledge ecology. My hypothesis is that students who actively participate in online discussion are members of knowledge ecologies: the gatekeepers of the future.

An ecology is the relationship of living things to their environment and to each other, or the scientific study of this, where relationships of the parts to the whole are of paramount importance. In building a knowledge ecology we need to move from a generation which handled traditional resources and the sense of ownership of information and knowledge to one where the emphasis is on effective use and usefulness of information in order to create, use, share and advance knowledge. Successful EFL teachers in Latin-America in the future might be those who can mediate knowledge online and those who can make the knowledge generated in their virtual learning environments available to new groups. However, the traditional information transmission model will play an important role: documents are the vehicle for sharing information and knowledge, conducting and publishing research. Online language education will foster learning through participation in debates and information exchange, and knowledge will be built on critical thinking and collaborative work. Chat and forum technologies are big pieces of realia, where learner production may be analyzed by the teacher. For the purpose of this paper I have used the words moderator/e-moderator, i.e. electronic moderator, as used by Dr. Gilly Salmon (Salmon, 2000) to define the new generation of online teachers.

Method

How knowledge is built, used, disseminated, shared and recycled in a virtual learning environment: case studies.

There are six major elements for a virtual distance learning environment to be successful. These elements are: the commitment of the organization’s top leaders for creating a shared vision of lifelong learning and allocating resources for distance learning opportunities, meaningful contents, effective management, CMC technical infrastructure, instructional support both for trainers and learners, and the most important element is the role of e-moderators that should pervade the ambience of EFL learning environment. If these components come together, training will be delivered efficiently, learning needs will be met, participants in online discussion will seize information and build knowledge. On the other hand, a very important factor influencing the success in technology-enhanced distance training is reducing the complexity or number of steps required to perform a task. So, the CMC
technologies used were those that most people can access from a desktop at home: online chat and forum.

The subjects for each case study vary and were chosen so as to represent what actually happened within each virtual learning environment. All of them were Latin-Americans and had Spanish as a mother tongue and had acquired or studied English as a foreign language. Other characteristics such as total number of participants in the discussions and average age of participants were specified for each case study. Materials in all cases included the applications of the virtual classroom: synchronous chat and asynchronous discussion group or forum technology, used as a virtual blackboard, from which historic records were kept. The most challenging step within the procedure was to identify representative samples of how knowledge is built, used, disseminated, shared and recycled in a virtual learning environment that would provide the reader with a clear scope of online outcome. The virtual classroom consists of the following buttons: Topic, which stands for the topic or name of the discussion. Each classroom has one topic and within that topic students choose either to post a follow-up to an already existing message on the virtual blackboard or to create a new message on a new virtual blackboard; Back to ...., which leads back to the main discussion or topic; Topics i.e. the full list of topics that correspond to all the virtual classrooms. This whole, the total amount of existing virtual classrooms, constitutes the most active and rich in exchanges virtual learning environment since it makes data, information and the processes of how knowledge has been built available to all members of the knowledge ecology.

NB: A sample of a virtual classroom was transcribed for each case study. All case studies include quoted unedited messages, therefore, they contain mistakes as they occurred.


Project overview

Focussing on working adults and young adults, the independent study program provides for various levels ranging from elementary to advanced level modules. Such comprehensive study plan was designed to cater for students’ needs at different stages, to improve the quality of the teaching of English as a foreign language and the performance of students through the use of a technology that will impact positively on their learning. The independent module study plan allows students to enroll at one or more modules at anytime with provision that they must complete each module
within 3 months. A three month term was chosen as a unit for the module design since in most countries in Latin-America an academic year is nine months.
Each independent module consists of a 24 lesson macromedia software designed to study entirely online and a virtual classroom for that module exclusively. Inside the virtual classroom, students will complete 15-20 real time assignments with tutor support and 15-20 asynchronous assignments moderated by tutors with historic records.

In order to encourage online participation in the virtual classroom, a certificate is issued to those students who have satisfactorily completed 75% of the assignments in the virtual classroom. Students work at their own pace and take an examination at the end of each module to demonstrate their knowledge.

**Business Travel.** Online module case study.

Modality: virtual distance learning proper.
Type of CMC used in virtual classroom: asynchronous and synchronous
Type of CMC analyzed: asynchronous
Age of students: 17-45
Language proficiency:
According to the LCCIEB standards: threshold level (level 2) and vantage (level3). According to the Canadian Language Benchmarks: Stage II (Benchmark 7) through Stage III (Benchmark 10)
Total number of student participants within this class: 25

Students participating in this virtual learning environment had subscribed to an independent module within the ESP program.
Each lesson included 6 online activities in a macromedia software delivered by the internet. Activities 5 or 6 included precise instructions for language production and a link to the virtual classroom where they should post the required outcomes and where the role of the e-moderator was to encourage language use as a result of social interaction.

**Topic: Business Travel**

✧ Post Follow-up ✧✧ Back To Business Travel ✧✧ Topics ✧

**Sample 1**

Please expand my knowledge posted by candy on October 19, 2000 at 19:37:46:

: I was working on lesson 4. Please tell me other means of transportation where one can use first class.

In Reply to: please expand my knowledge posted by candy on October 19, 2000 at 19:37:46:

Posted by tutor on October 19, 2000 at 19:41:19:

please, check the following:
we have first class busses and trains in Argentina.
What is it like in Mexico?

**Sample 2**

In Reply to: e-mail messages posted by Valeria on January 24, 2001 at 07:58:37:

: Can I use e-mail to communicate with my tutors? or shall I use this means only?

Dear Valeria,
you should use the virtual classroom, so that you can share information with other students and for topics relevant to the course, and e-mail only when requested by your tutor.
Two contrasting e-moderating techniques made themselves evident from intervention of the e-moderator as in sample 1 and 2. In sample 1, facilitating access to information, i.e. answering the posted question, and fostering further contributions by bringing up a cross-cultural topic. In sample 2, providing direct instructions to the language learner and highlighting the added value of CMC to a student hesitant to participate in online debate.

Sample 3

Posted by Analia on February 07, 2001 at 16:25:06:

In Reply to: travelling posted by Patricia on February 07, 2001 at 16:21:50:

: what´s the difference between coach and bus?  
I believe coach is long distance

All participants could benefit from interaction with other members of the online environment, as we can see in sample 3, where a student taught vocabulary to their peers.

Conclusions
Participation in the Business Travel virtual learning environment resulted in sustained growth of the community and the development of a valuable ecology. Newcomers to the virtual learning environment might benefit from previous postings, enhance reading comprehension skills, learn vocabulary and recycle information.

Developing a knowledge ecology in cyberspace through the use of CMC for participants of mixed modalities.


TESOL´s mission is to develop the expertise of its members and others involved in teaching English to speakers of other languages to help them foster effective communication in diverse settings while respecting individuals’ rights. It also articulates and advances standards for professional preparation and employment, continuing education and students programmes. TESOL links groups worldwide to enhance communication among language specialists and promotes advocacy to further the profession.
Modality: mixed (lecture, on the site training and real time online demo)
Type of CMC used in the virtual classroom: asynchronous and synchronous.
Type of CMC analyzed: asynchronous.
Average age of students: 25-50
Language proficiency:
1. undergraduate teachers of EFL according to the LCCIEB standards: threshold level (level 2) and vantage level (level 3). according to the Canadian Language Benchmarks: Stage II (Benchmark 7) and Stage III (Benchmark 11)
2. graduate teachers of EFL according to the LCCIEB standards: Vantage (level 3) and Effective Operational Proficiency (level 4). According to the Canadian Language Benchmarks: Stage III (Benchmarks 11 and 12)
Total number of student participants within this virtual community: 42

A letter had been posted prior to the conference to assess the CMC level of literacy of the EFL teacher participants with very disappointing results: no follow-ups.

Posted by Carolina on September 06, 2000 at 07:41:22:

Welcome to effective-english virtual classroom. Inside the virtual classroom you will be able to exchange information with classmates and tutors. You will use the English Language to communicate your views and queries. effective-english tutors will be ready to help you any time. So, join the virtual classroom, post your message and come back regularly to check what your tutor has posted to you. You may also receive an answer from another student, a virtual classmate! If you prefer real time interaction, you can use our chat to talk to your tutor, at the scheduled or agreed times. If you have a doubt, or you are not sure about how to use these technologies, just post a message here. There are real teachers behind this forum who are ready to help. Hope to meet you soon in this virtual classroom.

Many EFL teachers in our region feel intimidated by Information Communication Technologies. Therefore, before, during and after the past TESOL conference in Tucumán, Argentina, a virtual classroom was set up for them to explore the possibilities of CMC through online debate of topics
relevant to the TEFL. A welcome letter had been previously posted by the lecturer but it needed reinforcement due to a reluctant audience which can be accounted for with the lack of experience in CMC. In order to overcome this difficulty the teachers received instruction on how to use the virtual classroom at the convention. The outcomes of the real time exchanges ensuing on-the-site teacher training are the following:

In Reply to: AR-Tesol Convention in Tucuman posted by Carolina on September 07, 2000 at 16:06:48:

Feel free to post your messages and queries here. You can also use the chat inside this virtual classroom. Explore. Exchange. Express

Responses posted by participants during real time demo

Posted by Marta on September 08, 2000 at 11:36:51:
Are you having fun? Learning a lot about internet? we should do something about it, ah?

Posted by Maria on September 08, 2000 at 11:42:01:
I´d like to see what this is about

Conclusions
The intervention of the e-moderator here had successfully encouraged new participants and these engaged in finding someone with whom to interact. The very short outcomes can be interpreted both as a result of teachers exploring the new environment and an extra difficulty in fluent production in EFL. But the virtual learning environment had triumphed: it had satisfied the communication needs and had gained new advocates.

Mixed modality. Classroom based teaching supplemented by e-communication.
Type of CMC used in the virtual classroom: asynchronous.
Average age of students: 35-50
Language proficiency: graduate teachers of English. According to the LCCIEB standards: Vantage (level 3) and Effective Operational Proficiency (level 4).
According to the Canadian Language Benchmarks: Stage III (Benchmarks 11 and 12)
Total number of student participants within this virtual community: 60

This EFL learning environment was specially set up for those teachers of English who had joined the Licenciatura de Inglés in Argentina, the first national programme to provide graduate teachers of English who already held a teacher training college degree with a university (or should I say academic)?? degree. Ana Armendariz, Head of the Licenciatura encouraged teachers to exchange information online and maximizes her role as tutor fostering participation, dissemination of information and nurturing the research environment with her sustained follow-ups.

Posted by Ana on October 18, 2000 at 21:07:22:
In Reply to: Re: Good News posted by Patricia Suarez Rotger on October 17, 2000 at 20:58:06:

Dear Patricia and all,

First, I'd try to write sentences -- the forever boring Linguistics teacher -- and hit ENTER every now and then, so that your msg can be contained the space of the msg page. Second, Yes, there's a lot we can do here. For example suggest ideas to each other on possible topics for your papers. (HOW BORING!!) Well, I'm preparing a massive mail for all to let you know about different things.

I'll be clogging your mail boxes soon.
Love to all,
Ana

Follow-ups:
Re: Good News - Cecilia Zerbos 10/19/00 (16)

Posted by Cecilia Zerbos on October 19, 2000 at 23:01:04:
In Reply to: Re: Good News posted by Ana on October 18, 2000 at 21:07:22:
we can analyse, for instance, the linguistic structure of e-messages. After all, we have already had piles of Ana's as samples!!!!

Posted by Patricia Nora Galazzo on October 20, 2000 at 15:56:08:
Hi girls and boy (Sorry Marcelo I didn´t mean that I don´t take you into consideration)
I’ve already sent Ana´s two Power Point Sessions to Grace Ospital. I hope she receives them this time. Could you please do the same with the two Karinas?. If any of you does it, let the rest know asap. Otherwise, the Karinas will end up being bombed with more than 60 nuclear missiles that will probably collapse their systems!!! See you soon Pat.

So far, exchanges were a success and the environment was very active though apparently improdutive. Participants used the list for socializing and or exchanging information which could have been sent by mail, since it was not relevant to the whole group. After allowing a two week period for greetings and introductions, and finding someone with whom to interact, in an attempt to help these very willing and active participants begin true debate the e-moderator posted a message aimed at concentrating on the oncoming research papers to write.

Posted by Carolina on October 21, 2000 at 18:24:48:

Dear friends,
... that is exactly what we will do , once everybody has visited the e-communication list, said hello! and felt comfortable using this list.
Let's check we are using it correctly:
If we click on post a message, we are creating a new message that will be posted as a new bullet point on top of the list.
If we click on a certain message ,we will be posting a follow-up message to that particular message in the list. And it will come out a little indented right under that original message.
This message is a new message I created with a click on "post a message".
All messages are numbered, so it is easy to follow the chronological progression of our list.
This list is an additional medium for communicating and learning.
Concepts of HOW and WITH WHOM people can collaborate and WHEN and WHAT people learn are changing.
This list can help Ana and ourselves to look at the processes of learning rather than at the content
transmitted or disseminated and how knowledge is build with technology supported learning or this kind of forum or conferencing technology.
In this case we will be combining classroom-based teaching supplemented by electronic communication.
We could find out, e.g. some partner to conduct research with, or establish common understandings on a certain topic.
On the other hand, we can make materials available through networked technologies ...

Conclusions.
This last intervention of the e-moderator was an absolute failure. E-moderators role should be to interact, not to interrupt. The knowledge ecology was slowly but successfully developing when the e-moderator put too much pressure on the participants. As a result, they immediately migrated to a more private and already known communication technology: e-mail, where they could exchange as many greetings as they wished. Therefore, we have to conclude that it is absolutely necessary to allow enough time for socializing and that chat in the target language can be a legitimate step in the development of a knowledge ecology, particularly when this medium provides participants with the possibility of using EFL to exchange information of any type with significant peers, although the subject knowledge was not EFL.

3. Colegio Jesús María, Bachillerato Humanista. A pre-university case study

Mixed modality. Classroom based teaching supplemented by e-communication
Type of CMC used in the virtual classroom: asynchronous.
Average age of students: 17
Language proficiency: According to the LCCIEB standards: Vantage (level 3). According to the Canadian Language Benchmarks: Stage III (Benchmarks 10 and 11).
Total number of student participants within this virtual community: 19

In this case study we will look into a virtual learning environment which combined classroom based teaching and supplemented this by e-communication. This environment was created in order to practice reading comprehension skills and to promote reflection on peers' work, establish common understandings and foster online debate. Instructions from the e-moderator were presented clearly during a classroom session. In order to trigger conversation two questions were posted:

Posted by Tutor on March 26, 2001 at 10:45:08:

: Begin discussion, please. Where is Holden? What is wrong/ok with him?

In Reply to: Re: Chapter 2 posted by Ana Ines Querol on March 26, 2001 at 10:53:38:

: Holden is at Mr. Spencer's house. In my opinion he feels quite uncomfortable, because he started shooting the bull and he didn't see the time to go away. What is more, he asked himself why was he there. Do you think the same way as I do??

Posted by Mechi Beverati on March 26, 2001 at 21:50:58:

: Yes I believe he is not comfortable at Mr. Spencer’s house because the old man doesn’t make him feel comfortable. He asks Holden too many things specially those related to his going away from the school, to which he shows no interest, but he must probably not be that happy. That’s why I believe he is not comfortable, although he appreciates his History teacher very much.

Participants not only answered the questions but added their opinions and asked for peers’ feedback as well, which shows that they felt quite confident with the use of this technology. Needless to say that, transitioning from classroom to high-tech learning environments and creating “just for me, just in time, just enough” training requires systematic instructional efforts. Since most students write in the same way they speak, online conversation or chat is a valuable EFL sample for the language teacher that enables them to look into the processes of learning and how knowledge is being built rather than at how or what is communicated, who had chosen not to correct language mistakes at this stage.

Discussion
The use of CMC imposes order and systematization on the development, presentation of materials and applications. In order to develop an EFL
knowledge ecology in cyberspace supported by an internet delivered macromedia software it is necessary to conduct needs analysis, accumulate a large amount of linguistic data, integrate the data within a significant context, make information available to all participants, organize and publish all these in a coherent fashion and pervade the ambience of collaboration. Also members of other communities- who receive classroom based instruction supplemented by e-communication- can be integrated within the community making it richer in scope. To make this possible, i.e. integrating classes belonging to both modalities: virtual distance learning proper and classroom based with electronic communication supplement, there has to be a very good organization behind the scenes. Making a click with the mouse is probably one of the simplest activities in terms of computer operation, but students must know where to click, otherwise, content will lie flat and unshaped. That is why a set of mini-tutorials with step by step guides, must be available from the screen, such as a help button or direct instructions, e.g. how to use this module.

Within the independent module study plan, while working in a lesson, students are provided with immediate online feedback which may happen in different ways: in the form of correction of incorrect forms, allocating opportunities to self-correct the mistakes and submit the exercise a second time for online correction and then showing the correct answers and a diagnosis of performance over the total amount of items included in the exercise as a whole, e.g. you have 15 correct answers over a total of 20.

Perhaps the most revolutionary feature of virtual learning environments is that they allow the EFL teacher to assess the processes of how knowledge is being built in a non-linear way and how students who are active participants in online discussion are members of knowledge ecologies: the gatekeepers of the future.

Most American or British centered textbooks present content in a linear fashion and in roughly the same way, i.e. the simplest forms come first. With the use of ICT and CMC for the teaching of EFL in Latin-America the success of the pedagogy relies on the integration of content into realistic language use, the clarity of presentation and allocation of significant tasks to the virtual classroom. Latin-American members of EFL knowledge ecologies may encounter scenarios in which they may have to deal with texts which are pitched above their level of proficiency in EFL, i.e. more complex texts. More skilled language students will acquire the forms, style, vocabulary or syntax as they encounter them and others might just manage to understand those forms, style, vocabulary or syntax and will get by without acquiring them. Designing EFL courseware and software makes teachers place themselves in the student's place. Latin-American teachers of EFL can understand the student’s effort to communicate in the target language and what is going on inside the student’s mind because they have been in their place before. Furthermore, when designing EFL courseware, software and implementing CMC in order to foster the development of EFL knowledge ecologies,
teachers have to be prepared to face the fact that it will be absolutely necessary to acquire full mastery of the language features, material design e-moderating skills and CMC applications.

Bibliography


BIODATA
CAROLINA RUIZ MONTANI
Mrs. Carolina Ruiz Montani is the head of Effective English Advisers, a TEFL Consultant specialized in Open & Distance Learning delivered by the internet and the developer of www.effective-english.com. She is an AR-TESOL member and has lectured in Mexico, Brazil, Checoslovaquia and Argentina. She is a graduate teacher of English and a Licenciate candidate at Universidad Nacional del Litoral, Argentina.