The Collaborative Construction of Knowledge through Online Forums and Blogging in an EFL Undergraduate Class

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To my husband and son, whose love
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Abstract

In the educational field, the World Wide Web can be used as a medium of communication, as an information delivery system as well as an interactive space to provide novel opportunities for students' engagement in learning tasks. The present study attempts to explore the latter through interpretive, qualitative research. It examines how the use of blogging and the electronic forum contributes to the development of collaborative tasks and the application of critical thinking skills in an English Language II class at the Faculty of Languages of the National University of Córdoba (UNC), which offers programmes in EFL Teacher Training, Translation and Research. The teacher-researcher, two raters, one of whom was also the external observer, and 24 Spanish-speaking undergraduate students participated in this study. The data collection instruments included a pre-study and a post-study questionnaire, the text generated in the students' group forums and blogs. The findings led to the development of a taxonomy of online L2 collaborative contributions in the group debate forums, and to a threefold classification of the patterns of application of critical thinking skills and collaboration in the blog entries. Although the implications of this study relate to a specific group of students in a particular educational setting, the results suggest that the electronic forum and group blogging can facilitate collaboration and the application of higher order thinking and that the students perceived these Web-based activities as relevant to their L2 learning.

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Chapter 1: Introduction

The widespread use of the Internet is reshaping nearly all spheres of social and private life. In the educational field, the World Wide Web can be used as a medium of communication, as an information delivery system as well as an interactive space to provide novel opportunities for students' engagement in learning tasks. The present study attempts to explore the latter through interpretive, qualitative research. It focuses on finding out whether the use of blogging and online debate forums contributes to the development of collaborative tasks and the application of critical thinking skills in an English Language II class at the Faculty of Languages of the National University of Córdoba (UNC), which offers programmes in EFL Teacher Training, Translation and Research. It also examines *how* collaboration and the application of higher-order thinking are reflected in the students' written exchanges during the online tasks.

The teacher-researcher, two raters, one of whom was also the external observer, and 24 Spanish-speaking undergraduate students participated in this study. The data collection instruments included a pre-study and a post-study questionnaire, the text generated in the online group debate forums and the students' group blogs. The data were analysed following the inductive approach proposed by A. Hatch (2002). The findings led to the development of a taxonomy of online L2 collaborative contributions in the group debate forums, and to a threefold classification of the patterns of application of critical thinking skills and collaboration in the blog entries. Although the implications of this study relate to a specific group of students in a particular educational setting, the results suggest that the electronic forum and group blogging can facilitate collaboration and the application of higher order thinking and that the students perceived these Web-based activities as relevant to their L2 learning. Further research will be necessary to enhance our understanding of the various factors involved in Internet-based L2 learning. This understanding will eventually help teachers and students to make more effective uses of online environments for improved language learning.

1.1. Background and rationale for the study

Information and communication technology (ICT) is developing at an astounding rate. *Informationalism*, a term used by Castells (2004) to refer to the new paradigm of 21st century societies, is based on the human capacity to generate and distribute information and to create networks of communication. This capacity is made possible by the use of networked computers and digital communications. Because information and communication are at the core of all human activity, major transformations in these fileds influence every aspect of human interaction. Despite the ubiquitous presence of the Internet in our globalised world, some people may still question the validity of introducing the use of ICT in language teaching. Nonetheless, as Mark Warschauer (2000a) puts it, "ICT . . . affects the entire context and ecology of language teaching today" (p. 520). In fact, computer-assisted language learning (CALL) or, as currently referred to, Web-based language learning (WBLL) practices are increasing worldwide and there is ample evidence that ICT can powerfully influence language learning and language teaching. Current applications of WBLL indicate that this influence needs to be further investigated in terms of language input and output, the nature of online language tasks, task outcomes, learning environments and materials, the linguistic and cultural aspects of online communications, the role of teachers and students in online settings, and the interactions and complexities of each of these factors and their effects on one another.

Since the 1980s issues related to the use of ICT in the field of second language acquisition (SLA) have moved from the margins to the mainstream, and at present they are a central concern in SLA research, theory and practice (Chappelle, 2005). This is reflected in the multiple and varied body of literature dealing with the potential relationship between ICT and language learning pedagogy. Researchers in educational technology foretell significant changes in the teaching and learning practices beyond the classroom in new forms of student-student interaction in terms of time, medium and space.

Despite its shortcomings in the ever changing world of ICT, the acronym CALL is still widely used in institutions dedicated to language teaching to refer to a wide range of activities related to new technologies and language learning (Chappelle, 2005). A workable definition of CALL which accommodates its wide range of applications and

changing nature is "any process in which a learner uses a computer and, as a result, improves his or her language" (Beatty, 2003, p. 7). In the present study, CALL and WBLL will be both used to refer to Internet-based language learning. However, as Chapelle (2005) rightly says: "more important than the specific acronym used to denote this activity is the need to conceptualise and investigate technology-based pedagogy in a way that it can inform practice" (p. 743). Thus, as Chappelle continues, "the plea of the critical analyst is for educators to move beyond a shallow, technically oriented discussion of technology in education and society to the analysis of the values inherent in the use of technology for communication and education" (p. 744). The focus of much research in the early years of CALL, i.e. whether or not computers should be used for language learning, is no longer pertinent. Computers and the Internet are here to stay. At present, most research concerns in the general field of educational technology as well as in the area of L2[1] learning are related to *how* computers and the Internet should be used**,** and for *what* purposes. Joy Egbert (2005b) refers to a shift in the focus of recent CALL research which can assist us in investigating further the various possibilities of computer and Internet applications in language teaching practices:

> The initial proposition supporting CALL research was that inherent in technology was the ability to change tasks, environments, and outcomes, so CALL needed to be investigated differently. A more recent and more theoretically grounded view is that computer tools, particularly Internet support for computer-mediated communication (CMC), give us different opportunities than afforded by other tools, and we need to approach them as something that we do not currently understand.
>
> . . . Rigorous research assists us in describing more generalizable information about CALL, its benefits and problems, and its contexts and outcomes. (p. 5)

It is increasingly recognised among researchers and practitioners in Applied Linguistics that the changes brought about by the introduction of ICT in traditional, face-to-face classroom practices and distance learning programmes should be accompanied by a systematic revaluation of the conception of learning and teaching processes. These transformations call for a more flexible curriculum and a new understanding of knowledge, as well as an increased focus on autonomous and collaborative learning. Changes need to be made in areas such as curriculum design, communication modes, class management, teachers' and students' roles, and task design (Chappelle, 2005;

[1] Following the tradition in our field, I use L2 in this work to refer to a second or foreign language.

Gitsaki, Ya'akub & Honan, 2010; Salbusky, 2007). An appropriate use of networked computers and the World Wide Web can bring about dramatic changes in pedagogical practices and help to improve the quality of higher education (Bender, 2003; Bruffee, 1999; Fitch 2004). Nonetheless, in spite of the alleged benefits of computer-mediated education and the great variety of studies comparing CALL with traditional, face-to-face classroom learning, there is a need for more in-depth empirical research which focuses on data that indicate the processes of ICT applications for language learning in particular contexts (Beatty, 2003; Chappelle, 2005; Gitsaki et al., 2010). This research should seek to yield insights into how best to use new technologies in different language learning settings in an integral way, which means studying educational environments where the computer and the World Wide Web are used naturally and regularly along with other learning activities.

In the fields of applied linguistics and SLA, the challenge for researchers and educators alike is to apply, analyse and assess WBLL in an integral manner and with a strong theoretical foundation focusing on particular educational settings (Egbert, 2005b). The main issue to be studied is *how* variables such as *context, task, tool, language* and *people* influence learners' achievement in CALL. Egbert (2005b) considers these variables as the key components of the CALL equation in learners' achievement. She also warns against the tendency to evaluate technologies rather than language learning and stresses the importance of examining our research and pedagogical perspectives because the outlook of the researcher will determine the outcome, the implications and the conclusions he or she arrives at. In this respect, Egbert argues that "a strong foundation in SLA research and theory will help us to explain our findings in terms of language gains, even when the measure of such gains is complicated" (p. 7). The need for research studies to adopt a holistic perspective of L2 learning and to be framed along sound theories of SLA and methodological approaches is thus clear. The present study was in part meant to satisfy that need. It is grounded in communicative and constructivist approaches to L2 learning and the focus is on *how* the introduction of Internet-based activities into traditional face-to-face classroom work contributes to collaboration among learners and to the application of higher order thinking skills in the completion of the online language tasks.

As recent publications show, areas such as project-based learning, the negotiation of meaning, the development of higher order thinking, language learning awareness and

the use of multimedia in learning tasks need to be further investigated because of their relevance in training students to face the critical demands of the 21st century, especially in the areas of work and education (e.g. Cummins, 2000, Gitsaki et al., 2010; Johnson & Daugherty, 2008; Thorne & Payne, 2005; Warschauer, 2000a; 2000b). Richards and Rodgers (2001) argue that, "unlike most language teaching proposals, collaborative language learning has been extensively researched and evaluated and research findings are generally supportive although little of this research was conducted in L2 classrooms" (p. 201). Moreover, current research indicates that digital technology can and should be used in L2 teaching to foster language use for real-life communication in ways that promote collaboration, critical thinking and the negotiation of meaning (Levy & Stockwell, 2006). Thus, the challenge remains to investigate *how* and *which* L2 teaching practices in online settings best contribute to the development of these skills.

The application of appropriate research approaches has always been a central concern among scholars in language teaching and learning. Experts argue that even though most research in the area of CALL has followed quantitative methodologies, quantitative and comparative studies often fail to account for the complexities involved in the CALL equation (Egbert, 2005b; Warschauer, 2000b). As Levy and Stockwell (2006) put it, "the nature of language and language learning are complex phenomena, and in many ways we are only just beginning to make headway in understanding them" (p. 164). Therefore, a variety of research approaches, mainly descriptive and exploratory, should be applied to research in Internet-based learning. Above all, as Chappelle (2005) holds, "research intended to offer insights for those who work closely with CALL has to be conducted using appropriate methods for discovering relevant facts about CALL and its use" (p. 752). In this study, a qualitative research methodology was applied in order to produce descriptive classifications which would provide a detailed account of the findings and could eventually be used as working taxonomies in future research.

Last but not least, a key issue that needs to be addressed in TESOL teacher-training programmes is the use of technology as an integral component of professional preparation. In this respect, researcher Kamhi-Stein (2000) points out that "limited data exist concerning the use of CMC in the TESOL teacher education curriculum and the role of technology in the learning experience and, ultimately, the preparation of ESL/EFL teachers" (p. 424). It is clear then, that Internet-based learning activities

should be introduced in a variety of courses in L2 teacher-training programmes so that student teachers experience using ICT in a variety of situations and linguistic contexts. In so doing, opportunities for creative and reflexive uses of the technology should be provided so that students may be better equipped to apply Internet-based language activities in their future professional practices (Chappelle, 2005; Kamhi-Stein, 2000).

In light of the need for more in-depth studies in WBLL, this research project grew out of a personal interest to explore *how* online language learning tasks may contribute to the collaborative construction of knowledge and to the application of critical thinking skills in a group of undergraduate students of an EFL teacher-training programme.

1.2. Delimitation of the problem

Web-based learning is still not a common practice in higher education around the world, and Argentinean universities are no exception (Lion, 2005, 2006; Salbusky, 2007). Given the scarcity of WBLL research and practical applications in EFL teacher-training programmes and the need to find better and more efficient applications of ICT, this research project examines specific ways in which the use of two Web-based tools, namely online forums and blogs, may contribute to the development of two skills of critical importance to L2 undergraduate learners: participation in collaborative language learning and the use of higher order thinking. Collaborative learning contributions and the application of higher order thinking skills were examined in the L2 written output obtained from an English Language II class of EFL undergraduate students who participated in debates through the electronic forum and group blogging as complementary activities to face-to-face lessons.

The design of this study is based on a constructivist and communicative approach to L2 learning and it takes into account the variables included in the CALL equation proposed by Egbert (2005b): *context, task, tool, language* and *people*. Thus, the WBLL *tasks* were integrated in the language activities of a traditional, face-to-face class *context*. These tasks consisted in an online collaborative project carried out with the help of two main online *tools* or communication media: debate forums and blogs. The activities were planned to suit the L2 *language* level of the *students* in the course. The participants' perceptions were also analysed as an important element in the

interpretation of findings. The focus of analysis was the participants' language output and their perceptions of the online task. A qualitative research approach, which allowed for an inductive analysis and a detailed description of the findings, was followed for the analysis of the data.

1.3. Research questions and objectives

This study sought to answer four main questions: (a) Can online group debate forums help to create a collaborative learning environment in an EFL undergraduate class? (b) If so, how do online group debate forums contribute to the development of collaborative learning practices in that class? (c) Can group blogging foster critical thinking and the collaborative construction of knowledge in an EFL undergraduate class? (d) If so, how does group blogging contribute to the application of critical thinking and the collaborative construction of knowledge in that EFL class? In order to explore possible answers to these questions, I set the following main objectives:

- ✓ To explore how the use of ***online group discussion forums*** contributed to collaboration in the completion of the online activities in the English Language II class.
- ✓ To analyse the participants' application of critical thinking skills and collaboration in the construction of knowledge of the target language in the ***group blogs***.
- ✓ To gain insights into participants' attitudes and perceptions regarding the use of online group discussion forums and blogs.

So as to meet these objectives and answer the research questions, I conducted this study on the basis of the theoretical framework presented in the following chapter.

Chapter 2: Literature Review and Theoretical Framework

It is not an easy task to systematise the growing body of literature in the field of Web-based language learning. Some gaps in the research have already been pointed out in the previous chapter. In this chapter, I will present a description of the main features of WBLL and research tendencies in educational technology relevant to this study, followed by an overview of research findings regarding the use of digital technologies in EFL/ESL programmes in higher education. I will also develop the theoretical framework in which this study is grounded.

2.1. Web-based language learning

Not since the invention of the printing press five centuries ago has a human invention brought about such significant changes in the distribution of information and knowledge and in the way people communicate and interact. The Internet is ushering a new stage in human communication and cognition. Researchers Warschauer, Shetzer and Meloni (2000) refer to ICT as a major force in changing the dimension of human communication:

> Language. Writing. Print. These are the three great revolutionary developments in communication and cognition, each other ushering in a new level of human civilization. And now we are in the midst of another revolution in human civilization, based on the development and spread of computers and the Internet (Warschauer et al., 2000, p. 1).

The fourth revolution alluded to above has been taking place in these last three decades or so and has considerably impacted educational practices, which have been challenged by the rapidly expanding influence of ICT in all areas of life. The World Wide Web has produced an economic and socio-cultural revolution not experienced before. This transformation affects most areas of human activity, such as the way people communicate, buy, sell, advertise their products and services, study and work, to name just a few. ICT adds new dimensions to interpersonal communication, facilitates the distribution of information, and enhances the collective development of knowledge. All these changes have had a powerful impact on the educational field (Area Moreira, 2005,

2009; Brown, 2007; Gitsaki, Ya'akub & Honan, 2010; Lion, 2005; Litwin, 2001; Tedesco, 2003; Thorne & Payne, 2005; Warschauer, 2000a).

In the 1970s, computer technology began to be incorporated in the language classroom in an *ad hoc* fashion. It was based on an instructional design of text-based activities and drill-and-practice software for the learning of discrete skills. In the 1980s, these behaviourist applications of CALL moved to a more communicative approach; nonetheless, the computer was still used in an unsystematic fashion. It was not until the 1990s, with the popularization of the Internet, that an integrative approach to ICT and language learning began to be applied. Since then, the use of computers and Web-based learning has expanded by leaps and bounds and it continues to evolve with the advances in technology. In keeping with a constructivist approach and sociocultural theory of language teaching, Internet-based activities offer a wide range of possibilities to support and complement classroom work (Beatty, 2003; Chappelle, 2005; Cummins, 2000; Warschauer et al. 2000). This integral approach to WBLL focuses on the use of multimedia resources and sees the World Wide Web as a medium for social interaction and learning, rather than simply as an instructional resource.

The current interest in pedagogical applications of ICT for language learning is mainly due to an increased awareness of the potential of digital technologies for language learning coupled with the growing number of computers and easier Internet access in many educational contexts worldwide. This is also accompanied by a general increase in computer literacy among teachers and learners. Nonetheless, it is also true that many educational institutions, mainly in developing countries and poor areas, do not have computers in the classrooms and that students and educators in these areas may not be computer literate, which creates a digital divide between the haves and have nots. In the face of these social disparities, L2 language teachers should look for creative pedagogical applications of ICT to reduce technological inequalities (Warschauer, 2000a). Examples abound in the literature of teachers working in diverse cultural and socio-economic contexts who introduce their students to the world of new technologies and guide them in the acquisition of Internet literacy (e.g. Area Moreira 2005; Gitsaki et al., 2010; Thorne & Payne, 2005; Weigel, 2002; Zañartu Correa, 2002). That said, one of the greatest challenges for educators at the turn of this century is to seek to bridge the digital divide (Guttman, 2003).

Furthermore, the untapped potential of Internet applications in the area of language learning and higher education requires that teachers and researchers continue engaging in a thoughtful examination and assessment of ICT applications in particular settings. The following are some salient features of online media which are relevant to WBLL and to the online activities implemented in this study.

Hypertext, hypermedia and multimedia: The special features and resources of the World Wide Web, which are different and even better than traditional learning tools and materials, provide L2 learners with a vast array of possibilities to engage in interaction and develop their language skills in meaningful ways. As Warschauer et al. (2000) explain, "the Internet is more than a communication medium —it is also a worldwide repository of linked multimedia documents, brought together through the World Wide Web" (p. 4). It is based on the principles of hypertext, a non-linear organization of information whereby documents in a database are connected via hyperlinks that take the reader to the referent or connected document elsewhere. For instance, as regards the potential for L2 learning, online texts including hyperlinks allow the reader to click on a word to get its dictionary definition or to obtain additional information about topics, events, people and situations.

The significance of the ***hypertext*** is that "electronic texts are subject to rearrangement and reordering by the user beyond the traditional linear organization of books" (Beatty, 2003, p. 38). This capability of electronic texts can be exploited within a constructivist model of language learning since this model promotes creation and involvement, i.e. creation by doing. As Chun and Plass (2000) put it, "constructivist approaches to learning advocate allowing learners not only to interact directly with information to be learned, but also to add their own information and construct their own relationships" (p.160). For instance, the use of hypertexts involves a greater degree of negotiation and decision-making by allowing learners to engage in activities that require that they structure, sequence and configure their own learning. ***Hypermedia*** is similar to hypertext and it involves linking various media, such as text *plus* sound, text *plus* animation, or sound *plus* images. Hypermedia provides access to current information which students can use in collaborative activities to construct knowledge together through the World Wide Web (Brown, 2007; Warschauer, 1997). As regards ***multimedia,*** it differs from hypermedia in the sense that it tends to feature several types of media —written texts, images, sound, video and/or animation— at the same time

(Beatty, 2003). Hypermedia and multimedia modes of communication play a significant role in the learning process by facilitating both inter-mediation (between peers) and intra-mediation (mediation within the individual) of knowledge. These features of learning are discussed in more detail in sections 2.4.1 and 2.4.2 in relation to constructivist approaches to language learning and task-based language teaching.

***Synchronous and asynchronous computer-mediated communication in language learning*:** Communicational choices through the World Wide Web can be broadly classified into two modes: synchronous and asynchronous communication. Synchronous computer-mediated communication takes place in real time. The most common forms of synchronous online communication are chat rooms, video conferencing and instant messaging. Participants must be sitting at the computer at the same time and messages are sent and received instantly. On the other hand, asynchronous computer-mediated communication takes place via networked computers in a delayed fashion. The most common forms of asynchronous online communication are the electronic mail, bulletin boards and social networks, such as facebook and twitter, where users communicate with each other at different times. Asynchronous online communication is often used in WBLL because it offers a number of benefits; for example, it provides opportunities for purposeful reading and writing and it gives students more time to think before they post a comment or answer.

Research in WBLL has shown that using media such as e-mail, bulletin boards and virtual classrooms can open up extra channels for teacher-student and student-student communication, collaborative learning and students' publishing (Warschauer 2000a, Warschauer et al., 2000). Research reveals some advantages of online written communication for L2 learning:

- It gives learners much more time on task to gain written fluency.
- All students can “speak” at once, giving shy students a greater chance to participate.
- Students can notice, refer to, save, and reuse input, which allows them to assimilate vocabulary, collocations, and grammar.
- Students have greater control over the planning time for their output (Warschauer at al., p. 37, 2000).

As far as ***the electronic mail*** is concerned, some advantages are that shy students can be much more forthright via e-mail, and teacher and students can set up

appointments and carry out informal in-depth consultation. By using e-mail, teachers can also provide more specific and frequent feedback on students' written work, which can be saved for postanalysis. However, Warschauer at al. (2000) also point out that "one disadvantage of teacher-student e-mail exchange is the amount of time it takes the teacher" (p. 35). Therefore, they suggest some alternatives such as creating a website for students, e-mail lists and bulletin boards —the latter also known as electronic or online forums— because these resources allow for broader and simultaneous interaction between the teacher an many students, or among the students themselves.

The electronic forum offers great flexibility for interpersonal communication. It provides opportunities for learning and communication outside the classroom (Area Moreira, 2009; Davies & Thiede, 2000; Kamhi-Stein, 2000). Teachers can design various activities to foster students' written communication and language practice through online forums. They can post questions for whole class debate or ask students to form small groups for discussion on a particular topic or in preparation for a presentation (Warschauer et al., 2000). Godwin-Jones (2003) refers to the potential of online collaboration for language learning and he states that

> many instructors have increasingly turned to discussion forums as the principal tool for written exchanges among class members. . . . [And that] it is the encouragement of peer-to-peer networking and buddy learning, so central to a constructivist learning approach, which has made discussion forums the mainstay of Web courses in most disciplines (p. 12).

By using an online forum in the L2 class, students have the opportunity to practise the target language collaboratively and construct knowledge sharing ideas and resources, and providing feedback on each other's contributions (Bikowski & Kessler, 2002; Kamhi-Stein, 2000; Kol & Schcolnik, 2008). In online forum debates, teachers can give students the possibility to practise the language beyond the time and space constraints of the classroom. Therefore, when students participate in this kind of forum, they can have a greater degree of control over their own learning because they have more freedom and flexibility to plan and arrange their ideas and language than when they take part in face-to-face interactions.

Likewise, ***blogging***, an interactive Web application that can feature a combination of written texts and audiovisual materials, plus links to other websites related to its topic, can be considered a flexible medium of communication and a useful

learning resource. It displays serial entries presented in reverse chronological order and generally includes a comment feature that allows visitors to post responses. Blogs not only provide the opportunity to interact beyond the physical limits of time and space imposed by more instantaneous forms communication, but they also facilitate inexpensive and relatively easy and quick student publishing. Therefore, blogging is considered a powerful tool in education and its use has greatly increased in recent years (Area Moreira, 2009; Godwin-Jones, 2006). The *Encyclopedia of Educational Technology* (1994-2011) presents the following features of blogs as learning tools: "Blog entries can stand alone as written communication but they also allow commentary from readers. Blogs are both monologues and dialogues. Each individual blog entry is a monologue of the author's ideas. When many authors blog together and comment on each other's entries, it becomes a dialogue" (n.p.). Research shows that blogs are increasingly used in L2 classes around the world as resources for language practice, social networking, the articulation of ideas, critical analysis and collaborative learning projects (Godwin-Jones, 2003, 2006; Thorne & Payne, 2005). However, their potential for L2 learning has yet to be fully explored (Bloch, 2007; Soares, 2008; Yang, 2011).

Different kinds of blogs can be used in the L2 class, such as the tutor blog, which is run by the tutor for the learners; the learner blog, run by individual learners themselves or by small collaborative groups of learners; and the class blog, which is the result of the collaborative effort of an entire class (for a full description of these types of weblogs see Campbell, 2003). In this study, the learner blog administered by small collaborative groups was used. The task assigned to the student groups for the development of their blog is described in chapter 3 and the results are analysed in chapter 4.

The use of Web-based learning environments is particularly important in L2 teaching for their potential good effects on class dynamics and learning. ***Virtual classrooms***, for instance, are flexible and interactive learning environments which can be accessed by students and teachers at any time and place where a computer and an Internet connection are available. These online platforms vary from *Moodle*, a free platform widely used nowadays, to some other customised platforms available on the market. Most virtual classrooms feature a variety of tools for interaction in synchronous and asynchronous modes, access to information and practice activities, and storage and retrieval of study materials. Some of the most common resources afforded by most

virtual classrooms are the chat, discussion forums, wikis, files download, assignment submission, grading section, instant messaging, glossaries, online quiz, news and announcements, and calendar of events. They can be used not only as the main support in distance learning programs but also as complementary communication and language practice tools in face-to-face courses. By adding the virtual classroom to students' regular activities, communication and learning can occur beyond the time and physical constraints of the typical classroom. Wesley and Franks (as cited in Beatty, 2003) refer to a virtual classroom as follows:

> [A virtual classroom is] an electronic classroom which can be expandable in time, space and content. Its informational territory can grow indefinitely as new knowledge and resources are acquired and as the capabilities of new members are added. . . . [Moreover, through the use of virtual classrooms] information and problem-solving capabilities can be mutually shared and reinforced through collaborative interconnection (pp. 145–146).

Virtual classrooms can thus become highly interactive learning environments in that they offer rich resources to L2 teachers for the development of a variety of language practice activities.

In sum, the World Wide Web communicational potential allows unprecedented forms of human interaction and access to vast amounts of information by computer users around the globe and facilitates the development of knowledge and inexpensive publishing. These features have significant implications for WBLL and, as research shows, they can powerfully influence pedagogical practices in higher education.

2.2. Research trends in educational technology

Research in educational technology is relatively new and the literature offers a variety of approaches. Area Moreira (2005), a renowned Spanish professor and researcher, refers to four major research trends in this field. The first trend is represented by quantitative studies which describe and measure the use of CMC in school settings. The major limitation of these studies is the lack of information about the pedagogical applications of ICT and their impact on the learning process. The second approach is represented by a whole body of experimental studies which focus on computer effects

on learning. These studies seek to prove hypotheses about the effectiveness of the introduction of ICT in instructional practices through comparison of results between a control group and an experimental group. Despite having the longest tradition, this approach is the least applied at present. A third line of research focuses on teachers' beliefs, assumptions, attitudes and expectations in relation to the use of ICT to improve teaching and learning practices. This research trend has a tradition of more than twenty years in Anglo-American and European countries. The fourth and most recent research trend includes a growing number of studies which aim at analysing and exploring the phenomena that accompany the use of computers in the classroom. The focus of these studies is to identify factors or variables in pedagogically innovative and successful computer-mediated learning experiences in various school and college settings. This last trend is the most relevant at present, and it aims not only to shed light into meaningful applications of ICT in a diversity of contexts, but also to develop more solid theoretical foundations for Web-based pedagogy.

Researchers and practitioners in university education seek to develop theoretical perspectives to examine the role of ICT in higher education from a pedagogical, communicative and technical standpoint. In our country, Litwin (2001) and Lion (2005) have carried out extensive research into the use of ICT in Argentinean higher education contexts. Litwin highlights that ICT represents a potential advantage to education mainly because large volumes of information are readily and rapidly available, and because the World Wide Web provides alternative forms of communication, which may also enhance communicational practices among teachers and students. Lion's (2005) study reveals that since the year 2000 there has been a surge in the use of computers for learning purposes and a genuine interest on the part of teachers and students to introduce the use of ICT to traditional, face-to-face classes. Ricci (2006) has explored the use of on-line platforms and virtual classrooms in many institutions of higher education in the city of Córdoba, Argentina. Her analysis reveals that effective applications of virtual classrooms are still scarce. For instance, her study reports empty sections in most virtual classrooms and scarce use of forums and e-mail for social interaction. In our country, moreover, ICT has been mainly applied in distance learning programmes. Nonetheless, in recent years there has been a growing tendency towards the use of ICT to supplement traditional, face-to-face classroom work. Interestingly, Salbusky (2007), an Argentinean scholar and researcher, points out that even though b-

learning is not still a common classroom practice at the National University of Córdoba, Argentina, many teachers are becoming critical users of online tools in their classes. Teachers' use of new technologies is mostly determined by their training in the use of ICT for teaching purposes, the availability of computers and Internet connection in schools and institutional policies regarding the introduction of ICT in the curricula. Undoubtedly, the serious budget deficit in public education in our country, as in many others, affects the quality of educational processes and prevents full development of projects to introduce ICT in the curricula. There is also a pressing need for increased teachers' computer and Internet literacy as well as research into the meaningful application of online learning activities and projects. One of the greatest challenges of higher education worldwide is to continue to find avenues to successfully implement the use of digital technologies, mainly the Internet, into pedagogical practices with a strong theoretical foundation (Salleh, Jack, Bohari & Jusoff, 2011). Thus, as recommended by researchers in the field of educational technology, Web-based learning should be incorporated on a regular basis to supplement and enhance teachers' and students' work focusing on the collaborative construction of knowledge through a variety of multimedia resources which allow participants to develop their creativity, critical thinking skills and digital literacy (Area Moreira, 2009).

In view of the above discussion, this study analyses how WBLL can be integrated in a university class. The next section presents a review of research in the use of ICT for language learning in a variety of university contexts.

2.3. An overview of ICT in higher education and Web-based language learning

The socio-educational impact of electronic technologies is transforming the way the members of academic communities interact and construct knowledge. This transformation poses significant challenges to university educators, not only in the developed world but also in developing countries, where access to and use of the Internet is growing rapidly. Salbusky (2007) refers to the main characteristics of this impact, which can be summarised as follows:

- Changes in the way knowledge is produced and distributed, which entails new parameters of legitimacy and validity.

- The development of new ways of communication which break up physical barriers and linear time and create networks of collaboration.
- A re-definition of the role of the teacher, which implies that the teacher needs to develop the capacity to face new institutional challenges and to become more specialised.
- A renewed interest in various languages, especially the audiovisual language, and the development of new narratives.
- The need to re-evaluate institutional practices to preserve cultural differences.
- The need for more flexible approaches to online learning which emphasise problem-solving activities that promote lifelong learning.
- The use of multimedia classrooms to improve educational practices.
- The globalisation of education, which helps to reduce the tension between global and local spheres, between the national and the regional.

This characterisation indicates that there are number of features that deserve the attention of both educators and researchers. At present, the research literature focuses mainly on the need to conceptualise virtual environments as true learning sites and to improve the quality of education through computer-mediated communication that supports collaborative learning practices (Roldán, 2007). Of particular interest to this study is the work of researchers Kirschner, Strijbos, Kreijn and Beers (2004). Their research has produced an interaction design for developing and implementing learning tasks in electronic collaborative environments. This is a learner-centred model that provides an affordance framework for those collaborative environments. Kirschner et al. suggest that the way in which technologies are used should contribute to collaborative group work. They argue that collaborative learning environments are neither adequately designed nor appropriately implemented in today's classrooms because current research and teaching practices tend to focus on surface-level features and educators usually apply traditional pedagogy to non-contiguous collaborative environments. In light of this situation, Kirschner et al. conducted three studies at the Open University of the Netherlands, which focused on specific issues related to electronic collaborative learning. The first study, which explored the effects of functional roles in collaborative groups of a task-focused distance learning project using e-mail communication, revealed that the assignment of functional roles increased coordinative and content-focused statements in e-mail exchanges, two essential pre-requisites in collaborative

learning. The second study reported by the authors sought to investigate appropriate methods to meet the social needs of the online learners. The aim was to create sociable environments and explore suitable strategies for increased sociability in online collaborative learning environments. Finally, the third study explored a set of social-technological affordance devices (i.e. formalisms) for the negotiation of meaning to establish common ground in solving complex issues. The tentative results reported by the authors reveal that formalisms helped to make collaborative contributions more explicit, but it is not yet certain whether these formalisms contributed to the negotiation of common ground. Kirschner et al. conclude by suggesting that there are no pre-established rules to designing online collaborative learning environments and recommend the application of an interaction design model to encourage educators, researchers and educational designers to reflect on their pedagogical decisions instead of simply following traditional practices.

Recent research interests in online L2 learning are based on the principles of communicative and constructivist approaches to language teaching. As mentioned in the previous chapter, these interests derive from the need to find out *how* to integrate the Internet and L2 learning in relevant ways. Beatty (2003) puts it clearly, "a general area of study is the advantages and disadvantages of computers in providing communicative tasks which foster language learning" (p.15). Studies in WBLL (e.g. Abrams, 2003; Gitsaki et al., 2010; Kirschner et al., 2004; Lee, 2004; Liu, Moree, Graham & Lee, 2003; Lord & Lomicka, 2004, Thorne & Payne, 2005; Warschauer, 1997; Warschauer & Kern, 2000) reveal that the potential of Internet-based language learning and teaching has not yet been matched by research. The main areas of current research interest are the use of computer networks, the application of Web resources and tools to design collaborative learning projects, the role of technology in pedagogical practices, the use of the Internet to develop learners' higher order thinking skills, the development of learners' socio-cultural awareness and communicative competence, and the need for systematic educational reform. Nonetheless, studies focusing on ICT and L2 teaching and learning are still scarce.

Despite the limited number of studies examining the integration of ICT and L2 learning, some examples of research dealing with Web-based environments in L2 university courses can be mentioned.

Research into ICT applications in TESOL programs provides insights into the pressing need to introduce new electronic technologies in a variety of courses and learning situations and to investigate Internet-based language learning from a holistic perspective. According to Warschauer (2000b), the generalised piecemeal approach in the research literature about online learning in L2 classrooms fails to account for the complexities of social, cultural, linguistic and technological phenomena of virtual learning environments. Warschauer advocates the application of interpretative and qualitative approaches, which could yield rich results about the learning processes and the attitudes of participants in online learning environments. Through a 2-year ethnographic study of Web-based learning in four undergraduate ESL classes at the University of Hawaii, Warschauer (2000b) sought to achieve a comprehensive understanding of the implementation of online learning by exploring students' and teachers' beliefs and perceptions of the experience. The study has significant pedagogical implications. First, it shows the power of teachers' beliefs in the design of Web-based activities. Warschauer notes that "a teacher who favors structuralism will use technology in a structural way. Teachers who favour constructivism or critical approaches will similarly find ways to use technology to further their ends" (p. 45). Second, as regards students' attitudes and performance in online language tasks, this study reveals that students who participated in online language activities relevant to their language needs and learning goals were highly motivated and learned to communicate more effectively through the Web. These students perceived the technology as an integral component of the language learning experience, "as an important medium of literacy in its own right" (Warschauer, 2000b, p. 51). They recognised the rhetorical appropriateness of the Web medium and valued incorporating texts and graphics in the task of writing for the Web. In contrast, those students who could not integrate online language work with other activities in the traditional classroom did not perceive Web-based tasks as relevant to the development of their language skills and therefore resented working with computers. Although these results may not be applicable to the larger context of EFL/ESL college classes worldwide, they certainly shed light into many of the variables at play in WBLL environments and provide guidelines for researchers and practitioners who seek to implement and explore purposeful Web-based L2 learning in university education.

The study reported by Meskill and Ranglova (2000) focused on the use of technologies as an integral component of the redesign of the EFL curriculum at the University of Sofia, Bulgaria. It was a longitudinal, mixed-methods study based on current sociocognitive theory and practice. The foundational content of the revised curriculum was the short story and the technologies used were the audiotape, the word processor, concordancing, style checking and e-mail in a variety of activities such as problem solving, process writing, peer correspondence, interaction through class discussions and collaboration, and communication with e-mail partners from the United States. Ultimately, this multidimensional project revealed that new technologies can be used as "tools to support language learning goals and the socio-collaborative processes that promote them . . . [and that] the technologies utilized played a key role in bringing about new ways of using and thinking about language, especially in terms of student autonomy, student-student collaboration, and teacher participation" (Meskill & Ranglova, 2000, p.35). This study is a significant contribution to the understanding of how new technologies can be used as tools for students' construction of knowledge and how Web-based collaborative projects can be implemented.

Another work relevant to this study is the descriptive research reported by Pellettieri (2000). The purpose of Pellettieri's study was to explore the potential of chat mediated discourse for the development of grammatical competence in a group of undergraduate students of Spanish as a foreign language at the University of California. The findings reveal that task-based synchronous chatting fostered the negotiation of meaning and played a key role in the development of students' L2 grammatical competence. Although the descriptive nature of the study does not allow for the generalisation of results, the study shows the importance of well-structured online language tasks in students' negotiation of meaning and L2 acquisition, and the need to further investigate the effects of online tasks in language learning and collaboration.

Researchers Davies and Thiede (2000) conducted an exploratory study that sheds light into the benefits of collaborative learning. These authors explored style shifting through asynchronous writing conferences in a group of EFL university students from various ethnic backgrounds at the University of North Carolina-Charlotte, in the USA. Online forum conferences for discovery-based, collaborative learning tasks were implemented. The study focused on indicators of increased awareness of discourse conventions in the target language, as identified in the participants' writing. The data

revealed sociostylistic and lexicosyntactic patterns of adjustments in the EFL students' discourse. Moreover, the design of the study suggests that a corpus of electronic discourse offers valuable opportunities for researchers to store the exchange dynamics and the mechanisms through which knowledge is collaboratively developed in learning communities and subgroups within a community. This crucial aspect was taken into account in the design of the present study, which has used an electronic corpus of written discourse as the main source of data.

Another study that served as a model for the present work is Chun and Plass's (2000) investigation. Chun and Plass's research project, designed from a constructivist, sociocultural approach to SLA, featured a wider diversity of ICT applications and language tasks for the development of listening, speaking, reading and writing skills through communication and negotiation of meaning. A networked multimedia project was implemented at the University of California, Santa Barbara, for second-year students of German as a foreign language. The aim was to analyse the four features of hypermedia environments (access to authentic materials, communication through networking, multimedia capabilities and the nonlinear structure of information) and to integrate them to support "cognitive processes in learning in a constructivist learning environment" (p. 164). The study reveals the benefits of a constructivist approach to task-based, goal-oriented multimodal communication in L2 learning. The authors reflect on the need to design Web-based L2 learning environments from a critical perspective, which means looking at the various features of networked multimedia as well as researching issues pertaining to learners' cognitive processing before assuming that ICT applications can be beneficial to language learners.

As regards online programmes for EFL/ESL teachers, Kamhi-Stein (2000) reports on a comparative study of Web-based bulletin board discussions and whole class, face-to-face discussions in a Methods course of a TESOL MA at an urban university in southern California. The patterns of interactions and participants' attitudes were analysed quantitatively and qualitatively. The findings showed that post-graduate TESOL students may benefit from the use of innovative Web-based technology because they can develop knowledge through collaboration while gaining experience in learning through technology. Online forum discussions showed a high degree of peer support and collaboration and students valued these debates as a medium of learning about their peers' views. Thus, the introduction of WBLL to this class allowed future teachers to

gain first-hand experience in using digital technologies for learning purposes. “At the same time”, Kamhi-Stein concludes, “the limited data considered in this study suggest the need for future research focusing on other issues related to the use of Web-based bulletin board systems in TESOL teacher preparation” (p. 449). Therefore, more studies about electronic discussions will probably contribute to building a more solid framework for the effective implementation of the online forum in L2 learning.

In another relevant and more recent study, senior lecturer in TESOL at the University of Manchester, Julian Edge (2006), explored cooperative development through non-judgmental discourse among TESOL professionals using e-mail and chat communication. His study reveals that computer-mediated communication brings its own advantages. For instance, the most salient feature of using e-mail for peer exchanges is that it allows time for thinking and doing further reading before responding. As regards synchronous communication, the study shows that the chat creates a kind of social presence that is beneficial in that it contributes to the developmental process. Moreover, unlike face-to-face interactions, participants in chat and e-mail communication can review early statements while waiting for their peer's response, which may also contribute to learning because it allows for more time for the processing of information. Finally, computer-mediated communication makes it possible to record data while it is being produced. This feature facilitates subsequent reading and reflection and verbatim quotation when it is appropriate. All in all, this study presents an analysis of online tools, e-mail and chat in this case, that can be used to promote collaborative learning for the professional development of EFL/ESL teachers.

As regards project-based learning, Fang and Warschauer's (2004) case study examined two project-based EFL courses which were part of a technology-enhanced educational reform initiative for English majors in a School of Foreign Languages at a university in eastern China. The results of the study revealed that project-based language activities introducing the use of ICT promoted authentic online interaction among learners, fostered greater autonomy and provided content relevant to the students' lives and careers. The authors conclude that “while educational transformation may not be on the agenda today, well-defined pilot programs and research studies on new approaches are nevertheless needed . . . to accumulate lessons and knowledge for the future” (p. 318). In fact, this study showed that although language instructors in

more traditional and teacher-centred educational systems may find it difficult to use ICT in a transformative way, digital technologies can be incorporated gradually and systematically in L2 courses. It also showed that students in such contexts value the forms of collective learning and authentic interaction afforded by online environments.

The abovementioned studies, and surely many others which are not included here, provide a foundation for the study of language learning and the use of digital technologies in higher education. These investigations show that the World Wide Web can be used to support a variety of learning goals and that online tools can be applied to enhance L2 learners' linguistic skills and socio-cultural knowledge of the target language. The findings of these research works also suggest the relevance of exploratory and interpretative studies and the need for further analysis of the many factors involved in WBLL, such as task design, online interaction and L2 learning, the role of the teacher and students in online settings, collaborative learning and students' constructed knowledge, and the relevance of students' perceptions of online tasks. Above all, research should continue to be carried out from a critical and holistic perspective and it should be based on sound theories of language learning. In light of these research concerns, this study intends to contribute to the analysis of specific factors of WBLL, namely collaborative learning activities and the application of higher order thinking skills through online written interactions, in the context of an English Language class in an EFL teacher-training programme. Taking heed of the need to base our research on solid theories of L2 learning, I based the design of the study as well as the analysis and interpretation of data on the theoretical considerations presented below.

2.4. Theoretical framework

Theories of L2 learning and teaching practices have a long tradition and the 20th century experienced a surge of instructional methods and approaches which have shaped pedagogical practices worldwide. Now, at the turn of the 21st century, it seems to be commonly agreed that there is not “one best method” to teaching a foreign language and that teachers' approaches and methods can best be furnished by the myriad of pedagogical options available to them. This study is based on the belief that learners learn best when engaged in social interaction with their peers, the teacher and their

communities. It is, therefore, framed on the principles and practices derived from constructivist theories and approaches to SLA such as the sociocultural theory, communicative language teaching (CLT), collaborative language learning, and task-based language teaching (TBLT). These approaches to L2 teaching are discussed below, and reference is also made to the role of collaboration and the application of critical thinking skills in Web-based language learning environments, which are the main focus of this study.

2.4.1. Constructivist approaches to language teaching and learning

Theories and empirical studies focusing on the role of input, interaction and output in SLA have demonstrated that meaning negotiation in conversation results in successful learning (Mitchell & Myles, 1998). Approaches to L2 teaching derived from these theories and studies encourage the implementation of tasks which promote collaborative efforts between speakers and extensive negotiation of meaning to achieve understanding. However, theorists and researchers who view language learning in essentially social terms have moved a step forward and conducted studies which reveal that "interaction itself constitutes learning, which is quintessentially social rather than individual in nature" (Mitchell & Myles, 1998, p.144). This movement is known as *constructivism*. Whereas educators who adhere to a behaviourist approach to learning emphasise students' acquisition of information and rules, constructivists believe that the learning process "always starts with a case, problem, ill-defined question, or project, with [the educator's] expectation that students will learn facts and information *while* they work on the issue or assignment" (Duffield & Grabinger as cited in Oliver, 2000, p. 5). Thus, in constructivist learning environments learners interact in meaningful communication and collaborate in the construction of knowledge.

Constructivism gained momentum in the domain of L2 teaching in the 1990s due the introduction of Vygotsky's (1978) views, which stress the importance of interaction in developing children's cognition. Mitchell and Myles (1998) state that, from a Vygotskian perspective, "the child or the learner is inducted into a shared consciousness through collaborative talk, until eventually they take over (or *appropriate*) new knowledge or skills into their own individual consciousness; successful learning involves a shift form inter-mental activity to intra-mental activity"

(p. 145). Learning is first seen as a social process (inter-mental) and then individual (intra-mental), and learners are the active constructors of their own learning environment. The social conception of learning development can be considered one of Vygotsky's main contributions to constructivist theories of learning. This conception continues to be highly influential, especially in the design and implementation of WBLL environments (Levy & Stockwell, 2006). In this view, the skills and knowledge that can be developed with teacher guidance and peer collaboration can exceed those acquired by the learner alone. Unlike more traditional approaches that view the teaching-learning process mainly as information transfer from the expert to the novice and promote teacher-led activities, constructivism fosters the construction of knowledge through students' creative and dynamic involvement in discovery learning. According to the Vygotskian model of learning, "all the higher functions originate as actual relationships between individuals" (Vygotsky, 1978, p. 95). Central to this view is the idea that learning is maximised by the active participation of the novice and the expert in the learning act.

Sociocultural theory is rooted in the view of learning heralded by Vygotsky and his followers, which is based on the assumption that "human mental functioning is fundamentally a *mediated* process that is organised by cultural artifacts, activities, and concepts" (Lantolf & Thorne, 2007). It views language as a "tool for thought" and dialogic communication as central to the joint construction of knowledge. This approach also places learner-centred environments and language tasks that resemble real-world activities as central to SLA and provides a solid foundation for communicative and collaborative approaches to L2 teaching.

The communicative language teaching approach emphasises the social dimension of learning and meaning-making through interaction in real-life situations. It emerged from a theory of language as communication (Widdowson, 1978). From this perspective, the goal of language teaching is to develop what Dell Hymes (in Llobera et al. 1995), one of the first sociolinguists, referred to as *communicative competence*. Hymes's views have permeated language teaching theory and practice over the last decades and have also been complemented by the work of major linguists in the field. For example, Canale and Swain have produced a pedagogically influential analysis of communicative competence by extending the Hymesian model and identifying four dimensions of communicative competence: grammatical, sociolinguistic, discourse and

strategic competence. The social context in which communication takes place is central to CLT. This social context includes role relationships, participants' shared information and the communicative purpose of the interaction (Brown, 2007; Richards & Rodgers, 2001; Van Den Branden, 2010). CLT constitutes the foundation for the implementation of collaborative learning approaches, which are characterized by the creation of shared understandings through learners' interaction and the use of language for meaningful communication.

The current literature on pedagogy defines collaboration in many ways. Most definitions of collaborative learning share some basic elements such as group work and group interdependence, responsibility and leadership, shared learning, interactive processes, common goals, shared willingness to listen to others' ideas and suggestions, participatory decision-making, critical thinking, and the negotiation of meaning (Beatty, 2003; Bruffee, 1999; Egbert, 2005a; Gokhale, 1995; Pallof & Pratt, 2005; Richards & Rodgers, 2001; Salmons, 2008). In this study, the term *collaborative learning* is used to refer to the joint efforts on the part of the participants in an L2 learning task to achieve common goals by constructing knowledge together through the negotiation of meaning.

Collaborative objectives can be defined in contrast to two other types of goals found in group learning: individualistic, where a learner believes that he or she can accomplish the goal independently of others, and competitive, where a learner believes that he or she can reach the goal only if others fail to do so (Beatty, 2003; Pallof & Pratt, 2005). In collaborative learning environments, learners pursue common goals and believe they cannot succeed unless the other group members succeed too; group members "sink or swim together".

Despite its long tradition in the education literature, it is only recently that collaborative learning began to be regarded as the most appropriate approach to prepare learners, especially university students, for the demands of academia and the world of work (Weigel, 2002). As Bruffee (1999) puts it:

> Collaborative learning teaches students to work together effectively when the stakes are relatively low, so that they can work together effectively later on when the stakes are high. With collaborative learning, they learn to construct knowledge as it is constructed in the knowledge communities they hope to join after attending colleges and universities: the knowledge communities of industry, business,

> finance, government, academic disciplines, and public professions such as medicine, accounting and law (p. xiii).

Thus, collaborative learning contexts seem to be suitable for university students who will face an increasingly competitive job market, in which interpersonal and teamwork skills are becoming essential requirements.

Furthermore, collaborative learning methods rely on students' ability to organise and manage activities themselves in a context of substantive engagement and negotiation. When referring to collaboration in higher education, Bruffee (1999) explains the following:

> By cultivating students' interdependence, this alternative classroom social structure helps students become autonomous, articulate, and more socially and intellectually mature. It helps them learn the substance at issue not as a set of conclusive facts but as the constructed result of a disciplined social process of conversation, inquiry, and negotiation (pp. 89–90).

The intellectual development that this approach promotes as well as its communicative and social components make it a suitable choice for the development of sound pedagogies in the information society and the emerging knowledge society (Guttman, 2003). In the field of L2 teaching, collaborative learning practices began to be embraced as a result of the introduction of learner-centred approaches and the CLT approach, which promote meaningful communication in the classroom (Brown, 2007; Nunan, 1996; Richards & Rodgers, 2001). The collaborative approach to L2 learning stresses the use of activities which foster the development of learners' critical thinking skills and interaction to create shared understandings (Egbert, 2005a; Freeman, 1992; Kol, 2008; Richards & Rodgers, 2001; Shrum & Glisan, 1994, 2005). The assumption underlying this approach is that students can benefit more from learning tasks that entail collaborative rather than individual work.

As regards the role of learners, collaborative language learning promotes students' autonomy and collaboration with their peers (Brown, 2007; Gitsaki, 2010). Students should become active participants in group activities, which implies that they need to develop appropriate teamwork skills. Students should also be effective directors of their own learning so as to plan, monitor and evaluate their contributions to the group task. As regards teachers, their main role in collaborative learning environments is that of *facilitators* of learning. In other words, they are supposed to design appropriate

activities, guide the students' learning processes, negotiate classroom dynamics with learners, and provide help and resources as needs arise. The teacher-facilitator designs a well-organised classroom environment, sets goals, selects the materials, plans and structures tasks, assigns students to groups and roles, scaffolds the learning process and encourages participation by posing questions to challenge critical thinking.

As regards instructional materials and activities, appropriately selected and well-designed tasks play an important part in creating opportunities for meaningful collaborative learning. Tasks should be flexible and allow for multiple perspectives to be negotiated. They should be suitable for discovery learning (Brown, 2007; Richards & Rodgers, 2001) and reflect a view of knowledge as a social construct —which Bruffee (1999) calls a non-foundational understanding of knowledge. Therefore, collaborative activities should be appropriately planned to create the right conditions for learners' meaningful interaction, in other words, to foster group dynamics that will contribute to learning. The main goal should be to facilitate learning as a jointly constructed process.

Coelho (in Richards & Rodgers, 2001, p. 197) suggests three major kinds of collaborative tasks with their learning focus, namely *team practice from common input, jigsaw activities* and *cooperative projects*. Although these three types are by no means exhaustive, they are representative of the main types of collaborative tasks generally applied in classroom settings. Each of these tasks has many variations. For the purpose of this study, I will briefly outline the three task types. In ***team practice from common input*** all students work on the same material so as to ensure that all group members know the material and that anyone can answer for the group. In ***jigsaw activities*** each group member receives a different piece of information and all members regroup in topic groups (expert groups) to work with other students with the same piece of information. Then, they return to their home group (jigsaw group) to share their information and each group synthesizes the information and presents their work to the class or takes a test to demonstrate synthesis of all the information. This task requires long-term group involvement. ***Cooperative projects*** allow for discovery learning. In cooperative projects, topics may be different for each group. Each group member works on a subtopic by researching the information using a variety of resources, such as libraries, interviews, or visual media. Students then synthesize the information for a group presentation to the whole class (Richards & Rodgers, 2001). In this research study, a combination of “team practice from common input” and “cooperative projects”

was used in the design of the Web-based activities. Some modifications were introduced to suit the structure and objectives of the study. A full description and analysis of the online activities is presented in chapters 3 and 4.

2.4.2. Task-based language teaching (TBLT)

The concept of task is central in communicative and collaborative learning approaches. As mentioned before, these approaches are based on the premise that learners learn best by being involved in social interaction through learning activities which resemble real-world tasks. The task-based language teaching approach draws on several principles of CLT, some of which are the following:

- Activities that involve real communication are essential for language learning,
- Activities in which language is used for carrying out meaningful tasks promote learning.
- Language that is meaningful to the learner supports the learning process

(Richards & Rodgers, 2001, p. 223).

As these principles show, tasks are the key component of CLT and TBLT and they hold a central place in current SLA pedagogy and research (Ellis, 2003). To provide a framework for this study, I will now refer to the notion of *task* in L2 teaching and to some principles underlying TBLT.

The task-based language teaching approach is based on the use of tasks as the core units of planning and instruction. There are several definitions of a "learning task" and there is not complete agreement as to what constitutes a task. However, the following characteristics may serve to clarify the key components of TBLT. According to Nunan (1996), language teachers should look at tasks in terms of goals (aims pursued in the course), input data (linguistic and non-linguistic), activities (what the learners are to do in relation to the input) and the roles of teachers and students. This author also highlights the importance of sequencing and integrating tasks. In more specific terms, Skehan (1998) defines "task" as "an activity in which meaning is primary; there is some communication problem to solve [and] some sort of relationship comparable to real-world activities; task completion has some priority; [and] the assessment of the task is in terms of outcome" (p. 95). Finally, in Ellis' (2003) view, "a 'task' differs from other devices used to elicit learner language, for example, an 'activity', or an 'exercise', or

‘drill’” (p. 2). This author identifies criterial features of a task by stating that a task is a workplan which involves a primary focus on meaning, real-world processes of language use, and practice in any of the four skills (reading, writing, speaking and listening); it also engages cognitive processes and has a clearly defined communicative outcome. As this characterisation shows, the main components of a language learning task are the aim and meaningfulness of the task, its resemblance to real-world language use, the input data, the specific activities implied in the task, the teacher's and students' roles, and the students' production.

Task-based language teaching is learner-centred; in other words, students should assume an active role through participation in diverse language learning activities designed by the instructor. Students need to become participants in pairs or small groups, and monitors, since they have to focus not only on the message of the tasks but also on the form in which these messages are conveyed. Learners should also be encouraged to become risk takers and innovators who resort to various strategies in creating and interpreting messages (Richards & Rodgers, 2001). In these contexts, the teacher's role should be to provide clear task instructions and to guide students through the task process by facilitating the construction of knowledge. Moreover, teachers need to look at tasks in terms of integrated, meaningful input to engage students in communicative use of the language. The nature of activities in the L2 class can have a marked effect on what is learned; therefore, problem-solving activities and tasks that involve the negotiation of meaning for a common output create conditions conducive to learning (Ellis, 2003).

The interactional nature of TBLT feeds on sociocultural theory. Some concepts of sociocultural theory which underlie TBLT are those of *mediation, the zone of proximal development (ZPD) and scaffolding*. *Mediation* in L2 learning can be mediation by others in social interaction, individual mediation through private speech, and mediation by artefacts, for example tasks and technology. Cognitive development occurs when individuals appropriate the mediational means made available by others to gain control over their own mental activity (Lantolf & Thorne, 2007).

In L2 learning, interactive tasks can be considered as the most appropriate means to promote language learning and development. Interactive dialogue is best explained by the Vygotskian concept of the zone of proximal development, a key construct in sociocultural theory, which means that cognitive development results from interaction

with more capable peers. The ZPD is currently conceptualized as "task-specific, reciprocal, and open-ended and therefore emergent" (Ellis, 2003, p. 180). The implications of task-specific and emergent ZPDs are that the tasks create the context for learning and that the way participants go about the learning tasks influences learning. Thus, the task is a tool that learners can use to identify where assistance needs to be provided for the ZPDs to be created. As regards the notion of *scaffolding* and its implications for TBLT, this concept is understood as the interactional support by which teachers assist the learners to perform an activity they cannot perform alone. Interestingly, Ellis comments that in recent literature the term *scaffolding* is falling out of favour, and that the terms *collaborative dialogue* or *instructional conversation* are more frequently used. The term collaborative dialogue suggests the idea of an activity that is jointly constructed by participants —who can be groups of learners or learners and the teacher— who engage in problem-solving and knowledge building. Instructional conversation implies goal-oriented pedagogical interaction that allows learners to participate in dialogic activities. To put it in Ellis' words:

> Where tasks result in scaffolding, collaborative dialogue, and instructional conversations, opportunities for learners to extend their knowledge of the L2 can be expected to arise. . . . These opportunities are not created by the tasks themselves but rather by the way in which the tasks are performed by the participants (Ellis, 2003, p. 183).

In other words, the features of TBLT such as the participatory role of the learners, the importance of clearly structured tasks and the interactional nature of the activities constitute key elements in L2 learning. To conclude, constructivist approaches such as collaborative language learning, CLT and TBLT emphasise students' engagement in discovery learning through the discussion and exchange of ideas between peers and experts, as well as between peers.

I will now refer to current approaches to the construction of knowledge in on-line learning environments which provide a frame of reference for the classification of students' collaborative contributions and their application of critical thinking as found in the data.

2.4.3. Knowledge as a social construct and WBLL

Dissatisfaction with foundational teaching —an approach that assumes that knowledge is built on previously established ground, ideas or theories— grew throughout the 20th century, and philosophers and educators began to look at more interactive and innovative ways of teaching that would make learning relevant to students' lives. One of the precursors of this renewed interest in teaching and learning through experience and social interaction was John Dewey (1938), who promoted the idea of building cooperation through classroom activities on a systematic basis. This movement gained momentum in the US in the 1960s and 1970s; however, many attempts to change college and university education courted failure mainly because the authority and sources of knowledge remained largely unquestioned, i.e. knowledge was still regarded as universal and absolute. Failure to successfully move away from traditional teacher-centred instruction was also due to the lack of appropriate classroom dynamics and teachers' guidance so that the students, in productive relationships with one another, would construct knowledge assuming responsibility for their own learning and the learning of others (Bruffee, 1999).

Since the 70s, many transformations have been taking place worldwide to bridge the gap between education and the needs of the communities it is supposed to serve. Now, at the beginning of a new century, we experience a communicational revolution which has created a new role for knowledge in society and, more specifically, in educational institutions. This new role is based on the conception of knowledge as socially constructed and constantly evolving. In the era of informationalism and globalisation, knowledge is constructed in and through the Web. This new scenario has strong implications for the teaching and learning of English, the dominant language of international communications and the Internet. New approaches to the construction of knowledge can bring about a clearer understanding of how foreign languages can be learnt in the highly interactional contexts provided by the World Wide Web. Bruffee's (1999) distinction between the two main conceptions of knowledge —i.e. the foundational and non-foundational approaches— provides a basis for the design of language learning tasks in Web-based environments and for the role of teachers and learners.

On the one hand, Bruffee (1999) explains that a foundational approach to knowledge sees knowledge as cognition. This view is based on the assumption that there is a ground, an idea, a theory, a framework on which knowledge is built. On the other hand, a nonfoundational understanding of knowledge constitutes "an alternative to this traditional, cognitive, foundational idea. It assumes that knowledge has no foundation, internal or external. . . . We construct and reconstruct it. . . . People construct knowledge working together in groups, interdependently" (Bruffee, 1999, p. 294). In this view, knowledge is seen as a social construct.

Among the many educators who adhere to a nonfoundational and constructivist understanding of the nature of knowledge, there are two worth mentioning, Tisha Bender and Carina Lion. On the one hand, Bender's (2003) comprehensive work about collaboration in online learning environments is a significant contribution to online pedagogy. This author draws on her extensive research experience to provide valuable insights into the human component of online classes that involve reflective thinking and collaborative learning, both of which lead to socially constructed meaning. Her insights into the development of higher order thinking and Web-based learning will be discussed in the following section. On the other hand, Lion (2005, 2006), an Argentinean scholar who specializes in educational technology, proposes three approaches to describe the potential relationship between knowledge development and the use of new technologies. This relationship generates three types of knowledge: *info-knowledge, techno-knowledge* and *collaborative knowledge*[2]. They are based on the interplay between different beliefs about the nature of knowledge, students' learning processes, teachers' strategies in the applications of ICT, the ways of relating to these technologies and the use of communicative networking in various environments (Lion, 2005, 2006). In Lion's view, *info-knowledge* results from students' limited use of Internet resources, which leads to a mere reproduction of information. She calls this approach "cognitive shipwreck" (Lion, 2006, p. 77). *Techno-knowledge*, on the other hand, derives from the interaction of technologies, teaching methodologies and contents. This integration, according to Lion, fosters critical and creative thinking. Finally, *collaborative knowledge* entails shared thinking, which can be achieved by interacting and collaborating through the use of new technologies into educational practices. The approaches proposed by Bruffee (1999), Bender (2003) and Lion (2005, 2006) seem to

[2] Author's translation.

suit WBLL because online environments naturally allow for interaction, negotiation, discovery learning and language use in real-life situations.

Different online communicational modes —e.g. e-mail communication, chat rooms, bulletin boards, wikis, social networks, face-to-face conversations through videoconferencing, among many others— offer the possibility of various forms and degrees of collaboration between participants in the learning act. Focusing on foreign language learning, Warschauer et al. (2000) present five main reasons why the Internet should be used for EFL teaching. The first reason is *authenticity*. As mentioned earlier, sociocultural theory and task-based language teaching suggest that learners learn best when engaged in real-world tasks, i.e. when learning activities take place in meaningful contexts. The Internet can make learning meaningful because it provides opportunities for authentic communication and publishing and it allows access to vast amounts of authentic materials. Students can, therefore, find that using the Internet is relevant to their needs and interests and those of others. The second reason to use the Internet as a medium for EFL teaching is related to the issue of *literacy*. In keeping with the principles of communicative and collaborative language learning, by introducing ICT in English lessons teachers can help students to master the communicational and interactional skills needed for academic and occupational success in the 21st century. The third reason is *interaction.* According to constructivists and sociocultural theorists, interaction constitutes learning. Interaction and communication are the cornerstone of current L2 pedagogy and as Warschauer et al. (2000) put it, "all effective English teaching incorporates some kind of interactive communication in the curriculum" (p. 7). In this respect, the Internet provides students with opportunities for flexible and constant communication with native and non-native speakers worldwide twenty four hours a day, thus the opportunities for language learning through interaction are maximized in online environments.

The fourth reason to use the Internet for EFL/ESL teaching is *vitality.* Successful learning is learning with a purpose; it is learning that students perceive as relevant to the development of their linguistic skills and to their everyday lives. Through the Internet, students can interact in a medium that is flexible, multimodal, constantly evolving and connected to real needs. This kind of interaction can be highly motivating for students. The fifth and final reason proposed by Warschauer et al. (2000) is *empowerment*. The World Wide Web provides tools and resources to increase teachers' and learners'

personal power in the acquisition of knowledge. If students learn to use the Internet in meaningful ways, they can become "autonomous lifelong learners who can find what they need when they need it and collaborate with others to help construct new knowledge. By mastering the Internet, teachers and students can become shapers of the multimedia future" (Warschauer et al., 2000, p. 8).

Finally, it is worth noting that despite the many advantages of using Web-based learning environments, this alone cannot do the job of a good and well-prepared teacher. To a large extent, successful learning depends on *how* online environments are used for purposeful communication. The role of the teacher-facilitator is paramount because helping students to use the Internet for language learning requires careful preparation of efficiently designed communicative environments for online interaction in the target language (Dooley, 2011; Levy & Stockwell, 2006; Warschauer at al., 2000).

Having discussed the approaches to the construction of knowledge in the educational scenario of the 21st century and the role of ICT in EFL/ESL teaching, I will close this chapter by looking at how the development of cognitive skills can be fostered through collaborative online learning tasks.

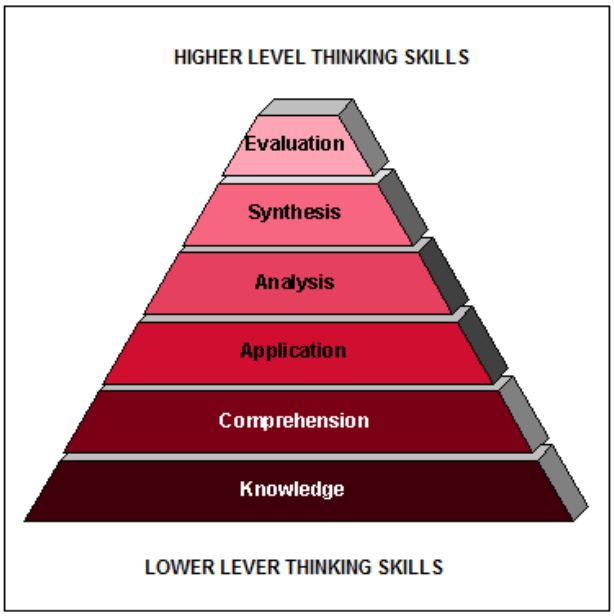
2.4.4. Critical thinking skills in WBLL settings

As the discussion in this chapter shows, it is widely agreed among educational researchers and practitioners that collaborative learning tasks promote the joint construction of knowledge. Experts also argue that new information and communication technologies, especially the World Wide Web, constitute a powerful medium to create communities of learning and to promote learners' autonomy, dialogue in education and the development of higher order thinking skills.

Critical and reflective thinking means much more than learning about facts. To avoid a shallow approach to Web-based learning tasks, students need to be empowered to use multimedia resources and online environments critically and creatively. As Bender (2003) explains, "there is a definite need to enhance reflective thinking well beyond the simple acquisition of facts to be memorized, and to delegate more responsibility to students for their own learning" (p. 17). To meet this need, Bender recommends that the teachers who use online environments should seek to guide their students in the development of critical thinking and distributive thinking. This author

indicates that the classification of developmental levels of knowledge acquisition and intellectual skills proposed by Benjamin Bloom (1956/1971) can provide the foundations for the design and implementation of online learning tasks[3]. Bloom's classification is presented as a taxonomy of three overlapping domains relevant to learning: the cognitive, psychomotor and affective levels. The cognitive domain underlies common practices in the general educational field, when teachers encourage the development of learners' critical thinking skills (Geoff, 1996; Inclusive Learning Group, 2007). Within the cognitive domain, Bloom identified six levels: *knowledge, comprehension, application, analysis, synthesis, and evaluation*, each of which builds upon previous levels and represents higher cognitive ability, as illustrated below.

Figure 2.1: Bloom's Taxonomy: The cognitive domain



Assuming that the application of critical thinking skills can be facilitated by Web-based collaborative activities that encourage learners to apply increasingly complex levels of cognitive ability, for the purpose of this study, I used the six-level classification of the cognitive domain in Bloom's Taxonomy as a springboard for describing the participants' L2 output in the online collaborative tasks. This is covered in detail in chapter 4.

[3] Even though a revised version of Bloom's Taxonomy of Educational Objectives has been developed by a team of specialists led by Anderson and Krathwohl (Krathwohl, 2002), Bloom's original Taxonomy is used in this study since this classification has been widely applied in the educational field and it continues to be the most renowned description of the levels of cognitive processing in the context of human learning.

Chapter 3: Methods

The previous chapter presented an overview of the research literature in WBLL and the theoretical framework for this study. In this chapter the reader will find a description of the context and participants, the instruments and procedures of data collection, the variables at play and the research methodology used in the study.

3.1. Context of the study

This study was conducted at the Faculty of Languages of the National University of Córdoba (UNC), Argentina, over a period of ten weeks —from August 7 to October 16, 2007. The 24 students who participated in this study were not chosen at random. They all belonged to an English Language II class, which is a compulsory course of the undergraduate study programmes in EFL Teacher Training, Translation and Research at the Faculty of Languages. The students had access to a multimedia classroom with 16 networked computers.

3.2. The teacher-researcher's role

My role in this study was twofold: I acted as the researcher and the teacher of the course where this investigation was conducted. The level of researcher participation and involvement is a key issue in qualitative studies, and recommendations about it vary in the literature. In the present study, some challenges arose as a result of my closeness to the participants and personal involvement as the course instructor. Therefore, some considerations regarding this issue are necessary at this point. Specialists in qualitative research methodology, such as Patton (1990), Hatch (2002) and Holliday (2010) among many others, make useful recommendations regarding the role of the researcher as observer and participant in qualitative studies. Hatch argues that "participation need not be an all or nothing proposition" (p. 74). This suggests that a reliable qualitative research inquiry should be based on a carefully balanced approach and strategic researcher participation in the study. For instance, Hatch (2002) and Holliday (2010)

also refer to the ethical issues researchers face when participating as teachers or administrators of the programme they are investigating. Hatch claims that knowing that the teacher is also acting as the researcher "will influence the behaviour of those being studied and influence the researcher's ability to be effective in both roles" (p. 74). Therefore, this author suggests keeping a field note record and balancing the degree of researcher involvement as the study progresses.

Moreover, Patton (1990) highlights the importance of a balanced researcher's approach in qualitative studies. He recommends building empathy with the people being studied to increase the researcher's understanding of the research context and adopting a stance of neutrality with regard to the phenomena under study to avoid manipulation of data and findings. Patton calls this balanced approach *empathic neutrality.* In this study, I tried to achieve this empathic neutrality in my twofold role as the researcher and teacher of the course so that I could gain insights into students' behaviour when they participated in the online collaborative activities. I regularly noted down my perceptions of the environment, the participants and their learning activities. These notes, which sometimes supported and sometimes did not support initial expectations, provided a rich source of observational data for their triangulation with other sets of data gathered in the study. Although my role as teacher-researcher might have compromised the validity of the study, keeping a record of the participants' behaviour during the online activities helped to avoid biased distortion later, during the interpretation of the data.

3.3. Participants

Twenty-four students, two raters, and an external observer took part in this study, all of whom volunteered to participate.

The students were an intact group of native Spanish-speaking undergraduate students who regularly attended classes in an English Language II course I was teaching at the time of this study. They were representative of the age and sex of the student population that generally enrols in second year in the EFL Teacher Training, Translation and Research programmes, according to the information provided by *Área de Enseñanza*[4] at the Faculty of Languages. The participants averaged 20 years of age,

[4] This administrative office is in charge of the students' academic records at the Faculty of Languages, UNC.

were predominantly female (88% women against 12% men) and had an upper-intermediate level of English. This level of English (language skills) corresponds with the characterization of the B2 illustrative descriptor of the Common European Framework reference levels (*Common European Framework of Reference for Languages: Learning, Teaching, Assessment*, 2001). According to the Faculty of Languages regulations, to be enrolled in the English Language II course students needed to have completed the following courses: English Language I, Grammar Practice and Pronunciation Practice.

As regards computer skills and previous experience in the use of the Internet for language learning, this was a highly homogeneous group. The pre-study questionnaire revealed that all participants were computer literate, but none of them had participated in online collaborative language learning activities prior to this study. Twenty-seven students answered the pre-study questionnaire and all of them agreed to participate in the online activities designed for the study. Three students dropped out after a few classes for reasons unknown to the teacher-researcher.

The two raters who participated in the study were Spanish speaking teachers of EFL, one of whom also participated as an external observer. They were graduate students in the Master's Programme at the Faculty of Languages, National University of Córdoba, at the time this study was conducted. They had been teaching English Grammar and Language I and II courses at the Faculty of Languages, UNC, for about four years. Both teachers were chosen to participate as raters for their teaching and research experience, as well as their knowledge of the research context. This knowledge and experience allowed them to make a careful analysis of the data and their work was useful in the triangulation of results. Their job consisted in individually analysing the same sets of data from students' L2 written output, which had been randomly selected from the group debate forums and the group blogs. Their contribution to this study is discussed in more detail in section 3.5.4 below.

The external observer was given access to the six group blogs developed by the participants and was invited to observe the students' oral presentations of their blog. She recorded her perceptions in the form of field notes, which were later used as an additional source of data in the triangulation of results. The external observer's field notes served to validate the findings because they provided information about nuances not always noticed by the teacher-researcher. As Patton (1990) observes in relation to

qualitative research designs, “all social systems involve routines, participants in those routines may take them so much for granted that they cease to be aware of the important nuances that are apparent only to an observer who has not become fully immersed in those routines” (p. 204). All in all, the analysis of both raters and the field notes provided by the external observer were valuable sources of information which strengthened the validity of the results obtained in this study.

3.4. Instruments

The instruments used in this study were the following: two questionnaires, the debate forums in a virtual classroom [5] and the blogs created by each of the six groups of students.

3.4.1. Questionnaires

Two questionnaires were designed to gather data from the students: a pre-study questionnaire and a post-study questionnaire. The information obtained from the former was used to build a profile of the participants and the data gathered from the latter was useful for the triangulation of results. To encourage honest answers, students were told that the information they provided in the questionnaires would be treated as strictly confidential. The researcher also explained that the purpose of these questionnaires was not to evaluate students but that the information in each of them was going to be used for research purposes. Most students answered these questionnaires during class time; only a few of them e-mailed their answers in the post-study questionnaire to the teacher because they were absent from class. Both instruments were written in English. The questions were written in a language suitable to the participants' level of English and the teacher also read them out loud explaining each of the items included so as to ensure full comprehension. Moreover, in order to encourage the students to write freely and to diminish any anxiety that might arise when writing in the L2, students were told that they could write their answers either in English or Spanish.

[5] An online platform with supplementary class materials and activities.

Results obtained from questionnaires may not always reveal a true picture of the phenomena under study because students usually state what they think they do rather than what they actually do; nonetheless, these can be used as research instruments to supplement data obtained through other instruments. As Mackey & Gass (2005) put it, "questionnaires allow researchers to gather information that learners are able to report about themselves, such as their beliefs and motivations about learning or their reactions to learning and classroom instruction and activities —information that is typically not available from production data alone" (pp. 92-93). Thus, in order to account for individual differences, it was first necessary to build a profile of each participant's Internet literacy and previous experience in online learning. The *pre-study questionnaire* (see Appendix A.1) was designed to collect information about the participants' digital literacy and to obtain their written consent to participate in the study. This questionnaire consisted of ten questions. It gathered information about the following: (a) whether students were familiar with the use of the Internet; (b) how often and for what purposes they used the Internet; (c) whether they had a PC and Internet access at home; (d) whether they had an e-mail account and how often they used e-mail; (e) who among the participants had previous experience in the use of *e-ducativa* (the online platform used in this study); and (f) who were the students willing to participate in the online activities for this course.

The *post-study questionnaire* (see Appendix A.2) was based on the models proposed by Conrad and Donaldson (2004) and it was used for the assessment of the students' perceptions of the online activities as well as their opinions about peer contributions to the group project. It consisted of three main sections. The first section contained ten closed items, to which students could also add their comments; the second section consisted of eight open-ended questions; and the third section was a peer-assessment form. The first two sections of the questionnaire were meant to gather information about the participants' opinions about their individual use of the Internet to carry out the online language activities, as well as the performance of their team in the group project. These questions were intended to elicit information about the students' use of the sections in the virtual classroom —especially the debate forums—, their participation in the blog design and their opinion about group dynamics. The last item in the second part of the questionnaire allowed students to write additional comments about any aspect they might have considered relevant.

The third section, i.e. the peer-assessment form, was included because peer assessment is considered a useful tool to examine students' involvement in a team project (Conrad & Donalson, 2004). It contained three closed items, in which each participant was required to assess the work of the members of his/her group in relation to three specific areas. First, each participant was required to assess the other members' attitudes towards peer suggestions during the online project. Second, they had to determine whether their peers had actually contributed to the completion of the group project, i.e. the development of the blog, by submitting adequate work. Finally, each group member was required to assess the degree of peer involvement or frequency of participation in the project. The students could also include additional comments about each group member. Each student was asked to fill in as many of these forms as the number of members in their group. The analysis of the participants' perceptions of their individual performance as well as the performance of their peers provided a rich source of data which was used to corroborate findings obtained from other sources.

3.4.2. The virtual classroom and group blogs

A virtual classroom and six group blogs were the main instruments used to collect data from the students' output. The virtual classroom used in this project was designed on the *e-ducativa* platform[6], the only online educational platform the Faculty of Languages had access to at the time this study was conducted. This virtual classroom consisted of eight sections which will be described in this section (see figure 3.1 below).

[6] The *e-ducativa* platform is an educational platform designed by an Argentinean company. Teachers and students at the Faculty of Languages, UNC, have free access to this platform. For more information on its features, please visit: http://www.e-ducativa.com/

Figure 3.1: The English Language II virtual classroom

The *site description section* (see Appendix B.1) included the following: 1) a welcoming introduction to the virtual classroom, 2) a description of the virtual classroom covering the aim of using a virtual classroom in this course and the content and purpose of each section (see Appendix B.2), and 3) the course syllabus (see Appendix B.3).

In the *learning activities* section, students could find information about the language tasks included in this project (see Appendix C.1). This section consisted of one website link and three files: 1) a link to a BBC practical online course about how to use the Internet (http://www.bbc.co.uk/webwise/course/); 2) a one-page file with guidelines about the online language learning activities students were required to do, such as participation in group debate forums and group blog design (see Appendix C.2); 3) a file with explanations about the aim of using blogs in this course and guidelines to

create group blogs (see Appendix C.3), and 4) a schedule for the activities (see Appendix C.4).

The *forum section* was organised into the following categories: 1) a welcome forum, 2) a forum for the students' familiarisation with the mechanics of blogging, 3) a forum about how to search the Internet, 4) six group debate forums in which the participants discussed issues pertaining to their group blogs, and 5) individual forums for each student to be used as learning journals. Only the *group debate forums* (see Appendix D) were analysed in this study. In these group forums students were required to exchange ideas and share materials related to their group work. They could also help each other by asking and answering questions related to the language task. The purpose of this instrument was to find out whether the use of online forums promoted collaboration among learners and, if that was the case, to analyse the ways in which collaboration was realised. A taxonomy of online L2 collaborative contributions was developed on the basis of the findings obtained from the participants' written contributions to each group forum debate. This taxonomy is described in chapter 4.

The *files section* functioned as a repository of course materials (see Appendix E). Here students could access the course syllabus, nine articles about the topics to be developed in the group blogs (i.e. natural disasters and the environment), and the three files included in the *learning activities section* (see above).

The *web resources section* (see Appendix F) contained links to three websites which provided step-by-step instructions about blog design[7], a sample blog created by the teacher, and the link to the online course to search the Internet presented in the *learning activities* section. Students could also find Web links to some online language learning resources such as "The Cambridge Dictionary and Resources", "The Longman Dictionary of Contemporary English" and "Wikipedia: The Free Encyclopedia Online". Moreover, links to the six blogs developed by the participants in this study were included in this section, along with brief descriptions of the content of each blog and the blog authors' names.

The virtual classroom also featured a *calendar of events, a contacts section and an internal e-mailing system.* In *the calendar of events,* the teacher-researcher entered

[7] These links were:
How to create a blog: http://prosites-vstevens.homestead.com/files/efi/blogger_tutorial.htm,
Blogger: https://www.blogger.com/start, and
WebJunction: Easy Steps to creating a blog: http://webjunction.org/do/DisplayContent?id=12354

the tasks to be done in the multimedia classroom (see Appendix G). The purpose of this section was to organise class work and to remind students of their assignments. Through the *contacts section* (see Appendix H) students could access their classmates' and teacher's e-mail addresses and personal information such as telephone number, address and birthday. The *e-mail section* is an internal mailing system used by the participants to exchange messages with their classmates and the teacher (see Appendix I).

The *group blogs* created by the students who participated in this study were designed using Blogger, a free blog publishing tool. This software allows users to personalise their blogs. For instance, blog authors can customise the layout of the blog, insert written texts, pictures and hyperlinks, upload videos and interact with readers through a comments section. The blogs created in this study were not open to the general public. They were only used by the participants, and could be accessed by the researcher and the external observer.

In order to provide a comprehensive description of the instruments used in this study, a brief description of the topics included in each of these six blogs is necessary at this point. Group A's blog[8] contained an introduction to natural disasters which included accounts of hurricanes, volcanoes, tornados, tsunamis, blizzards and cyclones. Students referred to the causes and effects along with examples of these natural catastrophes. Group B's blog[9] dealt with the topic of earthquakes, their causes and effects along with up-to-date information about recent earthquakes. Participants in group C designed their blog[10] on the topics of water pollution, groundwater depletion, toxic chemicals and deserts. Group D created a blog[11] on ecology, habitat destruction, endangered species and the role of Greenpeace. Group E's blog[12] dealt with the topic of energy and the environment focusing on chemical risks, nuclear power, fossil fuels, environmental racism and alternative sources of energy production. Group F's blog[13] focused on issues related to population growth, air pollution, the greenhouse effect and global warming. The analysis of students' output in the development of blogs resulted in a set of categories which describe the approaches to knowledge that emerged in the students' work. These categories are presented in the following chapter.

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[8] URL: http://naturaldisastersa.blogspot.com/
[9] URL: http://earthquakesgroup.blogspot.com/
[10] URL: http://englishlanguage-groupc.blogspot.com/
[11] URL: http://ecologyconscience.blogspot.com/
[12] URL: http://energy-environment-groupe.blogspot.com/
[13] URL: http://englishlanguage2groupf.blogspot.com/

Because of the aim of this study, *group debate forums* and *group blogs* were the two main sources of data. These instruments allowed the researcher to examine the participants' written output and establish the patterns of collaboration and approaches to knowledge development during the learning activities.

3.5. Procedures

The online tasks included in this study supplemented face-to-face classroom work and were carried out over a period of ten weeks —form August 7 to October 16, 2007. Table 3.1 shows an overview of the stages in the project.

Table 3.1: An overview of the stages in the online project

Stage I: **Introducing participants to online learning activities**	Time period: 1 week
- Administration of the pre-study questionnaire	
- Introduction to the virtual classroom	
- Participation in the *Welcome Forum*	
- Introducing students to blogging	
Stage II: **Introducing participants to group blogs**	Time period: 2 weeks
- Learning about Internet searches	
- Forming work teams	
- Assigning participants to group debate forums	
- Assigning topics for the development of blogs	
Stage III: **Group blog development and interaction in group forums**	Time period: 4 weeks
- Interaction in group debate forums	
- Participants' activities in group blog design	
Stage IV: **Class interaction in group blogs**	Time period: 2 weeks
- Sending invitations to classmates to visit group blogs	
- Participants' interaction in the blogs created by the six groups	
Stage V: **Oral reports and students' perceptions about online activities**	Time period: 1 week
- Participants' oral presentations	
- Administration of post-study questionnaire	

This study was carried out with permission from the Chair of the English Language II course. In order to obtain access to a virtual classroom in the e-ducativa

online platform, the researcher had to submit a letter of request to the Area of Distance Education of the Faculty of Languages, UNC. The researcher then worked on the design of the virtual classroom for a period of one month prior to the implementation of the online activities.

3.5.1. Administration of the pre-study questionnaire

The teacher-researcher asked students to fill out the pre-study questionnaire to build a profile of participants' Internet literacy (see Appendix A.1). This questionnaire was administered on a regular class before introducing students to the online project designed for the present study. Those students who agreed to participate in the online activities were required to sign the pre-study questionnaire and provide their e-mail addresses. All students agreed to participate. The teacher sent them their user names and passwords so that they would be able to log on to the virtual classroom.

3.5.2. The online L2 activities

Stage I. Once the students had completed the pre-study questionnaire, the following step in this blended-learning experience was to explain to the class the purpose of using the Internet in this course. The teacher told students that the aim of the online activities was to supplement face-to-face classroom work and to provide them with the opportunity of participating in a collaborative project by introducing a new medium for learning the target language. Therefore, they should help each other using the Internet to complete these assignments. The students were told that it was not compulsory to work on this online project and those who did not want to participate were free to leave when the class met in the multimedia classroom.

In their first meeting in the multimedia classroom, the teacher-researcher introduced participants to the use of the virtual classroom. The teacher and students visited the virtual classroom, read the information in each of the sections carefully and interacted in the first discussion forum: the *welcome forum*. The teacher gave explicit instructions on how to interact in debate forums and explained rules of netiquette. She provided instructions about technical issues, such as how to post comments and attach files in forum discussions, and explained how to send group e-mails as well as

individual messages. As an illustration, the first message posted by the teacher in the *welcome forum* and some answers from students are transcribed here:

> **Welcome to our virtual classroom!**
> Published by Gava, Ileana Yamina on 14/08/2007
> Message:
> Hello everyone!
> I invite you to explore this virtual classroom carefully. You can do so in pairs or in groups of three.
> If you have any difficulties in accessing any of the sections, files or websites included in this site, publish your questions on this forum and I'll be glad to help you.
> Be attentive to each others' questions or comments, so that we can all interact.
> Once you've carefully read all the suggestions and instructions included in each of the sections, please share your thoughts about this site.
> Yamina
>
> RE: Welcome to our virtual classroom!
> Answered by (name of student) on 14/08/2007
> Message:
> Hello everybody!!!!
> I'm really happy about the site. I think it will be very useful because it will enable us to be in contact with each other and to be updated with the new technology.
> This site is very well-organized, so we can find useful information easily and without wasting time.
> Bye bye!
>
> RE: Welcome to our virtual classroom!
> Answered by (name of student) on 14/08/2007
> Message:
> Internet used in a way like this is always extremely useful. I'm happy that there are teachers who take time and care about these things, because this is very important for us. The Internet makes communication easier and more relaxing. We can also be up-to-date with the latest news about this course.

The teacher and the students interacted in this discussion forum for a period of about two weeks. This forum was useful in that the students shared their opinions about using the Internet for learning purposes and expressed their expectations about this online project. Another debate forum was opened on *how to create a blog*. This forum allowed students to learn more about blog design. The teacher provided instructions about creating blogs and directed students to consult online tutorials about blog design and to visit a sample blog she had designed, which served as a model of the task they were going to do later in this project (see section 3.4.2 above). Furthermore, students were instructed in the use of the *individual forums*, in which they were encouraged to record their views, opinions, difficulties and feelings towards this online learning experience. Finally, a schedule for activities for this online project was presented to the class.

Stage II. The purpose of the second meeting in the multimedia classroom was to get participants to form groups to work on the tasks designed for this study and to guide them to do Internet searches. The students were also invited to participate in the class debate forum on *how to use the Internet*, where they could interact and help each other to search the World Wide Web more effectively. The participants were advised to study the guidelines for using the Internet, which they could access through a BBC online course in the *web resources* section in the virtual classroom. Then, students formed groups of three or four, and the teacher opened the *group debate forums* for each group and assigned topics for the creation of blogs. The teacher explained the purpose of *group debate forums* and gave explicit instructions about how to interact in these forums. The participants were going to use them to post questions and comments related to the development of their group blog. The teacher-researcher regularly read the participants' exchanges in group debate forums so as to monitor their work, answer questions and help them to sort out difficulties.

As regards blogging, each group was instructed to create a blog on the topics assigned by the teacher (see section 3.4.2 above for a description of the topics). The *group blog development* task consisted in reading course materials on the topics assigned to each group, doing further research and using multimedia resources to create the blogs. The teacher advised students to consult reliable online sources, such as the BBC, encyclopaedias, university and government websites, to use pictures and videos to illustrate their work, and to focus on content-specific terminology. The teacher also showed students how to upload videos and pictures to their blogs, and how to include hyperlinks to online dictionaries and websites. Creativity, collaboration and critical thinking were encouraged as students were advised to produce summaries based on their readings, to avoid "copying and pasting" information, and to include their personal opinions and questions to peers in the blog entries. Group members were encouraged to coordinate their work to complete the task. They were also told that the blogs produced by each group would then be opened to the whole class and that they could be used as study materials. Finally, the teacher and students agreed on rules of courtesy and commitment to the learning task.

Stage III. After two weeks, the class met in the multimedia classroom for the third time. In this meeting, participants started to work on their group blog. Each group opened a

blog and began working on its design. The teacher provided help with technical matters. During the following four weeks, the students worked on the design of their blogs using the computers in the multimedia classroom as well as outside computers. In the fourth and fifth meetings in the multimedia classroom, participants worked on the development of their group blogs and the teacher provided assistance whenever required. The teacher observed the participants' work and behaviour in these online activities and recorded her perceptions in a research journal.

Stage IV. Upon completion of their group blogs, students invited members of other groups to visit their blog. Thus, the main activities of the sixth meeting at the multimedia classroom consisted in sending blog invitations to classmates and interacting with peers in the blogs. Students read the other groups' blogs, answered questions posted in blog entries and wrote comments about their classmates' work in the blog entries. This interaction went on for about two weeks so that students could have enough time to visit and read the blogs created by their classmates and post their comments.

Stage V. Finally, in the seventh and eighth lessons held in the multimedia classroom, each group gave an oral presentation about their experience in developing the blogs. The students had to explain how they had handled the task, refer to the difficulties and benefits of blogging in the language class, and describe blog entries by showing their group blog on the wall screen using the LCD projector. The teacher-researcher and the external observer recorded comments about the students' performance in their field notes. The group debate forums and the blogs were stored in separate files for data analysis.

3.5.3. Administration of the post-study questionnaire

In the eighth and last meeting in the multimedia classroom, students were asked to fill out the post-study questionnaire. Most participants answered this questionnaire in class and some of them, who were absent, sent them to the teacher through e-mail.

3.5.4. The external observer's and raters' tasks

Once the students had completed the online activities, the external observer was invited to read the six blogs developed by the students and to provide comments related to the learners' L2 output. She was instructed to focus on aspects such as the content included in the blogs, the resources used to develop each entry, and the interaction of the students in the "comments" sections —i.e. the questions posted by the authors of each entry and the responses by members of other groups. She was given access to the blogs so that she could work on the analysis and, after a period of two weeks, she could submit her field notes to the researcher.

As regards the two raters' task, first they attended individual sessions with the researcher, who trained them to analyse the data. The researcher described and illustrated each item in the taxonomy of online L2 collaborative contributions and the categories of approaches to knowledge development created for the study. Next, she instructed them in how to apply these categories to the data. She provided them with a sample of the data consisting in one group debate forum and one blog that had already been coded by the researcher. Before classifying the data, the raters read the samples individually and asked the researcher for some explanations regarding the categories. Once they felt confident about their understanding of the categories, they worked separately in the analysis of the same sets of data: three group debate forums and three group blogs that were randomly chosen. They were allowed to take as much time as they needed to carry out the analysis, but were asked to turn in the results within a period of three months. Upon completion of their task, the researcher met with the raters to discuss the result of their analysis. The raters' analysis provided useful insights which helped to assess the reliability of the findings.

3.6. Research methodology

As stated earlier, the primary aim of this research work was to find out *how* the use of ICT promoted collaborative learning practices and the application of critical thinking skills in a group of EFL undergraduate learners. To this end, a qualitative methodology was applied. Following a systematic procedure of inductive analysis, the data were

described in order to produce patterns that captured the main features of the phenomena under study. My approach to the analysis of the data was based on the steps of inductive analysis suggested by researcher Amos Hatch in his book *Doing Qualitative Research in Education Settings* (2002). This approach allowed me to apply a systematic procedure to data analysis and to build a comprehensive picture of the phenomena under study.

Even though quantitative studies in CALL outnumber qualitative research, the latter has been growing in importance over the last decades. Qualitative studies in the field of educational technology and SLA are valuable in many respects, and scholars who advocate this approach do so on various grounds. Aiming to explore human behaviour in their own environments, qualitative approaches provide important insights into students' perceptions, their interactions in specific language learning environments, the importance of task design and specific Internet uses to promote the development of language skills (Lui, Moore, Graham & Lee, 2003). Hoepfl (1997), in her article "Choosing Qualitative Research: A Primer for Technology Education Researchers", refers to the growing popularity of qualitative methodologies and the need to apply them as "powerful tools for enhancing our understanding of teaching and learning" (p. 47). Moreover, Warschauer (2000), a well-known scholar in the field of ICT and language teaching, argues that "short-term quantitative studies may fail to account for the complex interaction of social, cultural and individual factors that shape the language learning experience. Researchers in education and Applied Linguistics are increasingly turning to interpretative qualitative approaches" (p. 41). As the primary purpose of this study was to explore instances of collaboration and application of higher order thinking by a group of EFL students during an online task, it seemed appropriate to frame this study along the lines of a qualitative research methodology.

Descriptive research approaches are useful to examine the variables involved in CALL, their interactions and complexities as well as their effects on one another (Egbert & Petrie, 2005). In this study, there were three main variables at play. The independent variable was the use of ICT as a teaching support medium in an EFL undergraduate class. The dependent variables were these: (a) the students' online learning performance and (b) their perceptions about the use of the Internet for EFL learning. Since the focus of this study was to describe the relationship between these variables as accurately as possible, a qualitative inquiry strategy allowed the researcher

to carry out intensive work with a small group of participants, to produce detailed descriptions of their L2 output and to include emic perspectives as relevant sources of data.

As regards the procedures of data analysis, qualitative studies are generally characterised by emergent research design (Dörnyei, 2007; Hatch, 2002; Holliday, 2010). In this study, the emergent elements were students' online written interactions and their use of Internet resources for language learning. Care was taken to provide only general instructions about the language task so as to ensure that participants' output was not controlled by the researcher but emerged naturally. I followed an inductive analysis of the data based on a flexible, comprehensive and systematic model proposed by Hatch (2002). This author highlights the following:

> The strength of inductive analysis is its power to get meaning from complex data that have been gathered with a broad focus in mind. It provides a systematic approach to processing large amounts of data in ways that allow researchers to feel confident that what they report is indeed representative of the social situations they are examining and/or the perspectives of participants they are studying (Hatch, 2002, p. 179).

Relying on this model, I followed a nine-step process in the analysis of the data. First, I read the data in order to identify frames of analysis. This consisted in breaking down the data into analysable parts, into segments or meaning units. The notion of *sensitizing concepts* proposed by Patton (1990) was useful here since these concepts can be applied inductively. As this author explains, sensitizing concepts are "concepts that the analyst brings to the data. . . . [They] give the analyst a general sense of reference . . . to examine how the concept is manifest in a particular setting or among a particular group of people" (Patton, 1990, p. 391). In this study, the principles underlying collaborative learning and the levels of critical thinking skills included in Bloom's (1956/1971) Taxonomy were the foundational *sensitizing concepts* which helped to tie pieces of the data together into meaningful parts. The frames of analysis, in other words, the units of meaning for both the students' collaborative contributions and their instances of critical thinking were identified in the corresponding data, i.e. in the group forums and the blogs. Having thus identified the frames of analysis, I moved on to the following step.

The second step in the process of data analysis was to create broad domains or categories of meaning based on the semantic relationships discovered within the frames

of analysis. I began by looking at recurring regularities in learners' written output in two main sets of data: *the six debate forums* and *the six blogs*. The students' collaborative forum interventions that showed similarities in meaning were grouped together under descriptive labels and the same procedure was followed in the analysis of their blog entries to find out how critical thinking skills had been used and how the students had collaborated in the L2 task.

The third step suggested by Hatch (2002) is to identify salient domains, assign them a code, and put others aside. Therefore, this phase in the process of data analysis consisted in what Miles and Huberman (1994) call "data reduction". I searched for recurring patterns in the data so as to select the most salient units of meaning in the participants' written output. Also, less salient domains that made a strong case in this study were kept, that is to say, those categories that were relevant to the research questions were kept for further exploration. The fourth step consisted in rereading the data and refining the salient domains. Upon looking more closely at the data, I could identify the most relevant domains or categories of analysis in relation to the research questions. These salient domains were the types of collaborative contributions in group debate forums, and the different dimensions in the classification of participants' L2 written output which revealed collaboration and the use of critical thinking skills in the blog entries.

The fifth step consisted in comparing, contrasting and re-grouping the salient domains into more refined categories, which gave final shape to the patterns of collaborative contributions and use of critical thinking skills found in the data. In this stage, I made the final decisions regarding the defining characteristics of the patterns and their relevance to the research questions. The sixth step, thus, was to complete the analysis within domains. This was a key step, since it involved going back to the data and looking at each of the categories created. Hatch (2002) suggests that "completing an analysis within domains means revisiting included terms, semantic relationships, and cover terms in search for other possible ways to organise what's there" (p.172). This process of re-definition, re-grouping and re-adjustment of the patterns led to the final verification of the meaningfulness and accuracy of the categories developed.

In the seventh step, I searched for common themes by establishing connections among patterns. This implied looking through the categories to identify common threads. The main purpose of this step was to construct a meaningful whole and write a

descriptive summary of my analysis that would be useful in the final discussion of findings.

Once clear regularities were identified and the categories were saturated, the eighth step was to create a master outline expressing relationships within and among domains. As Hatch (2002) puts it, the aim here was to "create a comprehensive representation of how the overall analysis fits together" (p. 176). This led to the development of a taxonomy of online L2 collaborative contributions —which includes the six main patterns of collaborative contributions found in group debate forums— and a threefold classification of the patterns of application of critical thinking skills and collaboration found in blog entries. These classifications represent the inductively generated categories of participants' online L2 written interactions and are described and discussed in detail in chapter 4.

The final step was to select instances of the data as illustrations of the categories developed. Some of these instances are included in the discussion of findings in the following chapter. Summing up, the findings obtained from this analytic approach are not intended to corroborate pre-existing categories, but rather they were grounded in the data and provide a systematic description of the phenomena under study.

The results obtained from the analysis of the two main data sets mentioned above (i.e. group debate forums and blogs) were corroborated by the triangulation of the data. Multiple sources of data are important in terms of credibility, transferability and conformability of research findings (Mackey & Gass, 2005). The various sources of data in this study were the participants' opinions, the researcher's and external observer's field notes, and the external raters' analyses. The post-study questionnaire was the instrument used to gather participants' opinions. These opinions were analysed inductively. Thus, students' answers to open-ended questions were first transcribed as they appeared in the questionnaires. Secondly, these answers were re-read and key ideas were highlighted. Thirdly, the key ideas were compared to the salient domains previously identified in the analysis of group forums and blogs in order to establish meaning relationships. Fourthly, the last steps were to produce summaries of students' responses and to analyse their relationships to the taxonomy of collaborative contributions and the threefold classification of critical thinking skills and collaboration. Finally, answers to close questions were tabulated and the results were described in percentages.

The analysis of field notes was also approached inductively. Therefore, the researcher's and the external observer's records were initially read and analysed in terms of their relationship to the categories developed for the students' L2 output. I identified the main ideas included in these notes in relation to group work dynamics, students' online collaboration in the L2 task, their use of online resources to complete the task, their attitudes towards the online activities and the role of the teacher. The findings from these notes are discussed in the following chapter.

All in all, I found this systematic procedure for data analysis suitable to the main purpose of this research since it allowed me to generate insights into the participants' L2 output in a principled way, without sacrificing creativity in the development of the descriptive patterns relevant to the focus area of the study.

Chapter 4: Research Findings and Discussion

In the previous chapter, I described the context of the study, the participants, the instruments and procedures for the data collection, as well as the research methodology used. This chapter focuses on the results.

The data in this study came from six sources: the participants' answers to the pre-study questionnaire, their written interventions in the group forums, the six group blogs, the students' answers to the post-study questionnaire, the external raters' analyses, the report provided by an external observer and the researcher's own field notes. This chapter is divided into five main sections, each of which discusses the findings obtained from the data analysed.

4.1. The pre-study questionnaire

The pre-study questionnaire was administered to 27 undergraduate EFL students. This figure represents the total number of enrolled students who attended classes regularly in one of the English Language II courses at the Faculty of Languages, UNC. The data obtained from the pre-study questionnaire covers aspects related to the participants' use of the Internet, their familiarity with online learning and their opinions about using the Internet in the English Language II class. This questionnaire is included in Appendix A.1.

Students' answers to this questionnaire indicate that the total number of participants in the study were familiar with the World Wide Web and most of them used it frequently; answers about frequency of Internet use varied from "(almost) every day", to "four/three times a week" or "twice/once a week". Only 14.8% of the students said they did not use the Internet very often. When asked about the purposes for which they used the Internet, most of them said they used it to search for information, to check e-mails, to chat and to download music. Other less frequent reasons for using the Internet were to download movies, to read the news, to visit virtual classrooms of other courses, to keep in contact with friends and to consult online dictionaries. Regarding Internet and computer facilities, 81.5% of the participants owned a PC and 66.7% also

had Internet access from home. All students had an e-mail account and used it on a regular basis. Students' answers about their skills in searching the Internet showed that only 7.4% of the participants were familiar with Boolean logic for Internet searches and 26% used only some symbols (e.g. + and **“ ”**). In relation to using the Internet for language learning, only one participant said she had taken an online course and explained that it had not been a successful experience. More than half of the participants were already familiar with the *e-ducativa*, the online platform used in the Faculty of Languages. Most of these students said they used the virtual classroom of the Introductory Research Methods course (i.e. *Typi: Teoría y Práctica de la Investigación*), where the teachers uploaded grades and assignments, and a few participants referred to an English Language II virtual classroom, which they used mainly to consult reading materials uploaded by the course instructor. Finally, all students who answered the pre-study questionnaire agreed to participate in this study and gave their written consent by including their e-mail address and signature at the end of the questionnaire.

On the whole, the students' answers show that the group of undergraduate EFL students who participated in this study were already computer literate and used the Internet mainly to search for information and to communicate with others via chat and e-mail. They were also familiar with virtual classrooms used as repositories of study materials and for course announcements. Interestingly, none of the participants referred to any experience in doing online language activities or taking part in collaborative projects. See Appendix J for a detailed account of the results obtained from the pre-study questionnaire.

4.2. The taxonomy of online L2 collaborative contributions

As mentioned in the previous chapter, there were five debate forum sections in the virtual classroom used in this study: 1) a *welcome forum*; 2) a *blog development forum*, in which students discussed issues related to the mechanics of blog design; 3) a *searching the Internet forum,* where they posted comments and questions about Internet searches for language learning; 4) a *personal forum,* which was intended as a learning journal; and 5) *group debate forums,* in which participants in each of the six groups (i.e.

groups A, B, C, D, E and F) discussed issues pertaining to the online language project. For the purpose of this study, only *group debate forums* were analysed.

As I examined the data obtained from the forums, I was able to identify features in the students' written texts which helped me to group their comments under six main categories of meaning, which in turn became the focus of the analysis. On the basis of the types of students' collaborative interventions identified in the group forums, a taxonomy of online L2 collaborative contributions was developed.

It is worth noting at this point that the students' contributions were analysed not only in light of the theoretical framework presented in chapter 2, but also according to what the students were instructed to do to accomplish the language task. As explained in chapter 3, the L2 task or group project consisted in the development of a content blog on a topic of a course unit assigned by the teacher. The various activities that the students engaged in served, in many cases, as indicators of their collaborative behaviour. The activities students were expected to do to complete the language task were the following. At the outset, they needed to become acquainted with the steps to create a blog and work on the design of the blog layout. Next, they were supposed to work on the preparation of the materials, such as texts, images, charts, videos, etc. to be included in their group blog. This required careful reading of the course materials on the assigned topic, researching the topic using the Faculty of Languages library and the Internet, and focusing on some language aspects (e.g. grammar or lexis) relevant to the level and content of the course. The participants were encouraged to use multimedia resources in the presentation of the topic in blog entries. These tasks entailed selecting, analysing, summarising and organising information, as well as negotiating among group members what content to include in the blog and how to present it. The participants were expected to use the group forum to share ideas and resources, to post questions and provide peer feedback about the development of the blog, and to inform the group on their individual work. Finally, they had to invite their classmates (i.e., the members of the other groups in the class) to visit their blog. Upon completion of this group project, the students also had to give an oral presentation on their work.

The group forums were, therefore, the online medium used by the students to share information related to the L2 task. Table 4.1 below shows the taxonomy of online L2 collaboration; it includes the types of collaboration identified in students' forum interventions. These types are classified according to the nature of students' engagement

with the language activities and their contribution to the group project. A description of each type of online L2 collaborative contribution follows below.

Table 4.1: A taxonomy of online L2 collaborative contributions

Types of collaborative contributions	Descriptions
Type I	**Discussing practical and technical issues**
Type I A	Asking and answering questions about technical issues
Type I B	Reminding peers about deadlines
Type I C	Apologising for falling behind with group work
Type I D	Instructing other group members
Type II	**Naming individual activities**
Type III	**Describing individual activities**
Type IV	**Praising peers' work**
Type V	**Peer reviewing**
Type V A	Asking for feedback
Type V B	Providing feedback
Type VI	**Suggesting a further step in the L2 task**

4.2.1. Type I collaborative contributions

Under this category, I grouped exchanges related to *practical and technical issues* pertaining to the L2 task. These exchanges account for 34.64% of the total number of instances identified in the study. Four kinds of contributions were identified as *Type I*. Within this group, *Type I A* contributions are related to *technical issues* and include questions and answers about technical problems, such as e-mailing, entering information on blogs, uploading videos, improving blog layout, inserting hyperlinks and sending invitations to blog readers. Contributions related to *practical issues* were classified as *Type I B* and they include peer reminders about deadlines for the completion of the task. *Type I C* contributions consist of apologies for falling behind with group work. Contributions classified as *Type I D* represent students' instructions to other group members in relation to the language task.

The following exchanges illustrate units of meaning classified as *Type I* online L2 collaborative contributions. The students' names have been changed in all the examples included in this chapter. In most cases, complete entries are provided and the

content of entries has not been edited. The units of analysis are in bold type and the type of collaborative contribution has been indicated between square brackets after each unit. This exchange was found in group A:

> how to post
> Published by José on 26/09/2007
> Message:
> hey girls!! how are you? **Well, my question is how to post in the blog if I am not the administrator? [*Type I A*]** I am now trying to set myself up to post something as many of you have already had, but **I see myself unable to post anything. There is no entry where I can publish what I have found. Can anyone please give me an answer??? [*Type I A*]**
>
> RE: how to post
> Answered by Silvia on 26/09/2007
> Message:
> **It doesn't matter if you're not the administrator, that has nothing to do with posting. What you have to do is to go where it says "Nueva Entrada", that is near to "Salir" [*Type I A*], and please, please PLEASE! publish something from the articles that we have in the material, not something extra from the Internet [*Type I D*]**.
> Bye
>
> RE: how to post
> Answered by Silvia on 02/10/2007
> Message:
> **José!!!! If you're going to post something on the blog, you MUST do it today [*Type I D*], we're sending the invitations tomorrow [*Type I B*], so make sure that you post something [*Type I D*]**.
> Bye
>
> PUBLISHED SOME MORE THIS MORNING
> Published by José on 03/10/2007
> Message:
> hey girls! how are ya? well, just letting you know that I have posted some more about the articles. **There are some problems of layout of the information, like gaps and blank spaces in the article about summary of natural disasters. Can you José see to it and try to make some changes? [*Type I A*]** Well , hope you liked it, just let me know if you have any suggestions or anything. **SO SO SORRY FOR THE DELAY AND EVERYTHING, but I am really doing as much as I can [*Type I C*].**

In the first entry in this example, José shares his concern about posting his work on the blog and receives an immediate answer from one of his classmates, who explains the procedure for posting information on the blog. Besides dealing with the technical issue, by posting a comment classified as *Type I A* online L2 collaborative contribution, Silvia instructs her classmate in the activity he is expected to do, a contribution classified as *Type I D*. A week later she reminds him about the deadline to complete the task (*Type I B* contribution) and José apologises for falling behind (*Type I C*). These exchanges reveal how the students expressed their concern about the problems that they encountered and helped one another as they worked on the group project. Thus, these interventions show the learners' collaborative efforts to solve the technical problems

which might have interfered with the completion of the L2 task. Collaboration was also evident in comments related to practical matters, such as reminders of activities that had to be done and deadlines that had to be met to complete the language task.

Exchanges related to practical and technical matters such as the ones analysed in this section can be considered instances of collaborative contributions since they attest to students' joint efforts to complete the language task. The results of this analysis may also indicate students' awareness of group members' interdependence, which is one of the basic characteristics of collaborative learning environments (Beatty, 2003; Bruffee, 1999). Overall, the exchanges in group forums showed the participants' efforts to achieve a common goal, the completion of an L2 task in this case. The students helped their group members to solve problems and also instructed one another to carry out individual activities that would contribute to the final outcome of the group project.

4.2.2. Type II collaborative contributions

This category accounts for 17.65% of the total number of instances found in the data and includes interventions in which group members name the activity or activities they are engaged in. The naming of the activity seems to be an indication of the learners' contribution to the group language task since it serves the purpose of updating the group on what the participants are doing in relation to the group project. The following entry found in group C's discussion forum is an example of type II collaborative contributions:

> RE: water pollution
> Answered by Luciana on 28/08/2007
> Message:
> hi girls!! I think this is my new group!! I know it is a little bit late but I'll try to do my best!!! **I've just read the topics we have to deal with, and I have just started searching in the net!!** Well, that's all for now...
> see you tomorrow!

Almost a month later, the same student writes the following:

> RE: about the blog
> Answered by Luciana on 25/09/2007
> Message:
> Girls, I wanted to tell you that **I've posted two articles about some of the effects of water pollution**.

This student keeps the group informed about her readings and her work on the blog. This kind of communication, also identified in other participants' interventions,

evidences the learners' commitment to group work and may indicate that the students take steps to direct their learning, a fundamental feature in the collaborative development of knowledge in higher education settings (Bruffee, 1999). By the same token, this may show the students' learning autonomy and accountability to their group. Another example of this type of contributions is the following exchange found in group D's forum:

> RE: Group work topics
> Answered by Elena on 11/09/2007
> Message:
> Hey Girls!
> I couldn't go today, but **I'm on-line**. What are you doing? **I'm searching for more information.**
>
> RE: Group work topics
> Answered by Soledad on 11/09/2007
> Message:
> Hi, great Elena. Lucía is a new member of the blog.
> **We've been working on the layout of the blog, and also we've discussed about the topics.** I think the best thing to do is divide the topics so everyone has the chance to develop a specific one.
>
> RE: Group work topics
> Answered by Elena on 11/09/2007
> Message:
> Girls!
> It's going to be better if we divide the topics! That's a great idea. **I will look for information about Rain Forest. OK?** Thank you!!! see you tomorrow!!

These exchanges show that debate forums allowed group members to learn about what their peers were doing to contribute to the group project. This suggests that the group members functioned as a learning community trying to achieve common goals, an essential ingredient in collaborative learning projects (Beatty, 2003; Bruffee, 1999; Pallof & Pratt, 2005; Richards & Rodgers, 2001; Salmons, 2008).

Another interesting feature which becomes evident through this analysis is the potential for the integration of Web-based learning environments, such the electronic forum, into face-to-face classes, as suggested by Kamhi-Stein (2000) and Bikowski & Kessler (2002). For instance, a group member —identified as Elena in the above exchange— who could not attend classes held in the multimedia classroom worked from home on the group project. This student's participation shows that online debate forums can open up extra channels for teacher-students and students-students interaction. Her asynchronous contributions are indicative of how advantageous b-learning environments can become in collaborative projects. Interactive learning

activities seem to be enhanced by integrating online tools to supplement traditional classroom work. Thus, ICT can make pedagogical practices more flexible and expandable in time and space; learning and communication are no longer confined to conventional academic time segments (Area Moreira, 2009; Beatty, 2003; Lion, 2006; Warschauer et al., 2000).

4.2.3. Type III collaborative contributions

This category includes interventions in which students describe, briefly or in detail, the materials they are working with or the activities they are engaged in so as to inform the group about their individual work. *Type III* contributions account for 13.07% of the total number of instances identified in this study. The following entries found in groups A and B can be considered representative examples of this type of collaborative contribution.

Group A:

> Hi girls!
> Published by Gloria on 22/08/2007
> Message:
> Hi!
> **I've found some articles in the BBC that are related to Hurricane Dean (that has hit Mexico for the second time this week). Maybe it could be interesting because it is something that has happened recently and has to do with our topic.**
> Please, if you think that is interesting read one of the articles:
> **http://news.bbc.co.uk/2/hi/americas/6955463.stm**
> Bye!!

A week later she makes the following comment:

> Encarta!!
> Published by Gloria on 01/09/2007
> Message:
> Hi girls!
> **I've been searching the Internet and I found an interactive page in Encarta which shows what happens when a tornado passes over land. I think that we could post it in our blog because it will be easier for our classmates to understand it. Here's the link:**
> **http://encarta.msn.com/media_701878950/Tornado!.htmls**
> Bye!!

Group B:

> RE: Group work topic
> Answered by Brenda on 20/09/2007
> Message:
> Hi group again!!!!!!!!! **I've been working on the vocabulary of the photocopies. I have a list of some phrasal verbs**, shall I post it?

RE: Group work topic
Answered by Andrea on 30/09/2007
Message:
Hi group B!
I have a list of verbs related with earthquakes (from the handout), but I think is not enough. So, if you think that there more verbs that should be included let me know.
See ya later at the msn

The units of meaning identified as *Type III* collaborative contributions show the students' accounts of their individual activities. These comments seem to provide the members in the group discussion forum with more concrete ideas about what is being done to complete the language task than the contributions classified as *Type II* (i.e. naming individual activities). Moreover, comments classified as *Type III* contributions demonstrate students' engagement with the study material as well as their commitment to the learning task. In these exchanges, the students shared resources and expressed their views on the materials to be included in their group blogs. This is an indication that students were acting as responsible and autonomous learners. As the comment posted by Gloria shows, students looked for information independently and in so doing, they became accountable to the group by informing their peers about their work. Other interventions, like Brenda's and Andrea's in the exchange above, show the students' efforts to work on language activities that contribute to the group project. These descriptions of individual activities on the electronic forum may also strengthen the idea that online communication can contribute to the construction of knowledge of the L2 through an online dialogue among peers. As mentioned in chapter 2, this learning potential of Web-based environments has also been explored in the studies carried out by Kamhi-Stein (2000) and Meskill and Ranglova (2000).

4.2.4. Type IV collaborative contributions

Type IV collaborative contributions consist of interventions in which group members praise their classmates' work and they represent 1.96% of the instances found in the data. Even though these contributions were not very frequent in the data gathered, they have been included in the taxonomy of online L2 collaborative contributions because they seem to contribute to building up good rapport between participants. Students' praise can be considered a way in which group members support one another as a

community of learning. Two instances of this kind of exchanges were found in the data. This entry was found in Group A:

> RE: Post
> Answered by Silvia on 11/09/2007
> Message:
> Hey! **I liked your post a lot! It's very good. And the video was great, I'm amazed. I think we're doing a really good job**, let's keep it like that ;)
> Bye...

This entry was found in Group C:

> RE: about the blog
> Answered by Luciana on 01/10/2007
> Message:
> girls! how are you doing?
> **I've seen the blog, and I really think it's great .. I like it very very much...**
> **it seems that there is nothing more to add to it..** so we could send an invitation to the teacher to find out what she thinks about it and have her opinion.
> what do you think?
> well that's all for now!
> see you tomorrow!!

The learners' praise identified in these contributions shows the students' appreciation of each others' work. This kind of praise might help to strengthen their engagement with the language task and suggests that students value their peers' contribution to the group project, the latter being an important feature of collaborative learning tasks (e.g. Brown, 2007; Pallof & Pratt, 2005; Richards & Rodgers, 2001). The following type of comments included in this taxonomy, *Type V* collaborative contributions, includes peer feedback, in which learners' mutual support can also be observed.

4.2.5. Type V collaborative contributions

Under this category, I grouped interventions in which participants provide or ask for peer feedback. These interventions represent 22.88% of the total number of instances identified in the data. The contributions in which the participants *request peer feedback* are classified as *Type V A*, and those interventions in which they *provide feedback* on their classmates' work are classified as *Type V B*. The following exchanges found in group B debate forums illustrate these types of collaborative contributions:

> RE: Group work topic
> Answered by Andrea on 07/09/2007
> Message:
> Hi! I've been searching for information at the internet. This is the website:
> http://www.seismo.unr.edu/ftp/pub/louie/class/100/plate-tectonics.html
> It's interesting because it gives info about plate tectonics, which causes earthquakes. We could summarize it. **Please, try to read it and let me know what you think about it**.
> **[*Type V A*]** Andrea

RE: Group work topic
Answered by Brenda on 09/09/2007
Message:
Hi Andrea!!!! **I've read the information you've provided us. I think it's interesting, but it has very specific details that are a little complicated to understand. I like the photographs it has, so I think we could include some of them on our blog and we can add the links with the rest of the information just for those who are interested in reading a little more. [*Type V B*]**
Also, I've found more information, I'm sending you the web page: http://en.wikipedia.org/wiki/Earthquakes#Specific_fault_articles. It's really interesting because it contains information about, for example, the effects of earthquakes, the largest earthquakes by magnitude, the recent ones, etc.
Please, when you (Andrea), or you Carolina and Leo, read it, tell me what you think. Thanks! [*Type V A*] Bye bye!

RE: Group work topic
Answered by Carolina on 10/09/2007
Message:
Hey everybody!!!!! **I've read the BBC article. It's great!!! We can post in our blog some of the photographs that appear in the article. The quiz it's also very interesting and funny!!! [*Type V B*]**

As these comments show, participants in this study asked for peer reviews of individual activities related to the group project and also provided feedback on each other's work. These comments can be considered instances of positive and constructive feedback since they aim at improving group work and, therefore, contribute to group cohesiveness. Moreover, the use of the first person plural to praise group work and suggest improvements in the language task (as in Andrea's and Carolina's entries above) may indicate an awareness of collaborative learning dynamics, in which peer appreciations and assessment of the group project contribute to the development of the L2 learning activities. Thus, it can be affirmed that *Type V* collaborative contributions indicate a willingness among participants to help one another and listen to their ideas and opinions. This openness to share ideas is crucial in collaborative learning environments, where learners welcome peer suggestions, discuss them and integrate them into further actions (e.g. Conrad & Donaldson, 2004; Beatty, 2003; Salmons, 2008).

Furthermore, the peer feedback found in the discussion forums resembles the type of collaboration that characterises successful learning environments, since it shows positive group interdependence through meaningful negotiation, an essential feature in the collaborative construction of knowledge among learners (Beatty, 2003; Bruffee, 1999; Warschauer et al., 2000). As already pointed out, in such contexts, participants know that they pursue common goals and believe they cannot succeed unless the other group members succeed, too. As the participants in this study became engaged in the

online language task, they worked together towards the same goal, which seems to confirm the contention that learners become more responsible for their own learning and the learning of others when they work together towards the completion of a joint project.

4.2.6. Type VI collaborative contributions

This category includes students' interventions which contribute to advancing group work by suggesting a further step in the learning task, such as doing an activity, or organising group work. It accounts for 9.80% of the total number of collaborative instances found in the data. The following are some examples of this type of contributions found in groups A and D debate forums.

Group A forum:

> Ideas...
> Published by Gloria on 28/08/2007
> Message:
> **I think that it could be great if we start our blog with a vocabulary section that includes collocations and other things... what do you think?**
> **I will start organizing something if you think that it is nice...**
> Bye!
>
> RE: Ideas...
> Answered by Silvia on 28/08/2007
> Message:
> **I think it's a great idea... Maybe we can make some exercise with that vocabulary...**
> **It'd be nice if we can find some videos related to the topic and upload them in the blog, maybe we can find one of those videos filmed by people that have been near a tornado or a tsunami, that'd be pretty cool...**

Group D forum:

> RE: Group work topics
> Answered by Soledad on 11/09/2007
> Message:
> Hi, great Elena. Lucía is a new member of the blog.
> We've been working on the layout of the blog, and also we've discussed about the topics.
> **I think the best thing to do is divide the topics so everyone has the chance to develop a specific one.**
> **María is going to look for more information about Greenpeace**
> **Lucía about Animals in danger**
> **I'm going to develop Habitat destruction/habitat loss**
> **You and Marta can choose between species extinction and Rain Forest**
> let us know what do you think about this.

The units of meaning classified as *Type VI* show the students' attempts to advance group work through comments related to the organisation and distribution of activities among group members. These interventions show the learners' commitment to the group

project and their awareness of the need to collaborate with their peers in the language task. As observed in the previous types of collaborative contributions included in this taxonomy (i.e. *Types I* to *V*), comments classified as *Type VI* also seem to show the learners' awareness that they are pursuing common goals and that individual success in the learning task depends on each member's participation in the project.

Summing up, the taxonomy of online L2 collaborative contributions resulting from this study shows how communication through the electronic forum allowed participants to exchange ideas and help each other to carry out an L2 group project. The participants' interventions in the group discussion forums provide evidence of different ways in which collaboration can be realised in online learning environments. In this study, collaboration was apparent mainly through participants' interventions concerning *practical and technical issues* in the completion of the project (*type I contributions*), which accounted for 34.64% of the units of analysis identified in the data set, as well as through *peer feedback* (*type V*), which represented 22.88% of the instances analysed. Furthermore, comments to inform the group on *individual activities* were also frequently found (*type II:* 17.65% of occurrences and *type III:* 13.07% of occurrences). Although less frequently found in the data, *suggestions to complete the language task* (*type VI:* 9.80%) and *praise* for peers' work (*type IV:* 1.96%) also evidence collaborative efforts among group members. Thus, online dialogue in threaded forum discussions seems to have promoted collaboration among learners since regardless of their frequency, the six types of online collaborative contributions included in this taxonomy appear to have been conducive towards the creation of positive group interdependence through meaningful negotiation, a key element in collaborative learning settings (Bruffee, 1999). It can therefore be concluded that students can engage in collaborative language tasks when Web-based environments are used in the L2 class to encourage meaningful interaction between participants. More specifically, the electronic forum can be used as a powerful tool to support the construction of knowledge in the target language through mediated discourse, a central tenet of socio-cultural theory and L2 learning (Lantolf & Thorne, 2007).

4.3. Blogging and knowledge development during the L2 task

This section presents the results obtained from the analysis of participants' L2 output in group blogs. The blog entries were examined in order to explore the learners' use of Internet resources and their application of critical thinking skills and collaboration to carry out an L2 learning project in this online environment. As a result of this analysis, a classification was developed. The classification includes patterns which indicate the participants' application of critical thinking skills and collaborative interventions in the group blogs. It seemed appropriate to frame this classification following the description of intellectual activity in Bloom's Taxonomy (see chapter 2, section 2.4.4) because this taxonomy captures different levels of cognitive ability. Table 4.2 shows a brief overview of the six levels within the cognitive domain in Bloom's Taxonomy. This classification of intellectual behaviour in learning includes *knowledge* at the lowest level of mental activity, *comprehension, application, analysis* and *synthesis* as representing increasingly more complex levels of intellectual activity, and *evaluation* as the highest level of critical thinking skills.

Table 4.2: Bloom's (1956/1971) levels of intellectual activity (adapted from: *Inclusive Learning Group*, 2006).

LEVEL	DEFINITION
Knowledge	Student recalls or recognizes information, ideas, and principles in the approximate form in which they were learned.
Comprehension	Student translates, comprehends, or interprets information based on prior learning.
Application	Student selects, transfers, and uses data and principles to complete a problem or task with a minimum of direction.
Analysis	Student distinguishes, classifies, and relates the assumptions, hypotheses, evidence, or structure of a statement or question.
Synthesis	Student originates, integrates, and combines ideas into a product, plan or proposal that is new to him or her.

Evaluation	Student appraises, assesses, or critiques on the basis of specific standards and criteria.

It is worth reiterating that the six work teams which participated in this study were instructed to (a) develop the blog in a collaborative way, (b) research the topic using the Internet, the Faculty of Languages' library as well as their course materials, (c) avoid "copying and pasting" the information found, (d) develop the topics in a creative way using multimedia resources, (e) focus on some language aspect (e.g. lexis or grammar), and (f) post comments or questions for interaction with peers at the end of the blog entries. The participants were also encouraged to work independently; which means that there was minimum intervention on the part of the teacher-researcher in the development of the language task. To avoid extraneous variables, the instructor did not provide feedback on students' written work. Some mistakes in language use were found in the learners' output, but they were not taken into account in the analysis.

The following threefold classification includes instances of critical thinking skills and collaborative development of knowledge found in the group blog entries. The three main patterns included in this classification are creativity in the use of resources, L2 learning awareness, and collaboration through reflection and evaluation. This classification includes several sub-patterns which show the various manners in which critical thinking skills and collaborative knowledge were manifested in this online learning environment. Frequency counts are not included since the focus of this section of the study was only the identification and description of each pattern of students' L2 online output.

4.3.1. Creativity in the use of resources

The findings reveal the learners' creativity in the presentation and arrangement of information and multimedia resources in the blog entries. Creativity is an indication of learners' application of critical thinking skills, mainly because it is based on *knowledge* —the foundational level of all intellectual activity in Bloom's Taxonomy— and also because it reflects two other levels of intellectual activity: *comprehension* and *application*. Learners' *knowledge* of the topic developed in their group blog is reflected in the information included in the blog entries. In other words, what was included and

what was left out show both the participants' understanding of the topic and their recognition of relevant ideas. Moreover, this creativity in the use of resources shows the students' *comprehension* of the materials through the definitions, summaries and related illustrations included in blog entries. Instances of *application* were identified in the data selection made by the learners in order to complete the language task with minimum direction on the part of the instructor. All in all, the frequent use of multimedia resources to develop and illustrate the topics of the blogs as well as the selection and creative arrangement of information shows that learners' critical thinking skills were applied. The following twelve patterns of learners' creativity in the use of online and printed resources emerged from the analysis of the blog entries.

Table 4.3: The patterns of learners' creativity

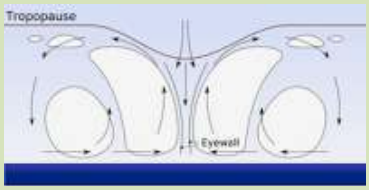
I.	Picture + definition (natural phenomena or environmental problems)
II.	Picture + definition (natural phenomena or environmental problems) + focus on content-specific vocabulary (highlighted terms or hyperlinks to dictionary definitions)
III.	Video + definition (natural phenomena or environmental problems) + focus on content-specific vocabulary (highlighted terms or hyperlinks to dictionary definitions)
IV.	Video related to the content of an entry + comment or question to peers
V.	Picture + summary of course reading materials
VI.	Picture + summary of course reading materials + focus on content-specific vocabulary (highlighted terms or hyperlinks to dictionary definitions)
VII.	Picture + summary of online materials
VIII.	Picture + summary of online materials + focus on content-specific vocabulary (highlighted terms or hyperlinks to dictionary definitions)
IX.	Picture + summary of printed sources + focus on content-specific vocabulary (highlighted terms)
X.	Video related to the content of previous or following entry
XI.	Joke + comment
XII.	Picture + comment

The following entry illustrates creativity *patterns II* and *V* in the use of resources. This was the first entry posted in group A' blog. As shown, the author develops this entry on the topic of hurricanes based on course reading materials and uses visual aids retrieved from online resources to illustrate the definition and description of hurricanes (*pattern V*). Furthermore, hyperlinks to dictionary definitions of content-specific vocabulary —*doldrums* and *squalls*— are introduced in the first paragraph (*pattern II*). At the end of the entry, the author posts questions to readers. This interactional aspect will be analysed in detail under the third pattern included in this classification: collaboration through reflection and evaluation.

MONDAY, 10 SEPTEMBER 2007

What you need to know: Hurricanes

Hurricanes are migratory tropical cyclones. A hurricane has its origins in the North Atlantic Ocean, the Northeast Pacific Ocean, the South Pacific Ocean and in certain regions near the equator, including the Caribbean Sea and the Gulf of Mexico. Hurricanes need warm tropical oceans, moisture and light winds above them to be formed. Most hurricanes originate within the doldrums, a narrow equatorial belt characterized by intermittent calms, light variable breezes, and frequent squalls, and lying between the northeast and southeast trade winds.



Hurricanes consist of high-velocity winds blowing circularly around a low-pressure center, known as the eye of the storm and generally move in a path resembling the curve of a parabola. All tropical hurricanes are areas of low atmospheric pressure near the Earth's surface. Tropical cyclones are characterized and driven by the release of large amounts of latent heat of condensation, which occurs when moist air is carried upwards and its water vapor condenses. This heat is distributed vertically around the center of the storm. From the edge of the storm toward its center, the atmospheric pressure drops sharply and the wind velocity rises. The winds attain maximum force close to the point of lowest pressure. The strength of a hurricane is rated from 1 to 5. The mildest (Category 1) has winds of at least 120 km/h (a tropical storm becomes a hurricane when winds reach 74 mph), while the strongest (Category 5) has winds that exceed 250 km/h.

Tropical hurricanes develop over large bodies of warm water. Tropical cyclones out at sea cause large waves, heavy rain, and high winds, disrupting international shipping and, at times, causing shipwrecks. The storm surge (heavy waves), or the increase in sea level due to the cyclone, is typically the worst effect from land falling tropical cyclones. The broad rotation of a land falling tropical cyclone, and vertical wind shear at its periphery, spawns tornadoes. When they move over land, they lose their strength, but the can still damage buildings, trees vehicles, and other outside objects, turning loose debris into deadly flying projectiles. This is the reason coastal regions can receive significant damage from a tropical cyclone, while inland regions are relatively safe from receiving strong winds.

Have you ever been near a hurricane? Would you like to be near one? Let me know what you think :)

Published by Silvia at 06:38PM

Below is the first entry posted in group B's blog. It shows a combination of *patterns II, IV, VIII* and *IX*. The author begins by presenting a definition of earthquakes, including a picture to illustrate this phenomenon and highlighting content-specific vocabulary in the text (*pattern II*). After this definition, the reader can find an account of the topic, which consists of summaries of course reading materials, online articles and an excerpt from a printed magazine, all of which also contain highlighted terms (*patterns VI, VIII* and *IX*).

September 25, 2007

What are earthquakes?

Earthquakes are **shaking, rolling or sudden shocks** in the Earth`s surface. They are among the most **devastating natural disasters** on the planet. They are destructive mainly because of their **unpredictable nature**. It is impossible to say accurately when **a quake will strike**.

How are earthquakes caused and where do they occur?
The surface of the Earth is **made up of large "tectonic plates**". These plates are in slow but constant motion. When two plates push against each other friction generates a great deal of energy. When the rock separating the plates give way, **sudden seismic ground-shaking movement occurs**. For this reason earthquakes occur most frequently on tectonic fault lines, where two plates meet.
Here there is a site which contains an interesting graphic where you can see how earthquakes occur:
http://www.bbc.co.uk/science/hottopics/naturaldisasters/earthquakes.shtml

The same forces that cause these shocks, causes mountains to be made. Scientists have found that **large earthquakes** usually occur in areas where the more recent mountains were formed. There are two great belts (the Pacific Belt and the Mediterranean Belt) where almost 95 out of every 100 earthquakes occur.
Source: photocopy NATURAL & MAN-MADE DISASTERS

*What do you think the expression **destructive mainly because of their unpredictable nature** means?*

Also, the movement of the rocks causes waves called seismic waves. There are two types: surface and body. Surface waves move along the top of the ground in a side-to-side motion or an up-and-down motion. These can cause great damage to building foundations and other structures when they hit cities or towns. Body waves travel through the Earth's layer and are further defined as primary or secondary waves. Primary waves (P-waves) travel faster than secondary waves (S-waves) and have a push-pull movement. They push (compress) and pull (expand) the rocks in the direction the wave is travelling. P-waves can travel through the Earth's liquid core, whereas S-waves can travel only through rock. S-waves temporarily change the shape of the material that transmits them in the direction the wave is travelling. Seismic waves – surface, P-waves, and S-waves – are recorded on seismographs located throughout the world at seismic stations.
Forum magazine. April, 2001
(From **Also**...to...**stations** posted by: Carolina)

Have you ever experienced an earthquake? If so, what did you feel?

Published by Luciana at 6:51 AM 1 comments 

The following joke was used to introduce an entry in group E's blog and it illustrates *pattern IX* of students' creativity in the use of resources. The student presents a joke and adds a comment that will probably help the other students to relate it to the content of the blog.

September 25, 2007

Chemical substances play an important role in food production and distribution. As food additives, they prolong for example the shelf life of foods, and, as colours and flavourings, they may make foods more attractive.
Joke taken from http://www.newmediaexplorer.org/sepp/sprmrkt-fd_c%202.jpg

Posted by Julia at 16:33 1 comments

The patterns identified as instances of learners' creativity in the use and combination of resources show the various ways in which participants applied critical thinking skills. They did so by using texts from various sources —such as online articles, encyclopaedias and course reading materials— and by including hyperlinks and multimedia to develop the topic of their group blogs. These results seem to indicate that using blogs to carry out an L2 learning task may foster learners' creativity since all groups were able to combine information from different sources and use online resources in meaningful ways. This seems to support the belief that Internet publishing contributes to students' engagement in the L2 task and can promote the development of cognitive abilities (Warschauer et al., 2000).

4.3.2. L2 learning awareness

Particular features which indicate the participants' L2 learning awareness were identified in most blog entries. These features include two main characteristics: (a) focus on semantic fields through content-specific vocabulary highlighted by the students and their use of hyperlinks to dictionary definitions and glossaries, and (b) the use of different sources to develop the topic of group blogs: a course reading packet, a printed magazine (*Forum magazine*, April 2001), and online materials such as articles, videos,

encyclopaedias, dictionaries and various websites. The learners' work on lexis and the use of these resources to develop the L2 task evidence their critical thinking skills at the levels of *application, analysis* and *synthesis*, three of the six strata of cognitive abilities identified in Bloom's Taxonomy. First of all, learners' *application* of informative knowledge was observed in the selection and use of data to complete the language task with a minimum of direction. They used the selected information in a context which was new to them, i.e. blogging. It is worth reiterating that practically none of the students had created a blog previous to their participation in this study. Second, they organised the content of entries clearly and coherently, which shows the students' prior *analysis* of the material. This in turn seems to suggest that the learners engaged in intellectual activity through the *synthesis* of information and selective use of texts and multimedia resources.

Ten combinations of features that show the students' L2 awareness were identified in the students' blogs. These include definitions of key terms and concepts, summaries of topics and subtopics, focus on content-specific vocabulary through the use of hyperlinks, highlighted terms and glossaries, and hyperlinks to websites. These are the patterns found in the data:

Table 4.4: The patterns of learners' L2 awareness

I.	Focus on lexis: highlighted content-specific vocabulary and collocations in the students' texts
II.	Focus on lexis: hyperlinks to dictionary definitions of content-specific vocabulary in the students' texts
III.	Summary of course reading materials + highlighted content-specific vocabulary and collocations
IV.	Summary of course reading materials + hyperlinks to dictionary definitions of content-specific vocabulary
V.	Summary of other printed sources (not included in the course reading packet)
VI.	Summary of online materials + highlighted content-specific vocabulary
VII.	Summary of online materials + hyperlinks to dictionary definitions of content-specific vocabulary

VIII. Summary of online materials + hyperlinks to websites or online articles

IX. Glossary of content-specific vocabulary

X. List of useful links

The following entry from group A's blog, which focuses on vocabulary related to natural disasters, serves to illustrate three of the ten patterns of learners' L2 awareness. In this entry, the definition of a key word which appears in the title, i.e. *whip*, is provided and content-specific vocabulary is highlighted in some sentences taken from an article included in the course reading packet (*pattern I*). This is followed by short descriptions of different categories of hurricanes drawn from an online source: http://www.answers.com/topic/hurricane (*pattern VIII*), and the semantic field is further developed by a list of collocations and a glossary of verbs (*pattern IX*)**.**

Tuesday, 2 October 2007

IT'S VOCABULARY TIME ON NATURAL DISASTERS!

TEXT SKIMMING

FLOYD WHIPS FLORIDA INTO A PANIC
[whip]:to move or to make sth move , quickly and suddenly or violently in a particular direction.
e.g.: The waves were being whipped by 50-mile-an-hour winds.
In this sense, the verb is used figuratively.

Hurricane Floyd, one of *the most ferocious hurricanes* ever **to loom over** the United States, **took a sideswipe** at Florida sending 2m people **fleeing inland** as it **barrelled north** towards Georgia and South Carolina.

FACTS:

Heavy Bands of Rain **swept over** eastern Florida's deserted beaches in the afternoon.

Roads heading west and north **were jammed with** coastal residents and holidaymakers belatedly *obeying evacuation orders***.**

Hurricane Floyd **vented its fury** on the Bahamas **toppling** trees and power lines and **stripping** roofs **off** homes

In Nassau, authorities **lost telephone links** with points throughout the low-lying archipelago where *winds reached 110 mph* and *damage was feared to be extensive.*

In a *driving rain [violent, intense, or forceful]* on New Providence rescuers were trying to reach residents whose homes lost their roofs.

The island of Eleuthera **took the full force of the hurricane.**

Floyd could prove even more disastrous than hurricane Andrew. Floyd was described as more powerful and bigger than Andrew.

As it **thundered** over the Bahamas, it **whipped up** 20 ft seas, **snapping** trees and **bringing down** phone lines.

There were fears that the American space programme could become *one of Floyd's casualties*. NASA said the buildings were designed **to withstand** hurricanes to a certain point.

Floyd was producing winds on its inner ring of about 145mph and its *computer-predicted path* showed the eye passing within 50 miles of Cape Kennedy.

NASA's 12500 workers **had evacuated** the space centre on Monday.

The Atlantic was beginning **to churn** with waves of four to five feet and a dark grey mass filling the eastern horizon promising more to come.

Towers were only built only to withstand *winds of up to 120mph.*

The eye of the storm was expected to move northwards before **hitting** land late tonight in Georgia or North Carolina. However, meteorologists said a small deviation could bring Floyd's *landfall* early, across central Florida.

Some districts are *more vulnerable* to the storm.
The Florida governor ***declared*** *a state of emergency,* and **announced** that *crisis shelters* had been opened all along the coast.

Hurricanes can:

rip doors, windows and roofs off buildings

overturn and destroy buildings

<u>And according to the category</u>:

Category 1. Minimal, 74-95 mph (119-153 km/hr): Some damage is expected, with most of it limited to shrubbery, unanchored houses and items. Some minor flooding will cause pier damage.
Category 2. Moderate, 96-110 mph (154-177 km/hr): Considerable damage can be expected to shrubbery and some trees may be blown down; there will be damage to mobile homes, signs, roofs, windows and doors. Small craft may be torn from moorings and marinas will probably flood. Some low-lying areas and shoreline residences should be evacuated.
Category 3. Extensive, 111-130 mph (178-209 km/hr): Large trees and most signs may be blown down; there may be structural damage to small buildings; mobile homes will be destroyed. Serious flooding will occur at the coast, with severe damage to shoreline structures and flooding up to eight miles (13 km) inland at elevations of five feet (1.5 m) or less.
Category 4. Extreme, 131-155 mph (210-250 km/hr): Expect trees, signs and traffic lights to be blown down, and extensive damage done to roofs, windows and doors. Mobile homes will be completely destroyed. Beaches will be eroded and there will be flooding as far as 6 miles (9.5 km) inland for anything under 10 feet (3 m) above sea level. Anyone staying within 500 yards (457 m) of shore will be evacuated, as will all single-story residences within 2 miles (4 km) of shore.
Category 5. Catastrophic, 156+ mph (251+ km/hr): Trees, signs, traffic lights will be blown down. There will be extensive damage to buildings and major damage to lower floors of structures less than 15 feet

(4.5 m) above sea level within 500 yards (457 m) of shore. Massive evacuation of residential areas 5-10 miles (8-16 km) from shore will be required.
Taken from: http://www.answers.com/topic/hurricane

COLLOCATIONS FOR HURRICANE:

The fiercest/most catastrophic/disastrous/devastating/dreadful/terrible/tragic/ferocious/vioent/ferocious/ violent/tempestuous/deadly/destructive **hurricane.**

GLOSSARY OF VERBS:

to loom: to threaten.

to take a sideswipe: to hit.

to flee: to run away from sth.

to barrel: to move in a high speed.

to sweep: to move swiftly with strong, steady force: The wind swept over the plain.

to be jammed with: A crush or congestion of people or things in a limited space.

to vent: To release or discharge with force.

to topple: to cause to totter and fall.

strip off: to remove sth of sth.

to take the full force: to be hit most intensively.

to thunder:(figurative)To express violently, commandingly, or angrily; roar

to whip sth up: if the wind whips up dust, waves, etc. it makes it/them rise quickly.

to snap:To pull apart or break with a snapping sound

to bring down: to make sth fall down.

to withstand: To be successful in resisting.

to evacuate:To withdraw or send away (troops or inhabitants) from a threatened area

to churn:To shake or agitate vigorously

to hit (land): to reach.

Published by José at 8:03 AM 2 comments

These patterns show some of the various ways in which students working in an online environment generated knowledge relevant to the L2 task, through the integration and combination of materials and multimedia resources in a way that was new to them. The participants' L2 output shows that blogging allowed them to publish their language work in meaningful ways. For instance, most of the blogs show that in order to present the topic they combined written text (summaries, definitions and short accounts), pictures, videos and hyperlinks. Therefore, the learners' use of online resources to present and illustrate the topic and their work with content-specific vocabulary could be indicative of their L2 awareness and of the possibility that they were developing their L2 skills through the completion of this online task.

4.3.3. Collaboration through reflection and evaluation

Collaboration through reflection and evaluation is the third category in the classification of instances of critical thinking and collaboration in the L2 task carried out through blogging. This third category accounts for participants' reflective participation in group blogs. It was found that group members stated their opinions by assessing ideas and information and making recommendations for the readers of their blogs. They also posed questions at the end of entries; readers (classmates in this case) answered these questions and sometimes also praised their classmates' work. These types of contributions seem to have served a dual function. Through these comments and questions, learners assessed the ideas presented in blog entries, and at the same time, interacted with classmates, which in turn contributed to the further development of the topic dealt with in the blog. Blogging, therefore, allowed this group of learners to engage in a reflective online dialogue, an activity that appears to have contributed to the development of collaborative knowledge. These results show that the participants in this study applied higher order thinking skills, not only through analysis and synthesis, as identified in the previous category, but also through *evaluation*, the highest level of intellectual activity in Bloom's Taxonomy. Four patterns of collaboration through reflection and evaluation were found in the data. They are the following:

Table 4.5: The patterns of collaboration through reflection and evaluation

I.	Recommendations to visit websites
II.	Questions to peers —with or without a preceding reflective comment
III.	Peer comments in response to questions
IV.	Spontaneous peer comments or opinions about the content of entries (i.e. the comments and opinions were not prompted by peers' questions).

To illustrate, the following recommendation to visit a website exemplifies *pattern I*. This comment was posted in the first entry in group B's blog, which introduces the topic of earthquakes.

> Here there is a site which contains an interesting graphic where you can see how earthquakes occur: http://www.bbc.co.uk/science/hottopics/naturaldisasters/earthquakes.shtml

Patterns II and *III* are illustrated in the following exchanges found in group C's blog. The dialogue begins with a reflective comment and a question to blog readers posted at the end of an entry that deals with the topic of marine pollution**,** and it continues with the answers of two students.

> There are millions of animals which are dying because of marine pollution... Man himself is destroying the life in the sea... Why? Well, we guess that question does not have a reasonable answer...Leave a comment.
>
> http://www.greenpeace.org/international/campaign
>
> Published by Sofía at 9:57 PM 2 comments

> Post a Comment On: **Water Pollution, Deserts and Life in the Sea**
>
> **"Pollution & the sea - like oil and water"**
>
> 2 Comments - Show Original PostCollapse comments
>
> **Alejandra said...**
> Why can a lot of people do some much damage to our seas? Well, I think in the end we should be grateful for those people who care enough to help.
> October 9, 2007 10:22 AM
>
> **Gloria said...**

I think that people are very selfish because they are using the different kinds of natural resources to get what they want and to improve their lives. They are not thinking about the animals that live in the sea and they are doing too much harm to them. I think that we should do something in order to help these animals!!
October 9, 2007 10:38 AM

The comment included below can be classified as *pattern IV* in this category. This intervention shows a student's praise and opinion about an entry in blog A that focuses on collocations and includes a glossary of verbs related to hurricanes.

Post a Comment On: **NaTuRaL dIsAsTeRs**
"IT'S VOCABULARY TIME ON NATURAL DISASTERS!: TEXT SKIMMING"
1 Comment - Show Original PostCollapse comments
Sofía said...
Great Glossary and interesting Collocations!!! These will be very useful when studying!! I think you all did an excellent hard work! Great Blog!
9 October, 2007 10:09 PM

As regards *collaboration through reflection and evaluation*, the data indicate that this feature is mostly found at the end of entries, where writers post questions to establish a dialogue with blog readers. The answers to these questions and comments in which classmates share their points of view suggest that there was collaboration as the students engaged in the construction of knowledge to create their blogs.

As these findings show, the use of blogging for the completion of an L2 task by this group of EFL undergraduate students evidences the application of critical thinking skills and collaboration. The threefold classification presented above accounts for the various ways in which the learners approached the development of knowledge through this online medium. More specifically, learners' creativity in the use of resources, their L2 learning awareness and collaboration in the L2 task became apparent in their use of multimedia resources, written texts and hyperlinks, as well as the questions and reflective comments posted in blog entries, all of which contributed to the development of each of the topics in the group blogs. Thus, these learners' L2 written output reveals *how* this online medium may be conducive to the development of critical thinking and the collaborative construction of knowledge in the language class, which are key

features in the development of collaborative knowledge (Beatty, 2003; Bender, 2003; Bruffee, 1999; Lion, 2006).

4.4. The learners' collaboration in online forums and the development of blogs: A comparative analysis

In this section, I explore the relationships between the types of online L2 collaborative contributions in the group debate forums, as identified in the taxonomy presented in section 4.2 above, and the instances of critical thinking skills and collaborative development of knowledge included in the threefold classification of learners' output in the group blogs (see section 4.3 above). The comparative analysis of the online group debate forums and group blogs indicates that there is a relationship between students' contributions to the forums and their L2 output in the blogs. Table 4.3 below shows a summary of the findings.

Table 4.6: An overview of the comparative analysis of group forums and blogs

	Group A	**Group B**	**Group C**	**Group D**	**Group E**	**Group F**
FORUMS	Forum A	Forum B	Forum C	Forum D	Forum E	Forum F
Group participation	all	all	– 1	all	– 1	– 2
Members' interventions	20	15	15	20	3	5
Online L2 collaborative contributions:						
Type I	17	7	15	10	0	4
Type II	5	3	6	11	0	2
Type III	3	5	6	3	3	0
Type IV	2	0	1	0	0	0
Type V	13	9	4	8	0	1
Type VI	5	7	0	3	0	0
Total of online L2 collaborative contributions	**45**	**31**	**32**	**35**	**3**	**7**

BLOGS	Blog A	Blog B	Blog C	Blog D	Blog E	Blog F
Number of entries	10	7	13	10	9	17
Time period	3 weeks	3 weeks	2 weeks	3 ½ weeks	2 weeks	1 day
Entries posted	7 days	6 days	8 days	8 days	3 days	1 day
Group participation	all	– 1	all	all	– 1	– 2
Creativity in use of resources:						
Course materials	✓	✓	✓	---	✓	✓
Printed materials	---	✓	---	---	---	---
Online materials	✓	✓	✓	✓	✓	✓
Pictures	9	2	7	2	15	4
Videos	4	1	2	2	---	1
L2 learning awareness:						
Hyperlinks to dictionary definitions	✓	---	---	✓	---	✓
Highlighted terms	✓	✓	✓	---	✓	---
Glossary	✓	---	---	---	---	✓
Hyperlinks to websites	✓	✓	✓	✓	---	---
Collaboration through reflection and evaluation						
Recommendations to visit websites	✓	✓	✓	✓	---	---
Questions	5	4	11	6	3	12
Answers	10	6	5	2	1	3
Spontaneous peer comments	3	3	---	1	---	---

References:
– 1 / – 2: group members who did not participate.
all: all group members participated
✓: material or strategy used
---: material or strategy not used
Numbers indicate the identified instances.

As table 4.3 shows, groups A, B, C, and D ranked higher than groups E and F in the number of online collaborative contributions in the forum debates. The students' interventions found in group forums A, B, C and D range from 20 to 15 and most types of collaborative contributions were found in each of these group discussions. All group members participated in these forum debates, except for one student in group C. Interestingly, a higher frequency in forum collaboration in groups A, B, C and D is matched by a higher frequency of participation and a richer use of resources in each of these groups' blogs. For instance, there is a greater variety of patterns of creative use of resources and features signalling participants' L2 learning awareness and collaboration in these groups' blogs than in groups E and F. Moreover, on average, the students in

groups A, B, C and D posted two to four entries each weak over a period of about 20 days, while the participants in group E posted their entries during only three days and group F's entries were posted on just one day. It was also observed that, in the case of groups A, B, C and D, all members contributed to the creation of their blog except for one student in group B, while only two out of three members participated in group E and three out of five in group E. This clearly reveals greater participation —and possibly commitment— in the L2 project for groups A, B, C and D than for groups E and F.

As regards the output in blogs A, B, C, and D which points to critical thinking, first, the participants' creativity in the completion of the L2 task becomes apparent in the use of a variety of online resources such as multimedia, visual aids and hyperlinks. Secondly, instances of participants' L2 learning awareness can be observed in the use of hyperlinks to dictionary definitions of content-specific vocabulary, highlighted key terms within texts, glossaries and entries which present key words and collocations used in the students' texts. And thirdly, a frequent interaction between blog authors and other students in the class was observed in these four blogs. For instance, in blogs A and B there are answers from peers to all questions posted by the blog authors, and in the case of groups C and D there are answers to approximately half of the questions posted. Furthermore, in blogs A, B and D there are spontaneous peer comments on entries which do not contain questions, and in blogs A, B, C and D opinions and recommendations to visit websites at the end of a few entries can also be found. This online dialogue, not necessarily prompted by questions and carried out rather naturally by the participants in the L2 task, seems to be an indication of students' engagement in the collaborative development of knowledge in the target language. This finding, which indicates that blogging was conducive to collaboration within most groups of students, supports the view that Web-based learning activities can promote socially constructed knowledge (Bender, 2003; Bruffee, 1999; Warschauer et al., 2000; Weigel, 2002).

On the other hand, members of groups E and F did not participate as frequently in debate forums as students in groups A, B, C, and D did. For instance, there were only three interventions in group E and five in group F. In addition, very few types of collaborative contributions were identified in both group forums, four types were found in group F and only one type in group E. Moreover, blogs E and F were developed over a shorter time period than blogs A, B, C and D. Blog E was developed over a period of

two weeks with activities reported only on three days, and blog F was developed on only one day. As regards creativity and L2 awareness, the students in both groups included definitions and summaries based on course reading materials and online articles, and also used pictures to illustrate topics presented in the blog entries. Hyperlinks to dictionary definitions, however, are not found in the texts included in these blogs (only a list of hyperlinks of thirteen specific terms is included in blog F) and the use of multimedia is scarce. For example, multimedia resources are not found in group E's blog and only one video is included in group F' blog. Furthermore, interaction between blog authors and classmates is scarce; in fact, only one answer was found to the three questions posted in blog E and three answers to the twelve questions in blog F. All in all, collaboration in the L2 task and higher order thinking skills are not as evident in the blogs created by groups E and F as they are in blogs A, B, C and D.

Summing up, these results indicate that the different types of learners' contributions to the completion of the L2 task in these online learning environments — group forums and blogs— signal their potential for the collaborative construction of knowledge and the application of critical thinking. The results also show that the interaction between group members seems to have fostered L2 learning awareness and the creative use of online resources in the task completion. As noted earlier, interaction was more frequent in the blogs in which blog entries and questions to peers were posted regularly and over a longer period of time. This frequency of participants' interaction in blogs can be an indication of their commitment to the L2 task, which may in turn have encouraged the collaborative construction of knowledge.

In conclusion, these findings show that the use of online media, such as the electronic forum and blogs, in the EFL class was conducive to the development of group projects, and it encouraged critical thinking and the joint construction of knowledge in the target language. The results reported here also support the beliefs that collaborative learning contributes to a nonfoundational development of knowledge (Beatty, 2003; Bender, 2003; Bruffee, 1999; Lion, 2005, 2006). The taxonomy of online L2 collaborative contributions and the categories of approaches to knowledge developed in this study illustrate how ICT could be used in the L2 class to open new ways of communication among learners by breaking up physical barriers and linear time, and by creating networks of collaboration. It can be said, therefore, that what was observed in

the learners' textual productions in this study instantiates the constructivist view that ICT in education can be used to develop critical thinking skills through collaborative learning (Gokhale, 1995) and that the World Wide Web should be used as a medium for social interaction and learning (Warschauer et al., 2000).

4.5. Triangulation of results

As explained in chapter 3, a post-study questionnaire, the external raters' analyses, the researcher's field notes and the comments provided by an external observer were used to triangulate the results from the analysis of the two main sets of data, namely the group debate forums and the blogs.

The research literature refers to triangulation as an essential element to corroborate results in qualitative and quantitative analysis. It is one of the ways that aids in ensuring that the process of study is consistent, a sort of "quality control" (Miles & Huberman, 1994). As Miles and Huberman (1994) point out, "the aim is to pick triangulation sources that have different biases, different strengths, so they can complement each other" (p. 267). In his book *Qualitative Evaluation and Research Methods*, Patton (1990) identifies four types of triangulation: triangulation by method, by data, by multiple analysts and by theory. In this study, I applied triangulation by data and by analysts.

4.5.1. Inter-rater reliability

The two external raters (raters 1 and 2) analysed 50% of the group debate forums and blogs produced by the students during the study. They were instructed to classify the participants' exchanges in three group forums by applying the taxonomy of online L2 collaborative contributions and classify the students' contributions in three group blogs by using the threefold classification of approaches to knowledge. As explained in chapter 3, the raters worked independently and with the same sets of data. Once they completed their classification, the instances of disagreement between the external raters' findings and the findings produced by the researcher were discussed. This procedure threw light on the categories of analysis, some of which were adjusted to make their

features clearer and more precise. The level of agreement between each of the two external raters' and the researcher's findings was calculated using a formula for check-coding suggested by Miles and Huberman (1994):

$$\text{Reliability} = \frac{\text{number of disagreements}}{\text{total number of agreements} + \text{disagreements}}$$

According to Miles and Huberman (1994), high internal consistency of results is achieved when the intercoder reliability is close to 80%. As regards the application of the *taxonomy of online L2 collaborative contributions*, 76.47% of intercoder internal reliability was attained between rater 1 and the researcher, and 75.29% between rater 2 and the researcher. In the context of this study, these two percentages can be considered a satisfactory-to-high level of inter-rater reliability because the taxonomy was not intended as a prescriptive classification of fixed categories, but rather as a descriptive representation of the findings.

The points of disagreement call for some analysis. To begin with, the findings revealed a few instances of disagreement between the raters' and the researcher's classification of some contributions. For example, the external raters classified three units of analysis as *Type I A*, i.e. contributions related to technical issues, if technical matters were mentioned in questions, whereas the researcher had classified them as *Type V A*, i.e. requests for feedback. Moreover, on some occasions, interventions identified as *Type V A* by the researcher were considered as instructions to classmates (*Type I D*) or as suggestions to take a further step in the language task (*Type VI*) by the external raters. Conversely, some units of analysis identified as *Type VI* by the researcher were identified as requests for feedback (*Type V A*) by the external raters, if they were expressed in interrogative form. Another interesting instance of disagreement was the case in which one of the raters classified an intervention as a reminder about a deadline to complete the language task (*Type I D*), whereas this unit of analysis had been categorized as *Type VI* by the researcher. There was also an instance in which a deadline reminder (*Type I B*) was classified as a contribution related to a technical issue by the external raters, because a technical matter was mentioned by the student. These examples show some instances in which categories seem to overlap and indicate that the types of participants' collaborative contributions accounted for in the taxonomy can be

interpreted in slightly different ways. This may be due to not only the different analysts' interpretations of the data, but also to the close semantic relationship between some of the categories included in the taxonomy.

As far as the *threefold classification for the application of critical thinking skills and collaboration* in the group blogs, inter-rater reliability was high. There was 98% of inter-rater reliability between rater 1 and the researcher and 95% between rater 2 and the researcher. The higher level of inter-rater reliability for this portion of the data is probably due to the fact that the learners' use of resources, their L2 learning awareness and their collaboration in the development of group blogs can be classified more easily and objectively than their contributions to debate forums.

As regards the category which describes participants' *collaboration through reflexion and evaluation*, there was complete agreement in the classifications of the two external raters and the researcher. There were only three instances of disagreement between the external raters' and the researcher's analyses of the other two categories: *creativity in the use of resources* and *L2 awareness*. For instance, one case of disagreement occurred when one of the raters considered that a video had been included to illustrate the content of a previous entry (*pattern X,* in the category *creativity in the use of resources*), whereas the other rater and the researcher classified the same unit as a case of support for the definition presented in the same entry (*pattern IV,* in *creativity in the use of resources*). The second instance of disagreement was the classification of an entry as *focus on lexis* (*pattern I:* in the category *L2 learning awareness*) by one rater and the researcher, while the other rater classified it as a *glossary* (*pattern IX*, in *L2 learning awareness*). The last case of disagreement also involved patterns in L2 learning awareness. The researcher and one external rater classified an entry as *a summary of an online article containing hyperlinks to dictionary definitions* (*pattern IV*, in *L2 learning awareness*), while the other rater labelled it as *focus on lexis with hyperlinks to dictionary definitions in sentences* (*pattern II* in *L2 learning awareness*). The last discrepancy was probably due to the fact that the content of the entry was presented in separate sentences; however, upon closer scrutiny, the entry actually contained a synthesis of the online material.

The instances of disagreement among raters provided useful insights. To begin with, the different categorisations of forum contributions by the raters were used by the researcher to make adjustments in the findings originally obtained from this set of data.

Thus, the units of analysis related to technical issues *(Type I A*) were classified as requests for feedback *(Type V A*) if they were presented in the form of questions asking for peers' help. Moreover, a contribution initially classified as a deadline reminder (*Type I B*) was relocated under *Type I A* because the external raters identified it as a comment which mainly referred to a technical matter. As regards the other instances of disagreement referred to above, (i.e., those instances related to some units of analysis corresponding to *Types I A, B and D, and Type VI*), changes in the initial categorisation of the data were not necessary since the different analyses revealed only slightly different perspectives between the researcher and the raters. Finally, as regards the classification of approaches to knowledge in the development of the blogs, no adjustments were made to the initial classification of the data since the researcher and the raters agreed that the few instances of disagreement were negligible and therefore did not pose any significant changes in the findings.

4.5.2. The post-study questionnaire

Upon completion of the online L2 activities, the post-study questionnaire was administered to the 20 students who participated in the development of blogs. The questionnaire consisted of three sections. The first section included ten yes/no questions to which students could add their comments. The second part was a set of eight open questions and the last section consisted of a peer-evaluation form. This questionnaire is included in Appendix A.2. Sixteen participants answered it, which represents an 80% return rate. The analysis of the data gathered from the post-study questionnaire allowed the researcher to examine students' perceptions about using the Internet as a medium for L2 learning as well as their opinions about the group members' contributions to the language task.

The answers to the first section of the questionnaire show that, as regards Internet literacy, 94% of the participants admitted to being able to effectively search for information on the Internet**,** and some of them commented that the Internet was “a useful tool”. Some students explained that it was difficult to find “good” information. Others commented that the information “was not enough” to complete the language task. Only one student said she could not search for information effectively**,** attributing this to lack of time and not having Internet access at home. Sixty two percent of the

respondents said they used Boolean logic, 13% said they did not use it because they did not understand how the system worked or because they could not get used to it**.** Twenty five percent of the participants did not answer this question. As regards attaching files in debate forums, only 25% of the students said they did not do it, stating it was not necessary to do so.

Furthermore, all students who answered the questionnaire said that they had participated in the development of blogs and agreed that the materials and activities in the English Language II virtual classroom were relevant to their L2 learning. They also indicated that using the e-mail system was useful to communicate with their peers and the teacher. In relation to the activities in the virtual classroom, two students pointed out the following:

> - The activities in the virtual classroom enhanced my computing skills.
> - [Using the virtual classroom] was good to deal with one of the most difficult topics in the syllabus.

These comments may reveal that some students did recognise the relevance of using the online medium to learn English. However, when it comes to participation in group forum, half of the participants said they did not participate in forum discussions regularly and attributed this to lack of time, difficulty in getting used to the habit of posting their contributions, and not having an Internet connection at home. Even though only 50% of the students said they regularly participated in threaded discussion forums, all agreed that these debates were useful to their L2 learning. They felt they could practise the target language, use English in real situations and exchange ideas with the members of their groups. This is illustrated in the following comments:

> - We can express ourselves, improve our English and use the language in real situations.
> - It was a great manner of exchanging ideas and sharing things.
> - You have the opportunity to participate and as [your contribution] is written you do it more consciously.
> - Although I haven't participated that much, I read the forum discussion every time somebody wrote a comment there, because different opinions broaden your mind.

The last question in the first section of the post-study questionnaire referred to group work in the development of blogs. Answers to this question reveal that 87% of the participants found working in groups a positive experience, though some pointed out that not all group members contributed equally to the project. As far as the positive comments are concerned, these are some examples:

> - The work was not so hard working in groups.
> - We divided the topics. It was a productive experience, because we helped each other.

> - It was useful because we could share the work but, personally, I don't prefer to work in groups because not all the peers are equally responsible.

Nonetheless, two students from group F noted that working in groups was not useful to them due to difficulties in reaching agreement and to "a lot of problems with individual participants", as one of them said.

To sum up, the analysis of the first part of the questionnaire shows that most of the participants in this study believed to have been able to effectively use the Internet and the English Language II virtual classroom to accomplish the L2 project. In fact, they said they found group debate forums and blogging relevant to their L2 learning, even though the lack of home Internet connection affected their participation in online forums to some extent. Therefore, their perceptions corroborate the findings obtained from the analysis of their contributions in the forums and blogs. On the one hand, most of the participants who reported having enjoyed working in groups belong to groups A, B, C and D. These groups' output was characterized by frequent interaction in the forums and blogs. On the other hand, some of the students who referred to difficulties in accomplishing the L2 task collaboratively belonged to group F. The blog and debate forum of this group revealed a low level of participation and collaboration (see section 4.4 above).

The data obtained from the second section of the questionnaire provide more detailed information regarding students' opinions about the English Language II virtual classroom and the online activities. In relation to the frequency of use of the virtual classroom, 19% of the participants reported using it every day and 12.05% reported doing so four to five times a week. These students noted that they used the virtual classroom often because they had Internet access at home and they wanted to do the online activities on time. Of all the participants, 31% said they logged on twice or three times a week to participate in the group forums and check their e-mails. Another 31% of students said they logged on once a week mainly because they did not have Internet access at home**.** This forced them to go to Internet cafés, which limited their participation on a regular basis. For instance, one participant noted that he "hardly ever" used the virtual classroom due to his studies and work commitments, yet admitted that he "would have liked to participate more". Another student, who said she used the virtual classroom two or three times a month explained:

> - I would have liked to use it more frequently, but I don't have Internet access at home, and in my town Internet cafés often have problems with Internet connection and they are not open all day.

As regards the virtual classroom sections that the students found most and least useful, 88% of the students said that they found the *forum section* very useful**.** They commented that they used it often because they wanted to participate in debates with their peers and practise their writing skills. The following comments illustrate some of the participants' opinions about the forums:

> - [I used the forum] to keep in touch with the members of my group while preparing the blog. (a student from group A).
> - [The group forum] was very useful because I could communicate with my peers and we exchanged information. Also, we could talk about the development of our blog. We could send and receive messages with comments about the work that the other members of the group were doing (a student from group B).
> - This section helped me develop my skills when writing about different topics (a student from group C).

Group E members did not mention using their group forum. Two students in group F referred to the forum discussions, but only one of them made specific reference to exchanging ideas with group members to complete the language task. The students' opinions about the forums also confirm the findings concerning their actual contributions to these debates. As mentioned earlier, groups E and F discussion forums showed scarce learners' online interaction, while the forums of groups A, B, C and D evidenced more active participation (see section 4.4. above).

In their answers, some participants also referred to the usefulness of other sections in the virtual classroom. The *web resources* section was chosen by 44% of the students as the most frequently used section. They explained that they used this section to look for information in reliable sources and to consult the tutorials for Internet searches and blogging included by the instructor. Other frequently used sections mentioned by students were the *webmail* —mentioned by 25% of the participants— the *learning activities* section —19%— and the *files section* —13%.

As regards less frequently used sections, 56% of the respondents said that the *calendar of events* as the least relevant, explaining that, since they regularly attended face-to-face classes, this kind of reminder about online activities was not necessary. Of the participants, 25% referred to the *site description* as one of the least useful since they felt that the instructions included in this section were unnecessary. The *contacts* section was the least useful according to 6% of the respondents, and 19% did not mention any section as the least relevant. Even though the *calendar of events*, the *site*

description and the *contacts* sections were not perceived by the students as the most relevant ones, they can still be considered useful tools in a virtual classroom from the point of view of the instructor. The *calendar* and *site description* sections can aid in terms of the organisation of activities. Likewise, the *contacts* section might be conducive to communication among willing participants.

When students responded about the online activities in which they participated more often, *blog development* ranked the highest with 75% of the participants choosing this option. Most of these students explained that it was a new and exciting experience for them**,** one in which they were able to display their creativity. To illustrate, the following are excerpts of what two students said:

> - The activity in which I participated more often was the blog development because, in my personal opinion, it was the most interesting one and it was a real challenge as I had never been involved in such creation before. (a student in group E)
>
> - It was a new experience for me and I wanted to learn more about the Internet. (a student in group B)

The findings also show that only 38% of the students who answered this questionnaire chose *group debate* in the *electronic forums* as the online activity in which they participated more frequently, noting that this space allowed them to be in contact with their group and share opinions and resources to develop their blog. The prevalence of face-to-face communication with peers and the teacher in the classroom context may explain the relatively low use of the electronic forum as an online space for frequent interaction.

Regarding the students' perceptions about the difficulties in using the Internet when trying to complete the language task —i.e. participating in the forum discussions, creating blogs, uploading information— 50% of the participants said that they either did not have any difficulty or they learned how to go about certain online activities with the help of their peers or the teacher. Of the respondents, 19% referred to difficulties in creating the blog because it was something new to them, and 25% said they did not know how to upload videos but managed to do so with the help of their peers and the teacher. Overall, most answers revealed that students value other people's help, as one student pointed out:

> - My main difficulty was in creating blogs. I've never done one before, it was the first time for me. I didn't know how to manage it. But with the help of my classmates and the teacher I could solve it. (a student in group B)

The last two questions included in this second part of the questionnaire focused on group dynamics. As regards communication within groups, the analysis of the participants' responses reveals that 56% of the students participated in online discussions. Most did so by means of the group forums, some also mentioned the use of e-mails, and 38% referred to face-to-face communication. In relation to management of the language task, 56% of the participants said they divided the topics in a manner that allowed each group member to concentrate on a specific topic to be included in the blog. Most of these students commented that they did not choose a group leader, but each member of the group was in charge of working on his or her specific topic or subtopic. Only two students from group A explained they had designated a leader in order to organise group work. Most participants also said that each group member had to provide content-specific vocabulary, and 25% of them explicitly referred to "good group dynamics" or to "having a nice group". However, one student from group E and one from group F referred to difficulties in group work. They explained that they had to work more than other students because some members of the group had dropped out. Also, a student from group D noted the following:

> - We divided the topics so that each one dealt with something, but I think that groups of many people are worse because not all of them can participate with the same frequency and it is not so comfortable. I think that just working with a partner would be fine.

Only a small percentage of the participants (12%) did not answer the question regarding group dynamics. In general, the most frequent comments on this question are related to the students' getting on well and to group work organisation. The following can be considered a representative example of the most frequent opinions found in this respect:

> - We had a nice group. We got on very well, which was important in order to carry out our work successfully. At first, we didn't know how to start working, how to organise our work and how to distribute the task. But then, through the forums we could talk about it. (a student in group B)

In the "additional comments" section of this second part of post-study questionnaire, 50% of the participants referred to the teacher as "good, supportive and willing to help". Some added that the class was very well organised, and 44% referred to using the Internet for language learning as interesting, useful and important in a university course. Two comments referred to some kind of difficulty but did not

specify the source of the difficulty, and 31% of the participants did not complete this section.

To summarise, the information obtained from the second part of the post-study questionnaire shows that the participants in this study perceived using the Internet — especially the virtual classroom and blogs— as relevant to their language learning. It is also clear that home Internet access, or lack thereof, affected their participation in the online activities. Participation in group forums, the creation of blogs and interaction with peers and the teacher are the online activities preferred by the participants in this study. Most students expressed that they enjoyed working in groups and that each group member focused on a specific subtopic to contribute to the blogs. One group reported to have chosen a group leader for the project. Only two students reported difficulties in doing group work, mainly due to the fact that some members had dropped out. As regards the role of the teacher, effective organisation and supportiveness were mentioned as the most salient features.

The third part of the questionnaire consisted of a peer-assessment form. Each participant who answered the post-study questionnaire was supposed to evaluate the members of his/her group by completing this form. Most students did so, and 41 peer-assessment forms were submitted. The following table presents the students' peer evaluation results, and a discussion of their comments follows below.

Table 4.7: Peer-assessment

Cooperation	Did not pay attention to and did not value the opinion of others.	Paid attention to but did not value the opinion of others.	Paid attention to but was not evident that he/she valued the opinion of others.	Paid attention to the opinions of others and made relevant contributions.
Percentage of answers	**5%**	**0%**	**5%**	**90%**
Contribution to the group project	Did not contribute to the completion of the project.	Contributed to the project, but work was insufficient.	Contributed to the completion of the project with adequate work.	Contributed to the completion of the project and submitted high-quality work.
Percentage of answers	**3%**	**5%**	**24%**	**68%**

Participation	Did not participate in the group.	Occasionally participated in the group.	Often participated in the group.	Consistently participated in the group.
Percentage of answers	**3%**	**12%**	**29%**	**56%**

The results listed in Table 4.7 show that most group members ranked high as regards cooperation with their peers, i.e. they were perceived as attentive and their contributions were considered relevant. Most students were also considered to have contributed to their group project with high-quality or adequate work. Only a small percentage of the respondents said their classmates' contributions were deficient. Most students also assessed their peers' participation as consistent, while a small percentage reported group members' participation as occasional.

The participants also included additional comments regarding peer assessment in 38% of the post-study questionnaires. A few of these comments echoed earlier perceptions that group work was hindered by some members' lack of responsibility and commitment to the project. Yet other comments reflected satisfaction with classmates' performance in the completion of the language activities. For instance, a student from group A noted that two group members had to be reminded to collaborate because they did not participate actively in the group activities; she also explained that these classmates finally helped the group by providing useful information to complete the blog. Also, a member of group C said that one of her peers was interested in the topic they had to work on, while the other did not participate fully because she lived in a small area where Internet access was minimal at best. Furthermore, a student in group D pointed out that two group members were “eager to help and very responsible”, while the other peer did not participate in the presentation of the group's oral report. As regards group F, one student referred to his peer as “a kind and very responsible student” who helped him in the development of blogs, while another student expressed concern over her classmate's lack of involvement in group work.

Overall, these opinions show that most members from groups A, B, C and D were perceived by their peers as willing to contribute to their group's project. It is not coincidental, therefore, that groups A, B, C and D ranked higher in collaborative interventions in debate forums than groups E or F, and that the L2 output of the former

in blog entries revealed a greater use of critical thinking than the L2 production by groups E and F. Moreover, the scarcity of opinions on the issue of peer collaboration in group E and the negative comment by one member from group F seem to correlate with these groups' lower performance in collaborative interventions and critical thinking in the L2 task (see section 4.4 above).

To summarise, the students' answers to these three sections in the post-study questionnaire are consistent with the results of the analysis of the contributions in group forum debates, students' application of critical thinking skills and their collaboration through reflection and evaluation in the blogs. Most members of groups A, B, C and D viewed the forum as a useful tool to keep in touch with the group, exchange ideas and share opinions. Many of these students also expressed their appreciation for their peers' help. Moreover, most of these students perceived blogging as a useful L2 learning activity. Regarding groups E and F —which ranked lower than groups A, B, C and D in collaborative contributions and the application of critical thinking skills in the L2 task— some group members reported difficulties with group work and admitted that they had not participated frequently in the forums. It can be concluded that the post-study questionnaire was useful not only in the elicitation and analysis of participants' opinions regarding the online activities, but also in the corroboration of findings from the other sets of data.

4.5.3. The researcher's field notes

One of the mandates of qualitative inquiry is to go into the field and get close to situations, people and events so as to gain insights into the phenomena under study. The design and exploratory nature of this research work called for the researcher's direct contact with the participants. Being the researcher and teacher of the course allowed me to gain insights into the dynamics of the online learning activities and the behaviour of the participants at different times during the project. Personal contact with the participants helped me to better understand how they felt about using the Internet in the English II Language class and to address their needs and help them overcome difficulties which might have hindered their participation in the study. The challenge was to strike a balance between being an insider, i.e. the course instructor, and being unobtrusive so as not to condition the students' performance. In relation to this, it is

often suggested that researchers in qualitative studies should build empathy with the people being studied while adopting a stance of neutrality with regard to the phenomena under study. This balanced approach helps to increase the researcher's understanding of the situation and to avoid manipulation of data and findings. As explained in chapter 3, I aimed at *emphatic neutrality*. Moreover, I kept a research journal where I recorded my perceptions of the context, the online learning environment and participants' feelings and attitudes towards the online activities. Having briefly described my stance towards the data and the participants of this study, I will now present an account of my field notes.

One of the most relevant aspects recorded in the field notes pertains to the learners' accountability and their involvement with the online tasks. Approximately half of the members in groups A, B, C and D rarely missed classes held at the multimedia classroom, and participated regularly in forum discussions and the development of blogs. Moreover, they were very responsive and sensitive to their peers' contributions in the group activities. Two students in group A, two in group B and one in group D showed a high level of responsibility and accountability as group members and contacted me frequently, either personally or through e-mail, about issues concerning the development of blogs. They seemed concerned about task deadlines and about finding material on the Internet. I noted down that they frequently logged on to the virtual classroom and naturally assumed the role of leaders of their group by organising activities and reminding their classmates about the activities they were supposed to do. For instance, I wrote the following about group A:

> (name of student) and (name of student) seem to get on very well. They look very enthusiastic about using the Internet in this class. They soon became familiar with the virtual classroom and although they do not know much about creating blogs, they seem willing to learn.

As recorded in my notes, most of the participants of the study had never created a blog before; therefore, I had to spend time guiding them through the steps. For instance, group C had some difficulties in developing their blog, yet they did not ask for help immediately. After our fourth meeting in the multimedia classroom, I wrote down:

> They (three members from group C) gathered around a PC and asked me to go through the mechanics of creating a blog. (…) I also helped them to insert hyperlinks and upload videos. They looked satisfied when they finally could do these things by themselves.

Despite these technical difficulties, most students seemed to enjoy working in groups. One surprising aspect about group D was their enthusiasm for the topic they had to deal with, which was about ecology. One of the students was a Greenpeace member and she

worked hard to obtain and organise relevant information from up-to-date Greenpeace articles. She told me she was "very happy to be working with topics related to Greenpeace." In my view, her enthusiasm influenced her group's work and was enriching to the whole class. This group's blog contains various web links to Greenpeace articles and online news.

Furthermore, my notes reveal that around 60% of the participants were actively engaged throughout the project, i.e. from our first meeting in the multimedia classroom until the last meeting when they gave their oral presentation. About 40% of the students, however, did not participate in the online activities very often, missed many classes in the multimedia classroom and had to be "pushed" by their peers to contribute to the group project. This kind of behaviour was observed in two students in group A, two in group B, one in group C, two in group D, and most of the students in groups E and F, who did not use the virtual classroom frequently and did not demonstrate as much individual accountability as their peers did. Furthermore, groups E and F did not show much interest in the development of blogs. These two groups also became smaller as members dropped out, which probably affected the groups' performance in the learning activities. For instance, group E members missed many classes and rarely logged on to the virtual classroom. As regards their performance in the multimedia classroom, I noted down that "whenever they showed up, they seemed to be at a loss." I tried to be supportive, but I did not want to oblige them to do any of the activities they were supposed to do so as not to influence the dependent variables. The following entries reveal that I did not perceive group E's performance as satisfactory as that of groups A, B, C and D:

> At the outset of this project, one student in group E seemed really engaged and evidenced strong determination to create her blog and learn how to search for reliable information on the Internet. But, her commitment soon faded away. . . . she told me that she was going to drop out of the course.

Half way through the ten-week period of the study, I noted the following:

> Now group E is made up of only two students. They do not come to class frequently, they do not participate in their group forum either, and they are falling behind with the development of their blog. . . . (Name of student) was the only group member in class today. I approached her to see if I could help her. . . . She said she did not have much time to log on to the virtual classroom and that she and the other team members were trying to get organized with the group work. She seemed shy and not very enthusiastic about the task, but she said they had been working on the material to make their blog.

As regards group F, it was found that this group did not function as a team. I noticed that its members did not seem to get on well and found it hard to reconcile opinions. Unfortunately, little could be done to change this situation since students had been allowed to choose the members of their groups. My notes reveal that it took quite some time for this group to get organised and start working on their blog. For instance, one student approached me after class and explained her concern about "interpersonal problems" in her group, so I tried to encourage her and promised to talk to her peers. Eventually, they were able to solve their problems and complete their blog, although their overall involvement in the group project was not as satisfactory as that of groups A, B, C and D.

As to the learning environment and the learning activities, the field notes focus mainly on aspects related to the infrastructure, the learners' performance and the role of the teacher. I noted down that some students could not work properly because they had to share a PC. As mentioned in chapter 3, there were 16 computers in the multimedia classroom and around 20 students attended classes regularly. I tried to organise the activities so that the students could take turns to log on to the virtual classroom and do Internet searches individually. I also showed some websites or activities on the wall screen using the LCD projector. I periodically observed how students' creativity took shape as they designed their blogs using a variety of layouts and multimedia resources to illustrate the topics. However, I constantly had to remind them to mention the sources of the texts they used in their blogs. I rarely corrected language mistakes in students' written work since I noticed that they tended to be sensitive concerning this issue. I felt that the students would have not worked as freely as they did if I had often corrected their texts. Therefore, my interventions focused mainly on making suggestions to improve their work in relation to the development and organization of topics and on providing feedback whenever it was requested. Group participation in forums was not as frequent as I had expected, which I attributed to the fact that participants met almost daily at school.

Finally, the analysis of my field notes regarding the students' oral presentations reveals some salient characteristics of the online project. First of all, all participants seemed to have experienced a sense of accomplishment in the development of their blogs. Most of them said they "enjoyed the task". Moreover, they pointed out that this was the first time they had created a blog and it was good to know this could be used for

learning purposes. They also said they had learned a lot about using the Internet, especially about using tools and resources to create their blogs. During their oral presentations, most students described their blog entries, explained how they had distributed the topics among the group members and the reasons why they had included some information —e.g.: because it was up-to-date information or because it was useful to complement the course materials. Some of them also recommended websites related to the topic of their blog. Last but not least, the participants also mentioned some difficulties. For example, one student said that at times she was "overwhelmed by the information found on the web." Also, group F members admitted that they had started to post entries quite late and were embarrassed to ask for help on how to post pictures. Finding reliable and relevant information was another difficulty mentioned by members of two groups.

All in all, the information in the researcher's field notes sheds light on the students' skills and difficulties in this online learning environment and their attitudes towards group work. The participants' involvement with the online activities and their accountability to group members seemed to have been a determining factor in the learners' performance. The degree of personal affinity between group members also seemed to have influenced their performance. Moreover, face-to-face interaction with peers and the teacher provided substantial support for the students as they participated in this project. Interestingly, limited technological expertise did not seem to have influenced the learners' performance since they were able to acquire the necessary skills in tandem with the development of the online tasks. Finally, Internet and computer facilities and the teacher's guidance and support seemed to have played an essential role in the successful completion of this online project.

4.5.4. The external observer's perspective

The second source of observational data comes from the field notes provided by a college English teacher who agreed to participate as an external observer. Due to time constraints, there were some limitations to the amount of information provided by the external observer; nonetheless, her notes lend valuable insights into the instructor's role, students' performance and the relevance of using ICT in the English Language II class. The following summary of the external observer's comments is based on her notes

regarding the virtual classroom, the blogs created by the participants, as well as her perceptions of the last two classes held in the multimedia classroom, when students gave their oral presentations.

Firstly, the most relevant aspects recorded in the external observer's field notes pertain to the teachers' and students' roles in the online learning environment. She reported that the teacher acted as a facilitator. For example, she pointed out the following:

> The teacher played the role of a guide and facilitator helping the students to become familiar with the virtual classroom and interact by means of debate forums and blogs. (…) She also assisted students in constructing knowledge by making suggestions to select and transform the information gathered.

Moreover, students were perceived as collaborators of the online task, as noted in these comments:

> The role of the students was enhanced by the use of a network of computers and the Internet (blogs, forums and e-mail), which allowed frequent communication and fostered language practice. . . . The members of each group included questions for debate in blog entries, which encouraged emotional involvement, spontaneous language use and reactions to the comments from their classmates.

Secondly, the external observer also mentioned two assets of this online learning environment: students had access to up-to-date information and used multimedia resources purposefully. Regarding the group blogs, she noticed that students were successful in interpreting, exchanging and negotiating information. In relation to these activities, she wrote the following:

> Working with authentic material and having greater access to up-to-date information increased the students' motivation and fostered their autonomy. Their enthusiasm was evident in the materials they presented: creative illustrations and graphics (e.g. pictures of tsunamis …), videos, films (e.g. "An Inconvenient Truth", a film documentary), charts and summaries of articles from reliable sources such as the BBC and National Geographic.

Finally, her comments about the oral presentations in the two classes that she observed reveal that using the Internet to choose and organise information while working in teams helped students to apply their critical thinking and collaborative skills. She reports that "in the blogs created, students showed commitment to the task and analytical, imaginative and cooperative elaboration of the material —not just a mere reproduction of the information gathered." She also included some final remarks and recommendations in her notes by referring to the usefulness of the virtual classroom in this course:

> . . . This experience constitutes an efficient pedagogical proposal for the application of ICT to the teaching of languages, mainly in large courses because it enables all the students to participate in projects and it also allows the teacher to provide feedback which is often difficult

> in such cases. . . . Therefore, it is vital to work on the digital literacy of the academic community, mainly when it comes to the training of future professionals.

The analysis of these notes reveals that the external observer considered that developing communication networks for the critical and creative construction of knowledge in an EFL context through a collaborative project was an important stage in the learning process. Her observations also confirm the findings concerning other sources of data —i.e. the students' written interventions in the group forums and blogs and the researcher's field notes— and have important implications for the role of tasks, teachers and students in online learning environments. These implications will be discussed in the following chapter.

Chapter 5: Final Considerations

This study examined how collaboration and the application of higher order thinking skills occurred when the undergraduate EFL students who took part in this research participated in debates in the electronic forums and created their group blogs. This chapter reviews the research questions and presents the implications and limitations of the study. It also provides suggestions for further research and presents the concluding remarks.

5.1. Research questions revisited

This study sought to answer four research questions. The first two questions were the following: (a) *Can online group debate forums help to create a collaborative learning environment in an EFL undergraduate class?* (b) *If so, how do online group debate forums contribute to the development of collaborative learning practices in that class?* The examination and the classification of the students' written contributions revealed that the use of the electronic forum allowed the participants to collaborate on the completion of the L2 group project. As shown in the taxonomy presented in chapter 4, section 4.2, six main types of online collaborative contributions were found in the group debate forums. Overall, these forums offered appropriate conditions for the discussion of issues pertaining to each group's online project. More specifically, by using the electronic forum the EFL learners helped one another to solve practical and technical issues related to the L2 task, informed the group about each member's activities, provided peer feedback and support, and suggested steps that needed to be taken for the completion of the L2 task.

The other two research questions that guided this study were: (c) *Can group blogging foster critical thinking and the collaborative construction of knowledge in an EFL undergraduate class?* (d) *If so, how does group blogging contribute to the application of critical thinking and the collaborative construction of knowledge in that EFL class?* A number of tendencies emerged from the analysis of the data and they were classified under three main categories: patterns of creativity, language learning awareness and collaboration through reflexion and evaluation. This three-fold

classification captures the ways in which the participants applied their critical thinking skills and in so doing constructed knowledge collaboratively. During the completion of the online language project —i.e. the creation of group blogs—, the students' creativity was apparent in the selection and use of multimedia resources; their L2 awareness became evident in the presentation of lexis, the use of hyperlinks to dictionary definitions, and the summaries of course and online materials; their collaborative and reflective participation was observed in the evaluative comments, questions and answers posted in most blog entries. In sum, the electronic forum facilitated collaboration in this EFL undergraduate class and the creation of group blogs allowed the learners both to apply their higher order thinking skills and to collaborate in the construction of knowledge as they completed the online language task.

5.2. The implications of the study

Five major implications for Web-based learning in the EFL class can be derived from this study. Firstly, as the answers to the research questions show, the findings have implications for online collaboration in the foreign language class. The use of the electronic forum seems to have contributed to fostering positive group members' interdependence, which has been identified as a key feature of collaborative learning practices (Bruffee, 1999). A constructivist approach —which views language learning as socially constructed rather than individually acquired (Lantolf & Thorne, 2007)— became evident in the students' collaborative participation in the forums and group blogs. The production of knowledge observed during the development of the online L2 activities indicates that the Internet can be purposefully and effectively used to facilitate the collaborative construction of knowledge in the language class. In this respect, for example, Warschauer (2004) has pointed out that "the most potent collaborative activities involve not just finding and using information, but rather actively making use of technologies to construct new knowledge together" (pp. 476–477). As the findings in this study have shown, the debate forums and group blogging used as the media to complete an L2 learning project encouraged collaborative interaction among the EFL learners and allowed them to make creative and meaningful use of a variety of data and

multimedia resources available on the World Wide Web to construct knowledge as they completed the language task.

Secondly, as regards the participants' familiarity with virtual learning environments and their perceptions about the online collaborative tasks, the findings indicate that none of the students had previously participated in online L2 activities or collaborative projects; that most of them were enthusiastic about using the Internet in this class and that they considered the group activities relevant to their learning of the target language. This receptiveness to the WBLL project can be considered an important implication for current L2 teaching practices, indicating that the use of collaborative online learning environments in the EFL class can be well received by learners, independently of their previous experience with such learning contexts and ICT.

Thirdly, the findings suggest that the use of blogging and the virtual classroom, especially the online forum, to complement face-to-face classroom work increased the students' opportunities to participate in the L2 learning activities by providing more flexibility in terms of time and space. In other words, each student could work at his/her own pace. For instance, their contributions to the group project with individual Internet searches, participation in the online language activities and communication with their peers and the teacher about issues pertaining to the L2 task were no longer restricted to the conventional academic time segments. These findings seem to confirm the contention that ICT makes pedagogical practices more flexible and expandable in time and space, which may in turn favour the development of learners' autonomy (Beatty, 2003; Benson, 2006; Warschauer et al., 2000).

While it is not possible to specify how the online medium might have influenced the students' cognitive processing of the data, the results of this research suggest that group blogging can be purposefully and effectively used in the EFL class to construct knowledge of the L2. Thus, the fourth implication of this study is that student bloggers can collaborate in the joint development of topics in the target language, becoming active constructors of their own learning and learning environments. In this way, students can use blogging not only to interact with one another and experiment with hypertexts and multimedia, but also to create their own configurations of the learning materials, which might be conducive to the application and development of higher order thinking.

From the abovementioned implications, it becomes clear that using online collaborative learning environments, such as debate forums and blogs, entails a shift in the traditional roles of students, teachers and learning tasks. As it is widely agreed, traditional classroom dynamics cannot be directly transferred to virtual learning environments. In this respect, the fifth implication of this study is that success in a collaborative online project depends, to a large extent, not only on the active engagement of each group member, but also on their accountability to the other group members since each participant is equally responsible for the final outcome of joint projects. In such contexts, the teacher is no longer regarded as the source of information and the knowledgeable authority, but rather as a supportive tutor or coach who monitors the learners' progress and directs them towards the appropriate resources. Since this participatory dynamics of virtual environments calls for different teaching techniques from those used in face-to-face classroom settings, the learning tasks should also be specifically designed to encourage collaboration, exploration, negotiation of meaning, and a sense of purpose. All in all, this study has crucial implications for the design and use of collaborative online learning activities in the EFL class. It seems clear that if EFL instructors become familiar with ICT resources and learn how to exploit their potentialities, they will be able to provide students with meaningful opportunities to construct knowledge in and of the target language in collaboration with their peers and the instructor.

5.3. Limitations

This study presents two main limitations in terms of scope and context of application. In the first place, as indicated in chapter 3 this research was carried out with a relatively small number of participants. Working with few participants facilitated detailed accounts of the data; however, the results may not be generalised to other populations. For instance, the online teaching approach suggested here may not be applicable to larger classes with low teacher-student ratios since the design and the application of blended learning projects usually require a significant amount of extra work and participation on the part of the course instructor, which may not be possible if a teacher is in charge of a large number of students. In the second place, this research was based

on the use of the electronic forum and group blogging. The choice of these media seemed suitable for the purpose of this investigation because bulletin boards and blogs allow for collaborative participation and they were neither widely used nor extensively researched in the EFL teaching context where this study was conducted. Nonetheless, the taxonomy of online L2 collaborative contributions and the threefold classification of knowledge development created here may not fully apply to the dynamics of online language tasks in other collaborative environments such as WebQuests, wikis or social networks, to name just a few.

5.4. Suggestions for further research

In light of the implications and limitations of this study, some suggestions for further research emerge. This study has proposed a set of descriptive categories grounded in the data, which were intended to capture the learners' collaboration and application of critical thinking skills as they worked on an online L2 project. If further explored, refined and applied to students' productions in other virtual environments, these classifications may throw light into virtual team dynamics in EFL classes and thus contribute to improving pedagogical practices in this area. Moreover, in-depth explorations of learners' performance and their use of Internet resources could also help to find out more effective approaches to guide them to a more critical and autonomous use of a variety of online media for language learning purposes. Thus, by interweaving issues related to collaboration, the application of critical thinking skills and learners' autonomy in virtual learning environments, future research may help teachers and students alike to make more effective uses of online environments for EFL learning.

5.4. Concluding remarks

As the growing body of research in educational technology shows, Web-based learning is becoming an essential ingredient of L2 education. By examining instances of EFL learners' online written output and their perceptions of the online activities, this study has sought to contribute to university educators' and researchers' efforts to uncover phenomena which can shed light on the dynamics and significance of collaboration in

foreign language learning. The findings indicate that EFL students can participate in new ways of constructing their knowledge of the target language through the use of digital technologies. Therefore, it can be concluded that an adequate use of ICT in L2 education can open up productive avenues towards new dimensions of collaborative learning practices in which knowledge is constructed through meaningful interaction and the application of higher order thinking skills. Uses of the Internet for language learning represent an untapped potential for today's educators and students worldwide. There is much to be learned and much to be discovered. The challenge that lies ahead for EFL teachers at the turn of the new millennium is to engage in an incessant exploration into more adequate and meaningful uses of online media to empower today's learners to become more effective communicators and users of the English language.

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Appendix A.1

The pre-study questionnaire

English Language II Group D – Facultad de Lenguas – UNC
Course Instructor: I. Yamina Gava
Student's questionnaire: **Online Activities Project**

August 7, 2007
Student's name: _____

Please, read and answer the following questions carefully. Be specific.

1. Do you use the Internet? If so, how often?
2. If your answer to the previous question is "yes",
   a. For what purposes do you use the Internet?
   b. Which sites do you usually visit?
3. Do you have a PC?
4. Do you have Internet access at home?
5. Do you have an e-mail account? If so, how often do you use it?
6. Are you familiar with Boolean logic (and, or, +, –, *and so on*) for Internet searches?
7. Have you ever taken an online course? If so, when and what kind of course?
8. Have you ever used the Faculty of Languages platform (*e-ducativa*) to carry out language activities? If so, when and in which course?
9. Would you like to use the Internet for your language learning?
10. Do you agree to participate in online activities for this course to supplement classroom work? (We will use the school facilities —the multimedia classroom — and you may have to do some homework assignments using outside computers.)

_____

Student's signature and e-mail
(Only required if you'd like to participate in online activities for this course.)
Thank you for your cooperation!

Appendix A.2
The post-study questionnaire

English Language II Group D – UNC – Course Instructor: I. Yamina Gava – October, 2007
Online Activities Project – Self-assessment & Peer-assessment Forms

SELF-ASSESSMENT FORM

Please, complete this questionnaire by providing as much detailed information as possible about the online learning activities carried out in this course.

Questions	***Yes***	***No***	***Comments***
1. I was able to effectively search for information on the Internet in order to do the tasks in this class.			
2. I felt comfortable using Boolean logic when searching the Internet.			
3. I was able to attach files in forum discussions.			
4. Using e-mail to communicate with my classmates and teacher helped me to exchange information in relation to language activities.			
5. I found the online activities done in this course useful for my language learning.			
6. I found the activities and materials in the English Language II virtual classroom relevant to my language learning.			
7. I regularly participated in threaded forum discussions in this course.			
8. I found forum discussions useful for language learning.			
9. I participated in online collaboration to develop a blog for the Language II class (team project).			
10. I found working in groups useful when creating a blog for my Language II course.			
11. Which section/s (*site description, learning activities, forums, files, web resources, calendar, contacts and webmail*) in the virtual classroom have you used more frequently? Why?			
12. Which section/s in the virtual classroom have you found the least relevant to your language learning? Why?			
13. Underline the online activity/ies in which you have participated more often and explain why. *class debates in forums – group debates in forums – individual forum – blog development*			
14. How often have you used the Language II virtual classroom? Please, underline the most appropriate option and explain why. *every day – 4 to 5 days a week – twice to three times a week – once a week – hardly ever – other:.....*			
15. Have you encountered any difficulty in using the Internet (i.e., participating in forum discussions, creating bogs, uploading information, etc.) when trying to complete the online language assignments in this course? If so, Which one/s?			
16. Please, refer to your group dynamics and mention any difficulty you encountered in managing group work.			
17. Did you participate in online discussions —chat, e-mail, forum— or in face-to-face discussions in order to carry out your work?			
18. Additional comments:			

PEER-ASSESSMENT FORM

Peer's name:

Instructor:

Date:

Please, score each of the members of your group based on the following criteria. (You will need one copy of this sheet for the evaluation of each one of your peers.)

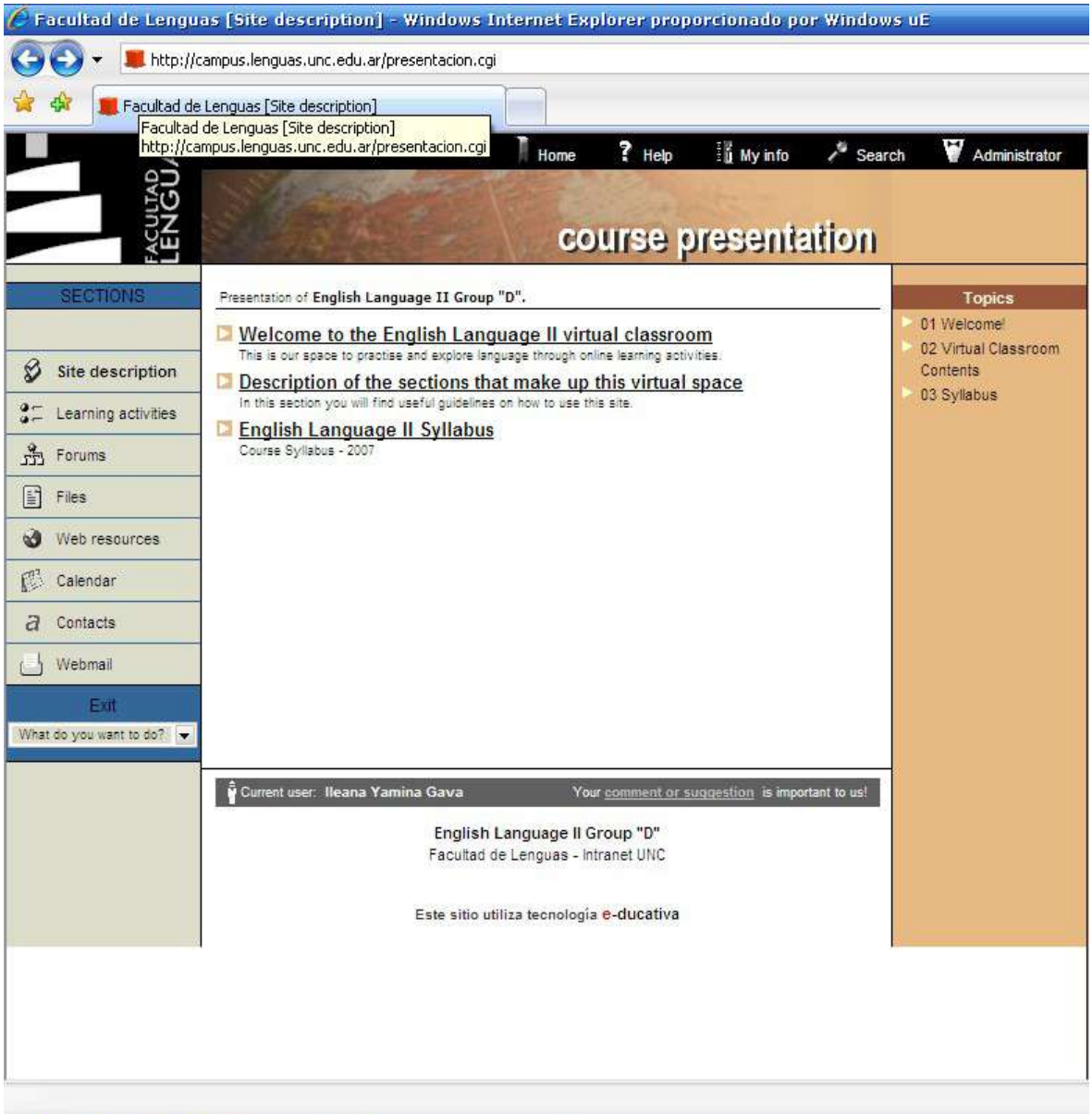
Score / *Criteria*	**0**	**1**	**2**	**3**
Cooperation **Score:**	My peer did not pay attention to and did not value the opinion of others.	My peer paid attention to but did not value the opinion of others.	My peer paid attention to but was not evident that he/she valued the opinion of others.	My peer paid attention to the opinions of others and made relevant contributions.
Contribution to the group project **Score:**	My peer did not contribute to the completion of the project.	My peer contributed to the project, but work was insufficient.	My peer contributed to the completion of the project with adequate work.	My peer contributed to the completion of the project and submitted high-quality work.
Participation	My peer did not participate in the group.	My peer occasionally participated in the group.	My peer often participated in the group.	My peer consistently participated in the group.
Additional comments:				

Adapted from Conrad & Donaldson (2004, pp. 30 & 40)

Thank you for your cooperation!

Appendix B.1

The virtual classroom: Site description section



Appendix B.2

Description of the virtual classroom

Presentation of **English Language II Group "D"**
Description of the sections that make up this virtual space
In this section you will find useful guidelines on how to use this site.

The main aim of this virtual classroom is to provide you with extra resources and a variety of tasks that can help you enhance your language learning. The purpose of this virtual classroom, therefore, will be to supplement the work you do in your regular classes in this course.

The following information can help you use this virtual space more effectively:

In the present section —***site description*** — you will find the ***course syllabus*** and a schedule of online activities, which you are advised to study carefully.

In the ***learning activities*** section, a detailed explanation of the online tasks is available to you. It is imperative that you read this document attentively and contact your course instructor in case you have any questions.

Questions for debate and reading assignments will be posted periodically on ***the forum*** section, where you are all expected to participate. Therefore, it is advisable for you to visit this section before visiting any other. You are welcomed to share your ideas, suggestions, questions or any difficulty you may encounter so that we are all involved in the joint development of knowledge.

In addition to individual work, you will be expected to do some group work, so each one of you will be joining a group. Each group will have its own forum to share ideas and information about the language tasks related to the development of blogs.

Each one of you will have a ***personal forum*** to record your feelings, difficulties, and any thoughts you might have in relation to your learning process. This personal section will be like a journal in which each entry will reflect how you are advancing as a language learner and which problems you may encounter while participating in the online activities.

In the ***files*** section you will find all kinds of reading materials and resources to work on the topics included in Unit 5.

In the ***web resources*** section you will be able to access different kinds of useful websites. All you need to do is click on the link and you will be taken to the suggested site.

Finally, through the ***contacts*** section you can access your classmates' and teacher's e-mail addresses. The ***e-mail*** section is an internal mailing system. Here you can e-mail your teacher and peers on issues that require immediate attention; however, I advise you to post questions on the ***forums*** so that all important information and suggestions are recorded for debate and future consultation.

I hope you've found this description useful and I'll be glad to help you if you have any questions or difficulties in using this site.

Prof. I. Yamina Gava

Appendix B.3

This is a copy of the English Language II course syllabus for the academic year 2007.

UNIVERSIDAD NACIONAL DE CÓRDOBA
FACULTAD DE LENGUAS
PROGRAMA DE LENGUA INGLESA II

Sección: INGLES
Carreras: Profesorado, Traductorado y Licenciatura
Cátedra: LENGUA INGLESA II
Comisiones: "A", "B", "C", "D", "E", "F"
Curso: segundo año
Año: 2007
Régimen de cursado: anual
Carga horaria semanal: diez horas cátedra
Correlatividades: A) LENGUA INGLESA I; B) PRÁCTICA GRAMATICAL y PRÁCTICA DE LA PRONUNCIACIÓN

Profesores: Titulares:
Ana María Morra de de la Peña
Liliana Pero

Adjuntos:
Juan Durán Zúñiga
María Inés Asís (en uso de licencia)
Marcela González de Gatti
Luis A. González
Ileana Yamina Gava (suplente)
Julia Martínez

JTP: Julia Martínez
Ileana Yamina Gava

OBJETIVOS GENERALES:
Al finalizar el año lectivo el alumno deberá estar capacitado para:

1. Comprender la información que reciba en situaciones de comunicación oral y/o escrita sobre temas de interés general o relacionados con la realidad cotidiana del alumnado.

2. Utilizar la lengua inglesa en forma oral o escrita como medio de comunicación para la interacción social y como instrumento de la expresión/trasmisión de experiencias propias y puntos de vista personales acerca de temas de interés general.

3. Transferir los conocimientos adquiridos el año anterior integrándolos con los del presente año.

4. Valorar el aprendizaje de la lengua inglesa como una experiencia enriquecedora tanto en el orden socio-cultural como individual y como una forma de establecer objetivamente relaciones entre la lengua materna y la lengua inglesa.

En el transcurso del año, se espera que el alumno:

- Perfeccione sus propias estrategias de aprendizaje y adquiera nuevas.
- Desarrolle el pensamiento crítico.

OBJETIVOS ESPECÍFICOS:

Al finalizar el año lectivo el alumno deberá estar capacitado para:

1. Demostrar, mediante tareas específicas, la comprensión del idioma oral hablado a ritmo normal de conversación acerca de los contenidos temáticos detallados más adelante.

2. Extraer información global y específica de narraciones, exposiciones y argumentaciones orales sobre dichos temas.

3. Mantener un diálogo fluido, con correctas pronunciación y utilización de rasgos prosódicos y de los elementos léxico-gramaticales específicos de este curso.

4. Exponer oralmente con claridad y fluidez los temas preseleccionados, demostrando una información adecuada.

5. Leer, con la ayuda del diccionario y otros libros de consulta, textos relacionados con los contenidos
temáticos del programa y con un grado de dificultad adecuado a este nivel y cuentos breves (versión adaptada) de autores de habla inglesa reconocidos y demostrar comprensión mediante tareas específicas.

6. Redactar párrafos y ensayos (hasta 300 palabras) sobre los temas de este programa, de manera clara, precisa y coherente, empleando ortografía, puntuación, nexos y estructuras gramaticales correctos y vocabulario pertinente.

7. Demostrar, a través de la resolución de problemas en forma oral y escrita, la aplicación de distintas estrategias de aprendizaje y el ejercicio del pensamiento crítico.

METODOLOGÍA DE TRABAJO:

El docente estará a cargo de la selección, adaptación y producción de materiales de enseñanza, del diseño de actividades y tareas comunicativas y de la elección de las técnicas e instrumentos que mejor contribuyan a la resolución de un problema o una tarea. Teniendo en cuenta la diversidad de estilos cognitivos, intereses, creencias y actitudes ante la lengua del alumnado, procurará, en la medida de lo posible, variar la organización de la clase (trabajar con toda la clase, en grupos pequeños, en parejas) y proporcionar materiales de auto-estudio, allanando el camino para que el alumno o la alumna trabaje a su propio ritmo. Asimismo, dentro de los lineamientos generales de este programa y del tiempo disponible, negociará con el alumnado diversos aspectos de los contenidos temáticos y de las actividades y tareas como, por ejemplo, permitirle seleccionar subtemas e idear proyectos.

En cuanto a que se acepta que hay diferentes componentes de la competencia comunicativa que interactúan de maneras aún no especificadas con otros sistemas de conocimiento y capacidades así como con factores volitivos y de personalidad, a la hora de establecer acciones metodológicas concretas habrá de prestarse especial atención al principio antes señalado de conexión de conocimientos nuevos con los previos puesto que el aprendizaje será más significativo cuanto más compleja y sólida sea esa relación. Es por ello que se propone un

programa multidimensional integrador de aspectos funcionales, estructurales, léxicos y temáticos en el desarrollo del cual se adoptará un criterio de reciclaje de los elementos aprendidos más importantes paralelo a la introducción de nuevos contenidos. Por lo tanto no debe entenderse esta propuesta de actividades y contenidos como una progresión en etapas sucesivas sino como un proceso de implementación recursivo. En cuanto a la metodología a implementarse, se considera el enfoque comunicativo, con las variantes y adaptaciones que nos señalan nuestra experiencia de tres décadas en esta institución, como el más apropiado al contexto de situación actual de la Facultad de Lenguas. Esta postura tiene su sustento teórico en las numerosas publicaciones en el tema en la última década.

ACTIVIDADES DEL ALUMNADO:

- Escucha/lectura seguidas de: toma de notas, respuestas a cuestionarios, ejercicios de selección múltiple, llenado de espacios en blanco y tablas, otros.
- Realización de ejercicios de transformación y de conexión de oraciones.
- Escucha/lectura y resumen de las ideas principales en forma oral y/o escrita.
- Debate sobre temas previamente asignados por el profesor y preparados por los alumnos.
- Respuesta a preguntas, comentarios, sugerencias, órdenes y otros estímulos verbales.
- Lectura de cuentos breves. Comentarios en clase acerca del contenido de los mismos.
- Búsqueda de material en periódicos, revistas y otras publicaciones en inglés. Lectura del mismo con la ayuda del diccionario. Apreciación crítica de los mismos en clase.
- Redacción individual o en grupo de los temas propuestos por el profesor.

CONTENIDOS TEMÁTICOS:

Unidad 1: Work. Skills and experience in work. The present and future of work. Redundancy and unemployment.

Unidad 2: Travelling and Holidays. Different modes of travelling. Kinds of holidays. The world's natural and heritage sites. Tourist attractions.

Unidad 3: Education. Formal education in the UK and the USA: primary and secondary schools, higher education. Educational achievements of boys and girls. Technology in education.

Unidad 4: Leisure. The importance of leisure. Leisure time activities. Going to the cinema. Reasons for taking up a sport. Extreme sports. Hobbies.

Unidad 5: Disasters and the environment. Weather facts. Natural and man-made disasters. Protecting the environment.

Unidad 6**:** Relationships. The important things in life. Bonds and feelings. Different kinds of relationships. Friendship. Love.

Unidad 7: Discovery. Human science and invention. About discovery. Invention (device or process). The legacy of Fleming. Space exploration.

Unidad 8: Crime and punishment. Types of crimes. Law-breakers and victims. Trials. Punishment.

ASPECTOS LÉXICO-GRAMATICALES Y DESARROLLO DE LAS MACRO-HABILIDADES LINGÜÍSTICAS:

El tratamiento y la práctica de los aspectos léxico-gramaticales, como así también el desarrollo de las macro-habilidades de la lecto-comprensión, la escucha y la producción de textos se basarán en el equilibrio entre lo oral y lo escrito. Como guía más apropiada al nivel que se espera del alumnado de segundo año se ha tomado el libro de texto de Bell & Gower (2003). (Ver Bibliografía Obligatoria)

Los aspectos a considerar comprenden:

a) Ampliación del léxico.
b) Adquisición, práctica y afianzamiento de estructuras; desarrollo de áreas gramaticales.
c) Comprensión del funcionamiento discursivo de la lengua inglesa.
d) Comprensión y producción de textos.

Los aspectos señalados abarcan:

- Vocablos/términos, modismos (*idioms*), campos y redes semánticos, verbos + partículas adverbiales (*multi-word verbs*), combinaciones de palabras (*collocations*), prefijos y sufijos, comparaciones y metáforas, proverbios y dichos.
- Tiempos verbales, construcciones verbales, estructuras sintácticas (*phrases, clauses and sentences*), ordenamiento sintáctico (*word order and inversion*), estilo indirecto, voces activa y pasiva, defectivos (*modals*).
- La coordinación y la subordinación como bases para la construcción y desarrollo lógico del pensamiento.
- Elementos de análisis del discurso que facilitan la comprensión y producción de textos.
- La puntuación y sus funciones; la división y organización de las ideas en inglés.

CONTENIDOS RELATIVOS AL DESARROLLO DE LA REDACCIÓN:

- Mechanics and form of the paragraph.
- Techniques for paragraph development: by logical order, by listing, by comparison and contrast, by cause and effect.
- Outline and development of the essay (300 words).

CRITERIOS Y MODALIDAD DE EVALUACIÓN

Los criterios de evaluación se ajustarán a las consideraciones especificadas precedentemente en los objetivos de este curso. En las pruebas parciales y en el examen final se evaluarán las cuatro habilidades básicas del idioma, a saber: comprensión auditiva, lecto-comprensión, expresión escrita y expresión oral. En lo concerniente a las habilidades orales (comprensión y producción), se considerarán los siguientes aspectos: precisión en la comprensión y emisión del mensaje oral; discernimiento entre ideas principales y secundarias, propósito(s) de la comunicación, tema, participantes, género textual, adecuación del mensaje al contexto de situación; coherencia; fluidez; corrección gramatical; control del léxico; control fonológico; usote estrategias de colaboración, de turnos de palabra, de petición de aclaración. En lo que respecta a las habilidades relacionadas a la palabra escrita, se tomarán en cuenta los aspectos siguientes: comprensión global; discriminación entre información esencial y subsidiaria; tipología textual; elementos del contexto de situación (propósito del texto, lector, organización textual, etc.);

coherencia y cohesión; fluidez; corrección gramatical; pertinencia; riqueza de vocabulario; uso de signos de puntuación.

En el transcurso del año se tomarán dos parciales escritos[14] y un parcial recuperatorio. **Para regularizar la materia** el alumno deberá aprobar dos de las tres instancias ofrecidas con una nota mínima de 4 (cuatro).
El examen final consistirá en una prueba escrita eliminatoria y un examen oral. Los **alumnos LIBRES** deberán desarrollar una tarea de evaluación adicional en la prueba escrita y en el examen oral.
Para el examen escrito se corregirá, en primer lugar, la redacción. Si dicha sección resulta reprobada, no se procederá con la corrección del resto del examen escrito.

CRONOGRAMA TENTATIVO DE LAS ACTIVIDADES DE DESARROLLO DE LOS CONTENIDOS[15]

Primer cuatrimestre: (marzo-julio):

Contenidos temáticos: Unidades 1-4
Redacción: Mechanics and form of the paragraph. Techniques for paragraph development: by logical order, by listing, by comparison and contrast, by cause and effect.
Tratamiento de cuentos breves:

"The Boss" by Dan Jacobson
"Public Opinion" by Frank O'Connor
"Manhood" by John Wain.

Primer examen parcial: última semana de junio[16]

Segundo cuatrimestre: (agosto-noviembre):

Contenidos temáticos: Unidades 5-8
Redacción: Outline and development of the essay (300 words).
Tratamiento de cuentos breves:

- *"Parson's Pleasure"* by Roald Dahl.
- *"The Garden Party"* by Katherine Mansfield.
- *"The Way Up to Heaven*" by Roald Dahl.
- *"The Case for the Defence"* by Graham Greene.

Segundo examen parcial: segunda semana de octubre
Parcial recuperatorio: primera semana de noviembre

[14] El profesor que lo juzgue conveniente podrá, además de los parciales escritos, hacer evaluaciones orales.
[15] Los contenidos léxico-gramaticales se desarrollarán a lo largo de todo el año académico en virtud de que, como se dijo más arriba, en el tratamiento de los mismos no se puede adoptar un proceso de desarrollo lineal sino recursivo en espiral.
[16] Por razones de número de comisiones y de profesores integrantes de la cátedra no es posible fijar una fecha única para la toma de los exámenes parciales.

BIBLIOGRAFÍA:

A. Obligatoria:

Bell, J. & R. Gower. 2003. *First Certificate Expert* (Coursebook, Cassettes). England: Pearson Education Longman.

Manual de Cátedra. Lengua Inglesa II. 2001. Universidad Nacional de Córdoba: Dirección General de Publicaciones.

Lectura de los siguientes cuentos breves de las antologías que se detallan más abajo:

- *"The Boss"* by Dan Jacobson.
- *"Public Opinion"* by Frank O'Connor.
- *"Manhood"* by John Wain.
- *"Parson's Pleasure"* by Roald Dahl.
- *"The Way Up to Heaven*" by Roald Dahl.
- *"The Garden Party"* by Katherine Mansfield.
- *"The Case for the Defence"* by Graham Greene.

<u>Antologías de cuentos breves</u>:

Hindmarch, R. (Ed.). 1989. *Waiting and Other Short Stories*. Cambridge University Press.

Marland. M. (Ed.). 1980. *Loves, Hopes and Fears.* London: Longman.

Marland, M. (Ed.). 1984. *Short Stories for Today*. England: Longman.

Taylor, B.(Ed.). 1990. *American Short Stories*. U.S.A.: Laurel.

B. Recomendada:

1. General:

Alexander, L. G. 1994. *Right Word Wrong Word*. U.K: Longman.

Crowther, J. 1999. *Oxford Guide to British and American Culture*. Oxford: OUP.

Dooley, J. & V. Evans. 1999. *Grammarway 3*. Blackpill, Swansea: Express Publishing.

Evans, V. 1998. *FCE Use of English*. Blackpill, Swansea: Express Publishing.

Fiedler, E. et al. 1990. *America in Close Up*. Essex: Longman.

Harmer, J. & R. Rossner. 1992. *More than Words*. Essex: Longman.

Mc. Carthy, M. & F. O' Dell with E. Shaw. 1999. *English Vocabulary in Use: Upper Intermediate and Advanced*. Cambridge: CUP.

Mc. Dowall, D. 1994. *Britain in Close Up*. Harlow: Longman.

Swan, M. & C. Walter. 1997. *How English Works: A Grammar Practice Book*. Oxford: OUP.

Vince, M. 1993. *First Certificate Language Practice*. Oxford: Heinemann.

West, C. 1996. *Recycling your English*. (Revised edition). Jersey: Georgian Press.

2. Composición:

Blanchard, K & C. Root. 1997. *Ready to write more. From paragraph to essay.* NY: Addison Wesley Longman.

Brown, K. & S. Hood. 1997. *Writing Matters*. Cambridge: CUP.

Evans, V. 1998. *Successful Writing: Upper Intermediate*. Blackhill, Swansea: Express Publishing.

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Olsher, D. 1996. *Words in Motion: An Interactive Approach to Writing*. Oxford: OUP.

Oshima, A. & A. Hogue. *Writing Academic English*. U.S.A.: Addison-Wesley, 1991 (Second edition).

3. Diccionarios:

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Collins Cobuild English Language Dictionary. 1995.

English Pronunciation Dictionary. CUP. 2001.

Longman Synonym Dictionary. 1996.

Oxford Advanced Learner's Dictionary of Current English. 1993.

Oxford Dictionary of English Idioms. 1997.

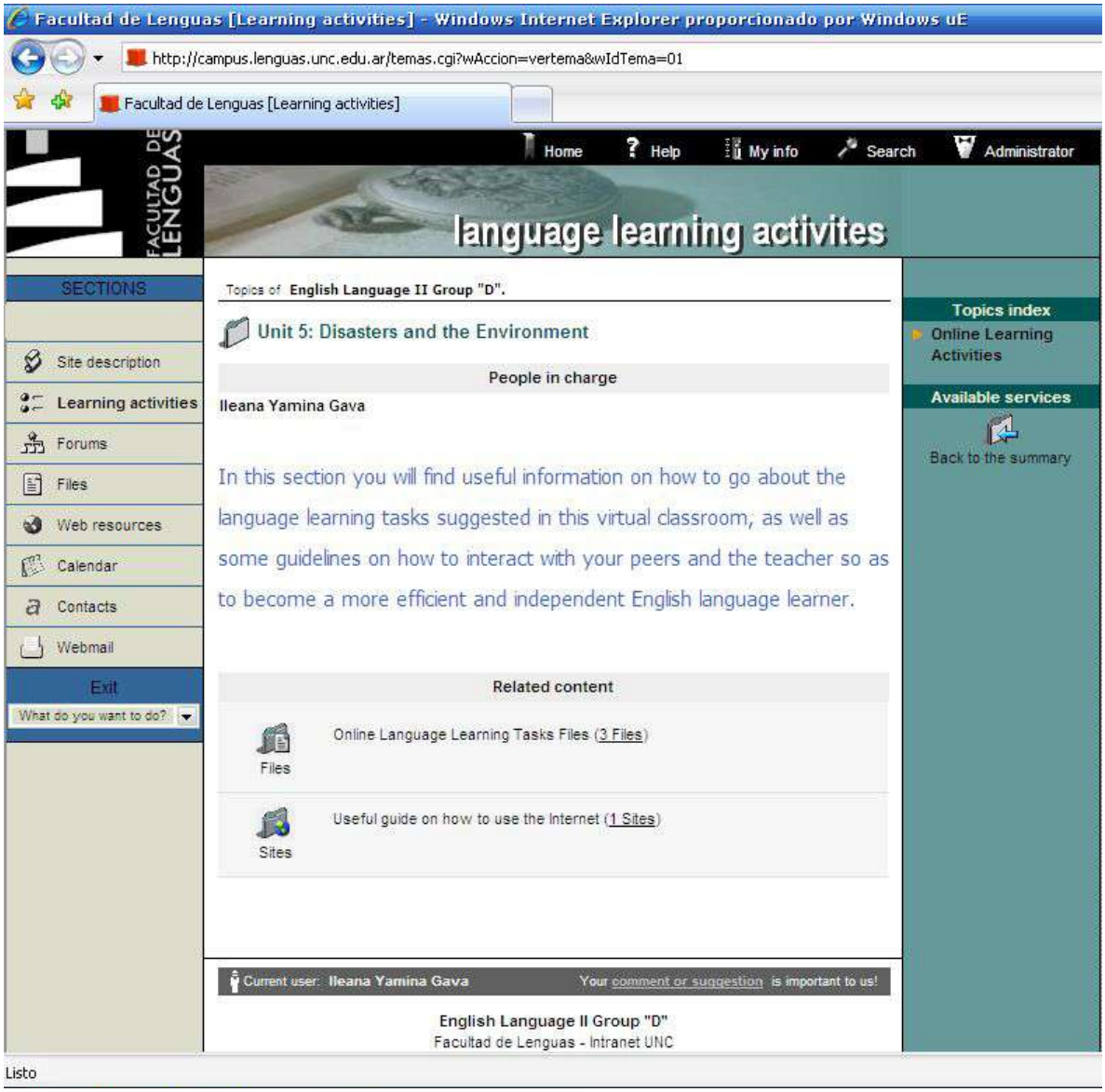
Swan, M. 1995. *Practical English Usage*. Oxford: OUP.

The BBI Dictionary of English Word Combinations. 1997. Philadelphia: John Benjamins Publishing Co.

.....	.....
Liliana Pero	Ana María Morra de de la Peña

Appendix C.1

The virtual classroom: Learning activities section



Appendix C.2

The online language learning activities guidelines

English Language II – Group D – Facultad de Lenguas – UNC
Course Instructor: Ileana Yamina Gava – August, 2007
English Language II Virtual Classroom: Online Tasks

Online Language Learning Tasks

We will work together on the development of the major topics and subtopics included in Unit 5 of the course syllabus. It is expected that each one of you will read the material provided in this site and in the course handout as an *active and critical* reader. This means interacting with the text by *questioning the views expressed in it, expressing your ideas and doing research*.

The reading materials and websites that you will find in the **files** and **web resources** sections serve the purpose of generating discussions on specific topics, learning new vocabulary and interacting with your peers and the teacher so that learning is maximized.

In this online project, we will focus not only on content areas and language practice related to the issue of natural and man-made disasters and their impact on the environment, but also and more importantly, on the development of learning strategies that will help you become more competent and independent language learners.

Questions for debate, learning tasks and reading assignments will be suggested periodically in the **forum** section, where you are all expected to participate.

Each of you has a **personal forum** to record your experiences, feelings, difficulties, and any useful thoughts regarding your learning process. You can write an entry in this section as often as you wish, but I encourage you to do so at least *once or twice a week*. I will be reading your personal forum regularly so that I can help you if you are facing any difficulties.

We will mainly concentrate on the development of blogs in groups to cover the different topics and subtopics in unit 5 (see the **Blog Development Instructions** file included in this section). We'll work together —as a class— on the mechanics of building your own blog. I will lead you through this process in the forum about **Blog development,** where I will suggest reading materials and tutorials that can help you build your own blog. In order to develop a blog efficiently, you also need specific skills to do research on the Internet. We will share ideas related to Internet research in the forum about **Searching the Internet**.

In the **web resources** section, you will find useful sites to create your own blog, and I will invite you to join a sample blog that I created. You will work in small groups so that you can share all the research, writing and design tasks. Once the groups are formed, I'll assign the topics that each group will deal with.

To find more about the activities, dates and deadlines for the completion of the group project, see the **Module Schedule** included in this section.

I hope you all participate in each of the online language activities and that you find this learning experience challenging and stimulating.

Prof. Yamina Gava

Appendix C.3

Instructions for the development of blogs

English Language II – Group D – Facultad de Lenguas – UNC
Course Instructor: Ileana Yamina Gava – August, 2007
English Language II Virtual Classroom: Online Tasks

Blog Development Instructions

One of the main purposes of this online project is to help you become engaged in the development of blogs on the main topics that make up Unit 5 of the course syllabus: *Disasters and the environment*. Therefore, your aim will be to explore online tools to enhance your language learning.

You should take into account the following instructions when creating your own blog:

- ✓ You will work in groups, but each one of you should have a username and password in order to make your own personal contributions to the development of the blog.

- ✓ Remember that this is not a "copy and paste" activity, but a language learning experience in which you are expected to make your personal contributions, such as summaries of the material you read and reflective comments. This means interacting with the text by *questioning the ideas in it, expressing your opinions and doing further research*. Your blog should contain at least three main sections: ***an introduction, a development and a conclusion.*** You should also prepare questions for reflection and invite your partners to interact with you. The final product should be a threaded discussion or debate.

- ✓ You are also required to include topics on language use, such as lists of useful specific vocabulary, collocations, or grammar-related issues.

- ✓ You can make use of any Internet resource that helps you develop the topic in a *complete, interesting, appealing, clear and coherent* way. You can use pictures, videos, radio news, songs, articles, etc. (Try not to include very long articles. Summaries of reading material will be more useful to you and your peers).

- ✓ A forum session will be opened to discuss issues pertaining to the development of bolgs. Therefore, you will be able to share any questions, comments or suggestions you may have while working on this task.

- ✓ Dates and deadlines for completion of activities are included in the **Module Schedule**, which you can find in this section.

- ✓ I hope you all participate *actively and responsibly* in this task, and that you all have fun while you advance in your learning of the English language.

Prof. I. Yamina Gava

Appendix C.4
The schedule of activities

English Language II – Group D – Facultad de Lenguas – UNC
Course Instructor: Ileana Yamina Gava – August, 2007
English Language II Virtual Classroom: Online Tasks

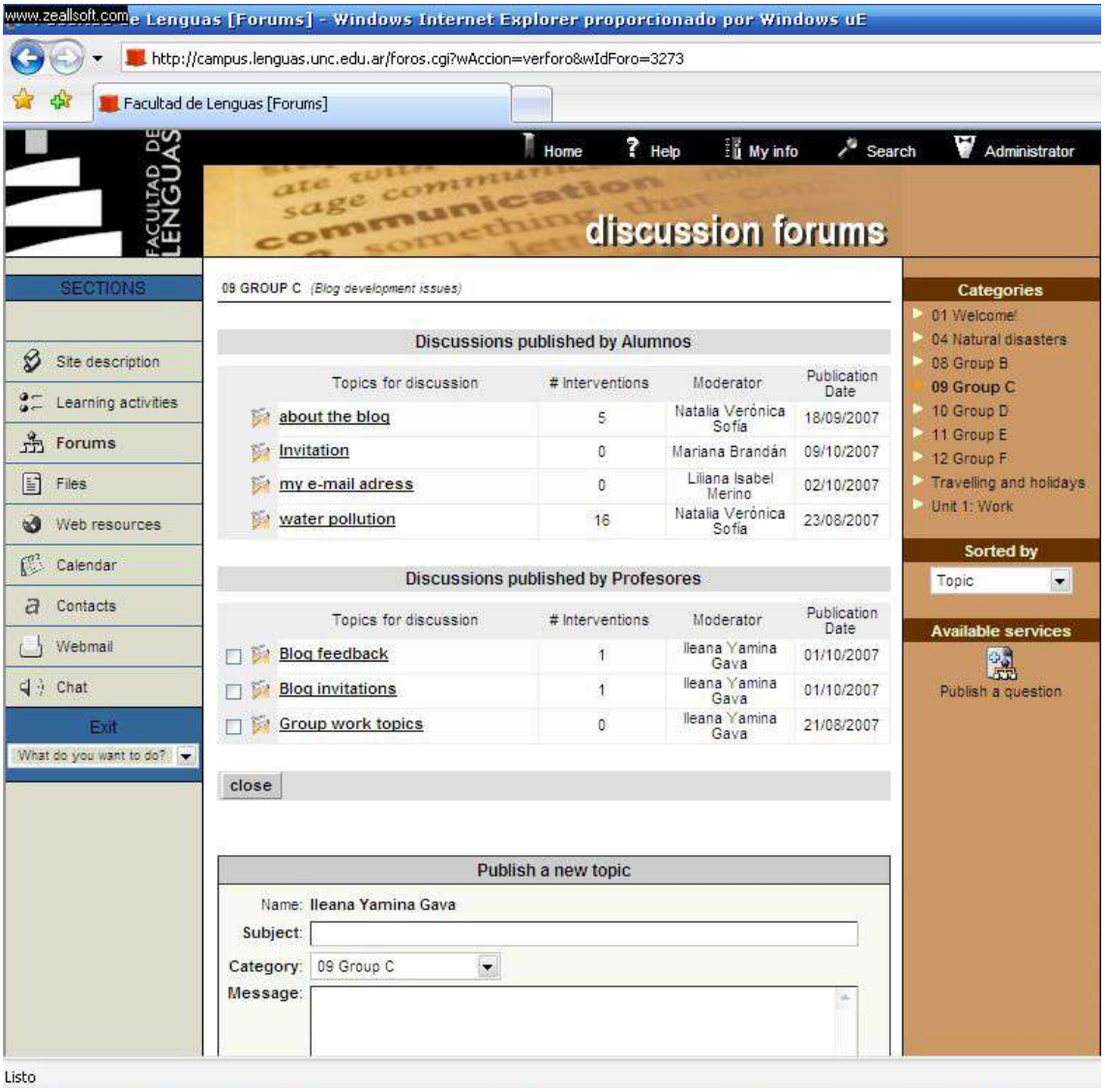
Module Schedule
Unit 5: Disasters and the Environment
Online Activities

Time Period	Tasks
08/14 to 08/20 (1 week)	○ Explore the English Language II virtual classroom. ○ Participate in the Welcome forum. ○ Read the guidelines included in the document "Online Language Learning Tasks", which you can find in this section. ○ Study the tutorial on how to create a blog in the web resources section. ○ Participate in the class forum on blog development. ○ Form groups to develop a blog. ○ Record your own learning process in your personal forum.
08/21 to 09/03 (2 weeks)	○ The teacher assigns a topic and subtopics for each group to create a blog. ○ Each group starts reading and doing research on the assigned topic and subtopics. ○ Consult the guidelines for online language learning tasks which you can find in this section. ○ Study the guidelines on how to do research on the Internet in the web resources section. ○ Participate in the class forum on how to use the Internet. ○ Start participating in your group forum. ○ Record your own learning process in your personal forum.
09/04 to 09/24 (3 weeks)	○ Start working in the development of you group blog. ○ Participate in the class forums: Blog development and Searching the Internet. ○ Interact with your peers in your group forum. ○ Record your own learning process in your personal forum.
09/25 to 10/02 (1 week)	○ Complete the development of your group blog. ○ Participate in the class forums: Blog development and Searching the Internet. ○ Interact with your peers in your group forum. ○ Invite your teacher and classmates to visit your blog and make comments. ○ Record your own learning process in your personal forum.
10/03 to 10/15 (2 weeks) 10/09 and 10/16 (1 week)	○ Visit the blogs created by other groups, answer the questions posted in each blog, and make comments in relation to content, language or any other relevant issue. ○ Record your own learning process in your personal forum. ○ Oral Presentations: On October 9, groups A, B & C will have 15 to 20 minutes to share with the class the work carried out in their blogs. Groups D, E & F will do the same on October 16. ○ Complete a self-evaluation sheet provided by the teacher on October 16 and e-mail it to your teacher as an attached document.

Appendix D

The virtual classroom: Group debate forums

Group C



Appendix E

The virtual classroom: Files section

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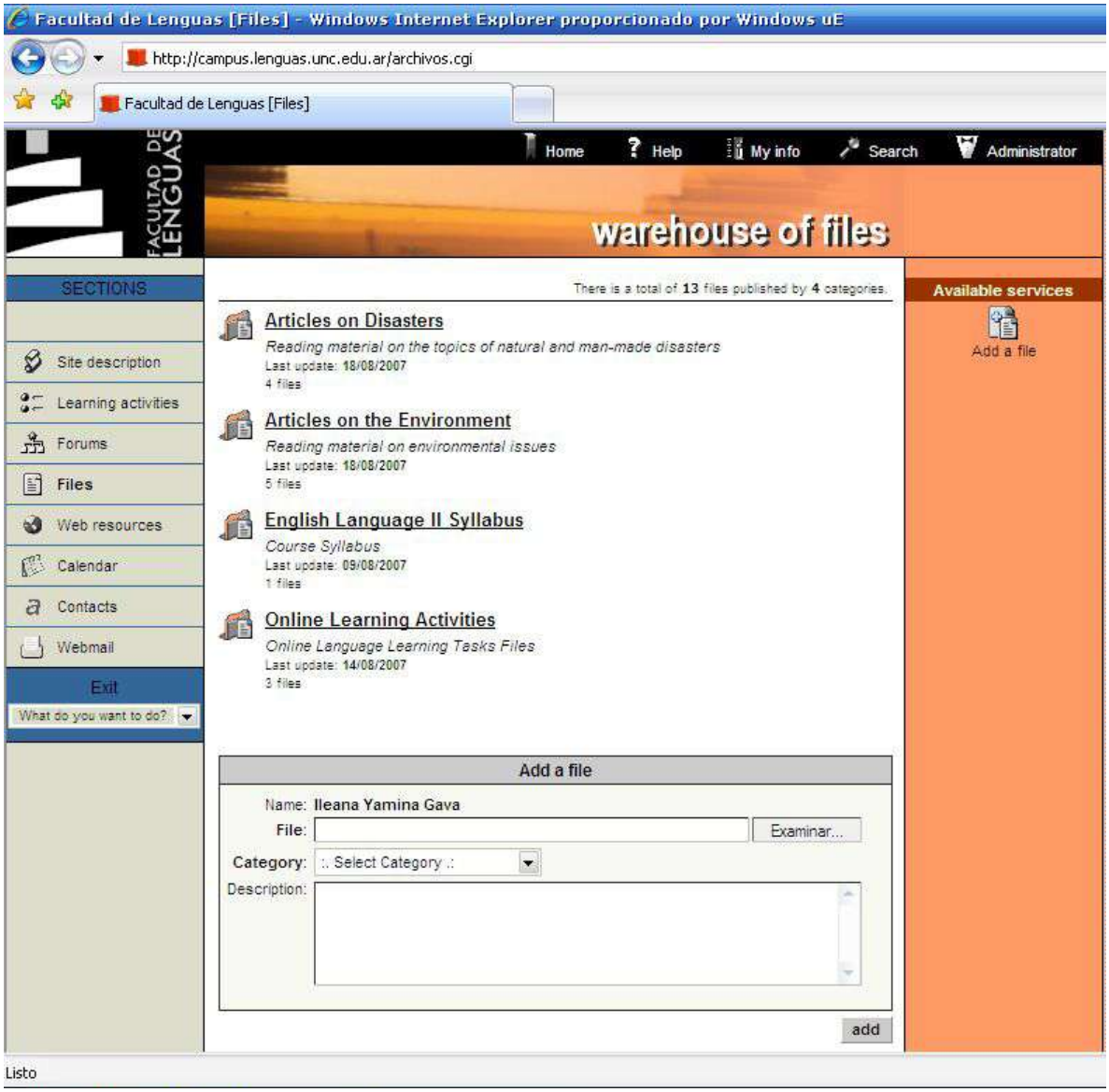
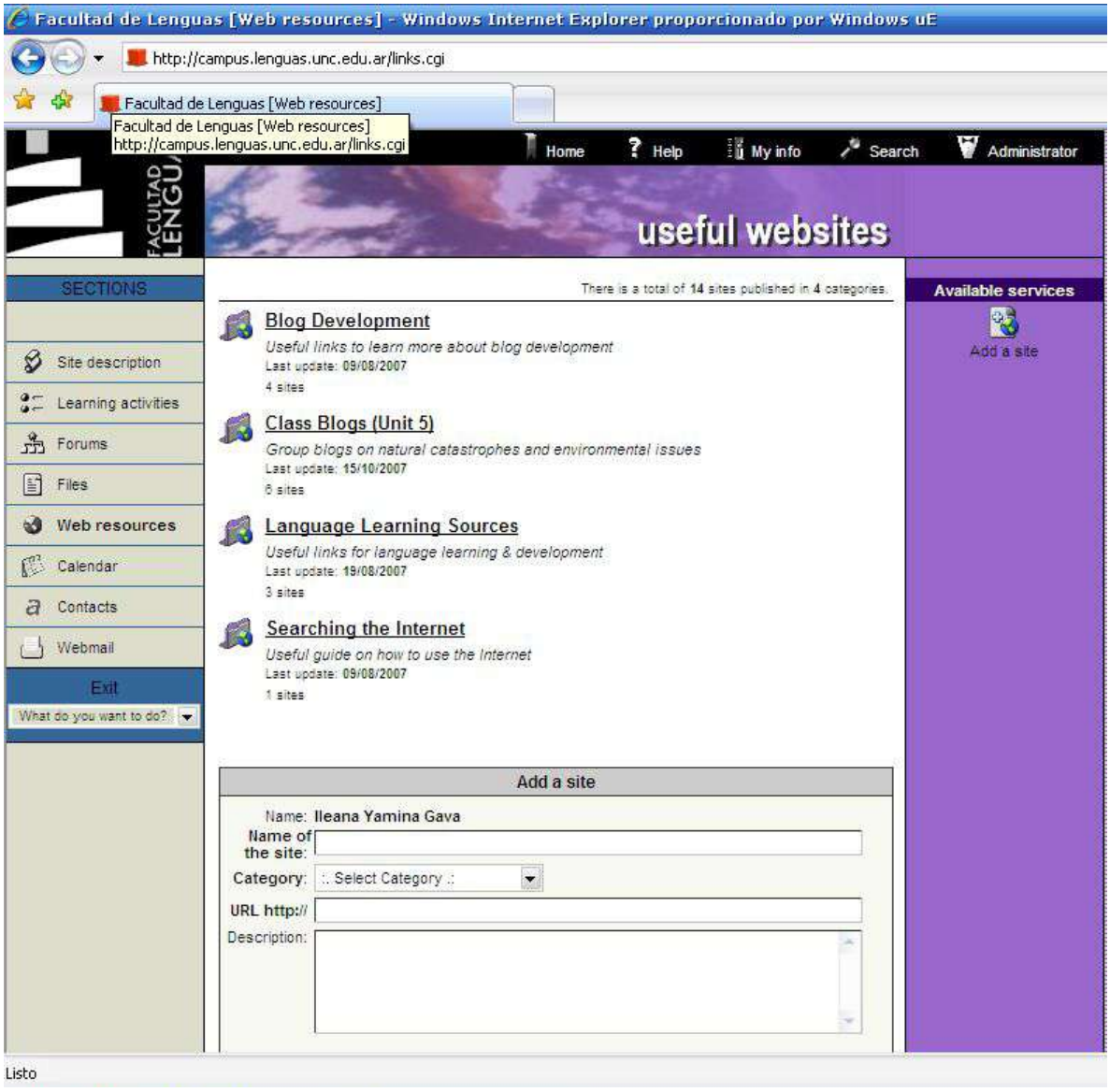


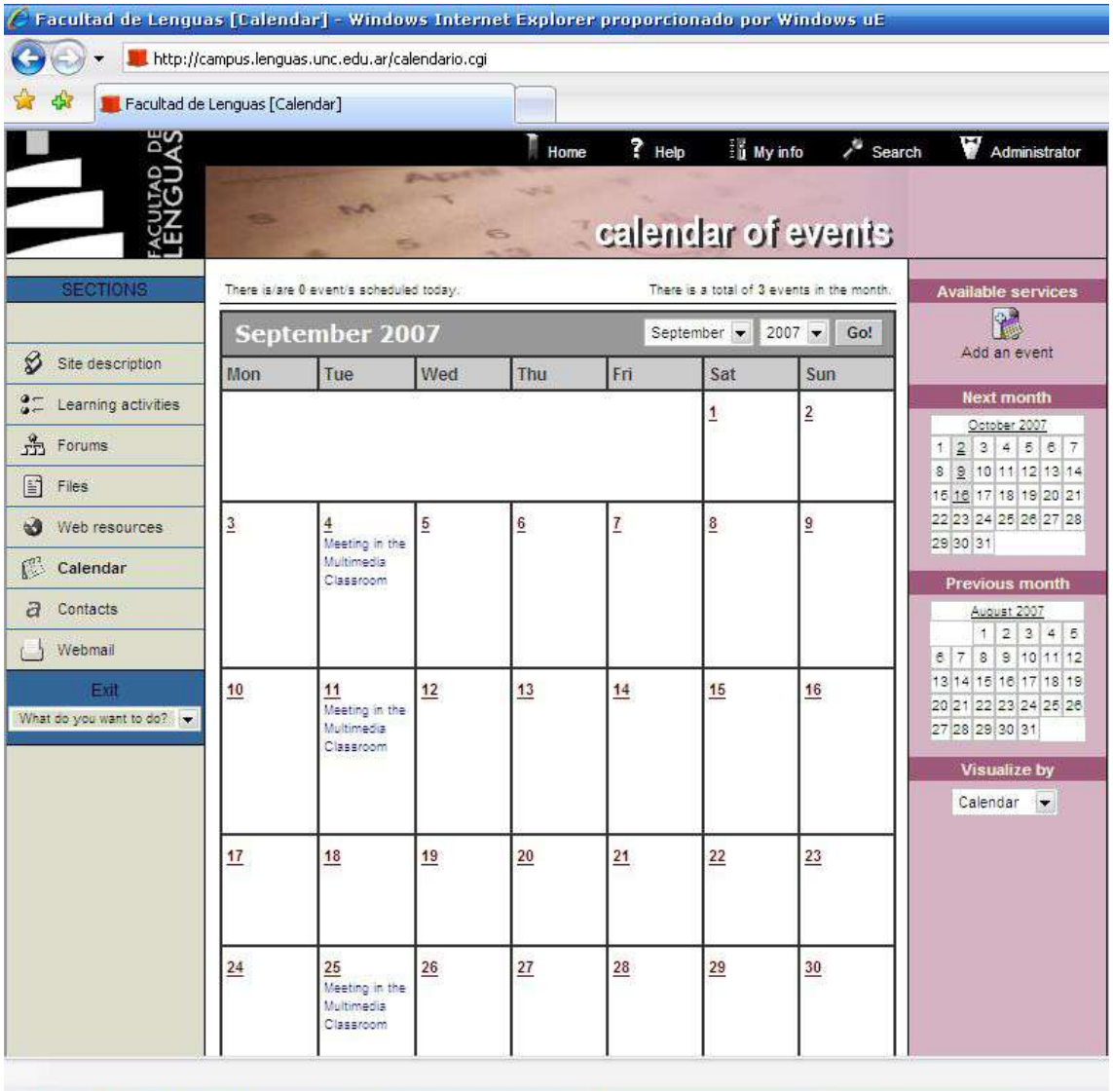
Appendix F

The virtual classroom: Web resources section



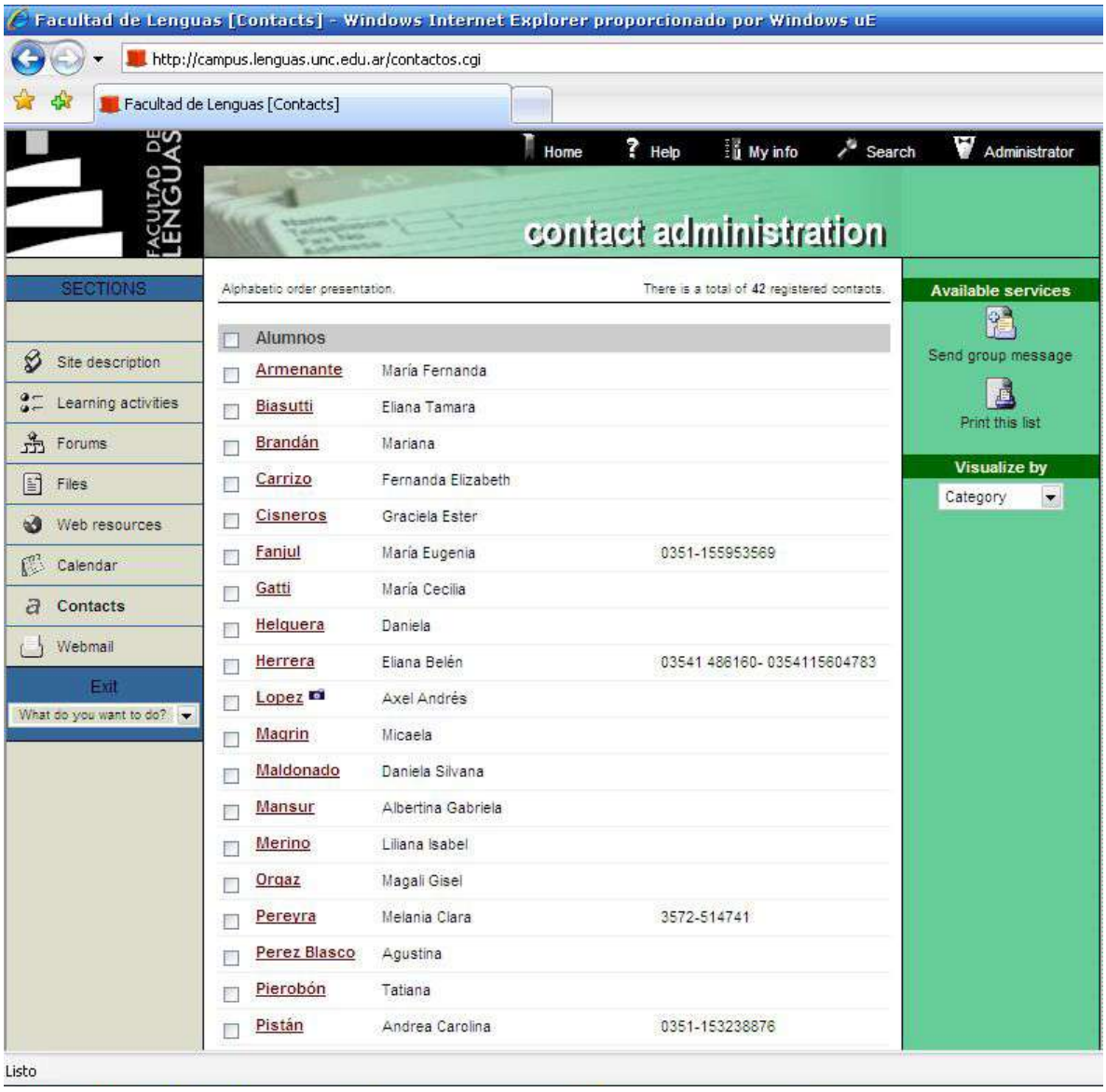
Appendix G

The virtual classroom: Calendar of events



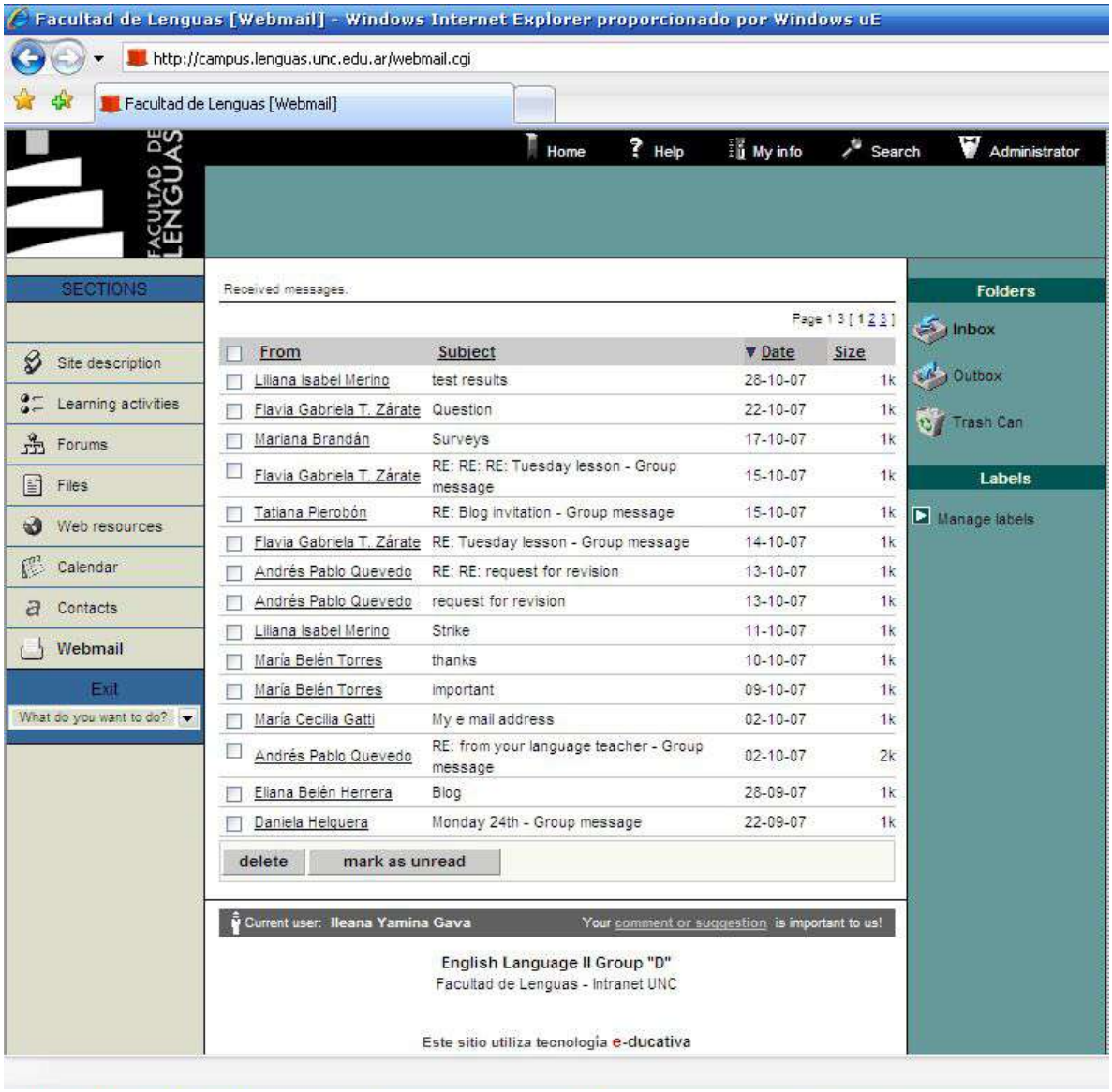
Appendix H

The virtual classroom: Contacts



Appendix I

The virtual classroom: Webmail



Appendix J

The results of the pre-study questionnaire

Pre-study Questionnaire: Questions and answers	
1. Do you use the Internet? If so, how often?	
Yes	100%
No	0 %
Answers regarding frequency:	
Every day	37%
Almost every day	3.7 %
3 or 4 times a week	14.8 %
Once or twice a week	26%
Not very often	14.8 %
2. If your answer to the previous question is "yes": **a) For what purposes do you use the Internet?**	
Most frequent answers:	
To search to information	77.7 %
To check my e-mails	62.9 %
To chat	59.2 %
To download music	37 %
Other answers:	
To download movies	14.8 %
To read the news	14.8 %
To visit the virtual classrooms of other courses[17]	14.8 %
To keep in contact with friends	11.1 %
To consult online dictionaries	7.4 %
To look for lyrics in English	7.4 %
To listen to the radio (the BBC or US stream radio stations)	3.7 %
To play games	3.7 %
To see pictures in facebook or metroflog	3.7 %
To send sms	3.7 %
b. Which sites do you usually visit?	
Most frequent answers:	
Hotmail	44.4 %
Yahoo	29.6 %
The Faculty of Languages Platform[18]	14.8 %
Youtube	14.8 %
La Voz del Interior	11.1 %
Newspapers	7.4 %
Personal or cti[19]	3.7 %
Wikipedia	3.7 %
Online dictionaries	3.7 %
Longman online	3.7 %
azlyrics	3.7 %
Facebook or metroflog	3.7 %

[17] Here students mentioned the virtual classroom of the Introductory Research Methods course (i.e., *Typi: Teoría y Práctica de la Investigación*), where teachers uploaded grades and assignments, and a few participants referred to an English Language II virtual classroom, which they used mainly to consult reading materials uploaded by the course instructor.

[18] Here students refer to *e-ducativa*, the Faculty of Languages online platform used in this study.

[19] These are mobile phone companies.

3. Do you have a PC?	
Yes	81.5 %
No	18.5 %
4. Do you have Internet access at home?	
Yes	66.7 %
No	33.3 %
5. Do you have an e-mail account? If so, How often do you use it?	
Yes	100 %
Answers regarding frequency:	
Every day	33.3 %
Very frequently	14.8 %
Once or twice a week	40.8 %
Every time I use the Internet	7.4 %
Not very often	3.7 %
6. Are you familiar with Boolean logic (*and, or,* +, - , " ", and so on) for Internet searches?	
Yes	7.4 %
Some of them	26 %
No	62.9 %
N.A.	3.7 %
7. Have you ever taken an online course? If so, when and what kind of course?	
Yes, an English course four years ago. It wasn't a good one.	3.7 %
No	96.3 %
8. Have you ever used the Faculty of Languages platform (*e-ducativa*) to carry out language activities? If so, when and in which course?	
Yes	66.7 %
No	33.3 %
Courses mentioned by students who used the school platform[20]:	
Typi	88,8 %
English Language II	22,2 %
9. Would you like to use the Internet for your language learning?	
Yes	96.3 %
I don't know	3.7 %
10. Do you agree to participate in online activities for this course to supplement classroom work? (We will use the school facilities —the multimedia classroom — and you may have to do some homework assignments using outside computers.)	
Yes	100 %
Student's signature and e-mail (Only required only if you'd like to participate in the online activities for this course.)	
100 % of students included their signature and e-mail account.	

[20] Ibid footnote 4

Appendix K

Production data from the students: Group A debate forum[21]

07 GROUP A *(Blog development issues)*

Discussions Published by Professors

Group work topics
Published by Gava, Ileana Yamina on 21/08/2007

Message:
Dear Gloria, Silvia & José,
This is your group forum. Here you can exchange ideas, questions and any other issue related to your group work.
I will be reading your exchanges so as to guide your task and help you if you have any questions or difficulties.
You have to develop your group blog on the following topics: hurricanes, blizzards, cyclones, tornados and volcanoes. I also want you to cover the 2004 tsunami (this morning I left a newspaper article about this catastrophe at the school photocopy shop).

The following articles in your course reading packet deal with the topics assigned to your group:
- Floyd whips Florida into a panic
- Natural Disasters: Blizzard, Cyclone, Hurricane, Tornado, Under the volcano
- Lucky to be alive
- Caribbean Relaxes Hurricane Watch

You should read these articles as well as do further research on each of the topics.

Yamina
P.S. I think there is another student who has joined this group but I do not have her name. Can you tell me her name, please?

RE:Group work topics
Answered by Gava, Ileana Yamina on 22/08/2007

Message:
Dear group A members,
Gloria has just e-mailed me to let me know that Ana is the fourth member of this group. So, welcome Ana!!
I hope you all make a good team :)
Yamina

Blog Feedback
Published by Gava, Ileana Yamina on 24/09/2007

Message:
Dear students,
I received the invitation to join your blog.
I'll be reading it during the week and I'll post my opinions and suggestions here.
Best,
Yamina

[21] This is a copy of the discussion forum as it was produced by the teacher and the students. The discussions are ordered alphabetically according to the subject of each threaded discussion. The students are identified by pseudonyms to protect their identity.

RE:Blog Feedback
Answered by Gava, Ileana Yamina on 28/09/2007
Message:
Dear students,
I've been having a look at your blog.
These are some general comments:
The layout is clear and neat, and the content (summaries, videos and vocabulary lists) is very well organized.
Some suggestions:
You should include the source of the summary in the first entry about hurricanes.
You have to edit the one about tsunamis. I think you have to change the layout and you should also add a question at the end of the last entry.
Remember that you can include hyperlinks to dictionary definitions of some content-specific vocabulary. The online Cambridge Dictionary is a useful one. You can create hyperlinks to dictionary definitions of key words in your texts.
Any questions, just let me know.
Have a nice weekend!
Yamina

RE:Blog Feedback
Answered by Gava, Ileana Yamina on 28/09/2007

Message:
One more suggestion:
I think it would be a good idea to rearrange the vocabulary lists so that the items appear in alphabetical order.
Yamina

RE:Blog Feedback
Answered by Gava, Ileana Yamina on 01/10/2007

Message:
Dear Students,
I'm attaching a file containing your classmates e-mail addresses. Tomorrow, you should send each of them an invitation to visit your group blog.
If your address is not on this list, or if it is incorrect, please let me know as soon as possible so I can send an updated list soon.

This morning some of you were a bit concerned about your work and you told me that you'd still like to go on posting material on your blog. We can make some adjustments to our schedule and you may go on posting for one more week.
However, by next week, you should all write a short conclusion about the topic/s developed on your blog so as to round up your work.
See you tomorrow,
Yamina

File Attachment: **Email_list_Lang_II_UNC_Oct2007.doc** *(74.0 kb.)*

RE:Blog Feedback /updated email list
Answered by Gava, Ileana Yamina on 05/10/2007

Message:
Dear Students,
In the attached file, you will find the new e-mail addresses highlighted in yellow.
Those of you who are not included on this list will have to e-mail your address to your classmates.
Please, remember to send invitations to everyone so that all students in our class can read and participate in your blog.
Please, also check your blogs once more to make sure that you include the sources of the content posted on each entry, as well as a question or thought to encourage your classmates to share

comments about the topics in your blog.
Any questions as regards your presentation on Tuesday, just post it on this forum and Ill get back to you.
Have a nice weekend!
Yamina

File Attachment: **Email_list_Lang_II_UNC_Oct20079.doc** *(74.0 kb.)*

Discussions Published by Students

Encarta!!
Published by Gloria on 01/09/2007
Message:
Hi girls!
I've been searching the Internet and I found an interactive page in Encarta which shows what happens when a tornado passes over land. I think that we could post it in our blog because it will be easier for our classmates to understand it. Here's the link:
http://encarta.msn.com/media_701878950/Tornado!.htmls
Bye!!

RE:Encarta!!
Answered by Gava, Ileana Yamina on 08/09/2007
Message:
Hi Gloria!
Can I post this link on the *web resources section*?
I'd like all students to consult the Encarta. Thanks!
Yamina

RE:Encarta!!
Answered by Gloria on 08/09/2007
Message:
Yes, of course... I think that Encarta is a wonderful source of information. :)

Hi girls!
Published by Porporato, Gloria on 22/08/2007
Message:
Hi!
I've found some articles in the BBC that are related to Hurricane Dean (that has hit Mexico for the second time this week). Maybe it could be interesting because it is something that has happened recently and has to do with our topic.
Please, if you think that is interesting read one of the articles:
http://news.bbc.co.uk/2/hi/americas/6955463.stm
Bye!!

RE:Hi girls!
Answered by Gava, Ileana Yamina on 08/09/2007
Message:
Gloria,
This research you've done is very useful and relevant. You are supposed to work with updated material as much as you can.
Great work :)
Yamina

how to post
Published by José on 26/09/2007
Message:
Hi girls!! how are you? Well, my question is how to post in the blog if I am not the administrator? I am now trying to set myself up to post something as many of you have already had, but I see myself unable to post anything. There is no entry where I can publish what I have found. Can anyone please give me an answer??? PLEASE GIRLS, JOSEPH NEEDS ASSISTANCE! LOL

RE: how to post
Answered by Silvia on 26/09/2007
Message:
It doesn't matter if you're not the administrator, that has nothing to do with posting. What you have to do is to go where it says "Nueva Entrada", that is near to "Salir", and please, please PLEASE! publish something from the articles that we have in the material, not something extra from the Internet.
Bye

RE: how to post
Answered by Silvia on 02/10/2007

Message:
José!!!! If you're going to post something on the blog, you MUST do it today, we're sending the invitations tomorrow, so make sure that you post something.
Bye

RE:how to post
Answered by José on 02/10/2007
Message:
hey hey! Here is Joseph at home LOL, RECENTLY POSTED A VOCAB FILE ON HURRICANE FLYD. HELL YEAH! just expect for the others later on today. I'll be working on and on until late at night . OK gotta go get my hair cut now and then work! ;) LOVE YALL KIDS!

RE:how to post
Answered by José on 02/10/2007
Message:
OH BTW, CALL ME Joseph !!! JAJAJAJA ;) (I'm crazy , I know lol)

Ideas...
Published by Gloria on 28/08/2007
Message:
I think that it could be great if we start our blog with a vocabulary section that includes collocations and other things... what do you think?
I will start organizing something if you think that it is nice...
Bye!

RE: Ideas...
Answered by Silvia on 28/08/2007
Message:
I think it's a great idea... Maybe we can make some exercise with that vocabulary...
It's be nice if we can find some videos related to the topic and upload them in the blog, maybe we can find one of those videos filmed by people that have been near a tornado or a tsunami, that'd be pretty cool...

RE:Ideas...
Answered by Ana on 29/08/2007
Message:
Hi girls!!!

Gloria, I think it is a good idea to crate a vocabulary section because there are a lot of new words and also lot of phrasal verbs!!.
I have been working on the article about the tsunami 'the day that shook the earth'. It's a bit long but it has lot of testimonies and useful verbs and new vocabulary. I've made a list with phrasal verbs and the vocabulary.

I've also been surfing the net and I've found a site which describes the natural disasters, the effects and also how can they be prevented. I've some of the articles in my computer, they are from the CBC NEWS ONLINE. There's a section about natural disasters:
http://www.cbc.ca/news/background/forcesofnature/
I want to know how are we going to deal with our blog entries
Well that's all!!! I hope we keep in contact!! see you!
Ana

RE:Ideas...
Answered by Gava, Ileana Yamina on 29/08/2007
Message:
Hello everyone!
Good work!
Your ideas are excellent.
The website Ana suggests is very useful.
Keep on reading and interacting!
Remember to go on recording your learning experiences and feelings about these online activities on your personal forum. (You'll enjoy reading it once you complete the course!)
Yamina

my e-mail address
Published by Alejandra on 02/10/2007
Message:
There is a mistake with my e-mail address, the correct one is lilianamerino88@hotmail.com please make sure you have the correct one so you can send me your invitation.
Ale

New Post
Published by Gloria on 19/09/2007
Message:
Hello everyone!
I am writing this message just to tell Marina that what she has posted is very nice. I would only add a question there so that it will encourage people to leave a comment (that is what Yamina told us).
Have a nice week!!

RE:New Post
Answered by Gava, Ileana Yamina on 21/09/2007
Message:
Yes, Gloria. This is what you should do.
Yamina

Post
Published by Silvia on 11/09/2007
Message:
Hi guys! Yesterday I posted something on our blog. Please read it carefully and let me know if there's something that needs to be changed.
Hope you like it :)
Bye

RE: Post
Answered by Gloria on 11/09/2007
Message:
Sil! I think that what you posted is very nice... I've just posted something about volcanoes, I'd like you all to do the same...
I hope you like it!
Bye!!

RE: Post
Answered by Silvia on 11/09/2007
Message:
Hey! I liked your post a lot! It's very good. And the video was great, I'm amazed :-O, lol.
I think we're doing a really good job, let's keep it like that ;)
Bye...

RE: Post
Answered by Gloria on 11/09/2007
Message:
We have just talked to Yamina. She told us that we should change the font in my post because there is a problem there. Besides, you should reduce your post, it would be good if you delete one paragraph and add a question.
Please, delete my entry so that I can add it again.
And, please, send an invitation to José so that he can work on the blog.
Yamina told us that we are doing well :)
Bye!

RE: Post
Answered by Silvia on 11/09/2007
Message:
Ok, I've already deleted your entry and I've sent an invitation to José, let me know if he received it and if you can post the entry again.
Bye.

RE:Post
Answered by Gava, Ileana Yamina on 13/09/2007
Message:
Dear Students,
This is indeed a very hardworking group! Congratulations!
Keep on developing your blog.
You can send me an invitation to visit your blog whenever you wish.
Yamina

PUBLISHED SOME MORE THIS MORNING
Published by José on 03/10/2007
Message:
hey girls! how are ya? well, just letting you know that I have posted some more about the articles. There are some problems of layout of the information, like gaps and blank spaces in the article about summary of natural disasters. Can you Silvia see to it and try to make some changes?
Well , hope you liked it, just let me know if you have any suggestions or anything. SO SO SORRY FOR THE DELAY AND EVERYTHING, but I am really doing as much as I can.
bye bye

RE:PUBLISHED SOME MORE THIS MORNING
Answered by Gloria on 04/10/2007

Message:
Nice Joseph! I think that what you did is great, I really like it!! :)

Appendix L

Production data from the students: Group A blog[22]

NaTuRaL dIsAsTeRs

WEDNESDAY, 3 OCTOBER 2007

LUCKY TO BE ALIVE

Some important expressions taken from the text:

- the giant hurricane Floyd hit New Providence
- When hurricane George was due to hit
- Hurricane Floyd was heading towards us
- to change course
- the island was in the direct path of the hurricane
- all of the ground/floor windows and balcony doors in the hotel were boarded up.
- to catch a glimpse of the hurricane
- to go out and see the devastation
- a tidal wave had destroyed many homes on the island
- to put sth off
- to set off
- huge chunks of ice break away from a glacier
- we scrambled up the rocky slopes to safety
- the consequences would have been tragic
- the tremor shook
- There was a power cut so it was pitch black
- it was absolutely terrifying
- the scale of the devastation gradually began to sink in
- there was the most incredible sense of camaraderie
- I witnessed so much courage and kindness
- tornadoes wrecked Oklahoma
- then suddenly last night one of them came down our street
- branches of trees and all sorts of of other debris were pulled up into the air.

[22] This is a copy of the blog as it was produced by the students; therefore, the entries appear in reverse chronological order. The students are identified by pseudonyms to protect their identity.

- telephone lines were knocked down by the hurricane~force winds and the heavy rain caused four feet of flood water

NOW, IT'S YOUR TURN!

We all would like to know about any similar experience that you have been into. Or if you haven't, just be creative and make up a story using these expressions and some others you may find. DO IT! IT CAN BE A FUN THING TO READ!

Published by José at 02:21 PM 2 comments

Belén said...

This comment is for all of you but especially for Andres: THANK YOU FOR YOUR HARD WORK!!! It`s really quite useful when studying to have this wonderful summary about the most important things we've to take into account.

9 October 2007 10:34

YG said...

Excellent vocabulary work!

20 October 2007 10:01

NATURAL DISASTERS: SUMMARY OF TEXTS

BLIZZARD: severe storm characterized by extreme cold, strong winds, and a heavy snowfall. These storms are most common to the western United States but sometimes occur in other parts of the country.

It can be defined by winds of 35mph or more and a visibility of 0.25mi or less, if they endure for three hours.

The great blizzard of March 11-14, 1888 was perhaps the most paralyzing of any storm on record.

CYCLONE: an area of low atmospheric pressure surrounded by a wind system blowing, in the northern hemisphere and in counterclockswise direction. A corresponding high-pressure area with clockwise winds is known as an anticyclone.

The term cyclone has often been more loosely applied to a storm and disturbance attending such pressure systems, particularly the violent tropical hurricane and the typhoon, which occurs in areas of unusually low pressure.

HURRICANE: migratory tropical cyclones that originate over oceans in certain regions near the equator, and particularly those arising in the West Indian region. Hurricane-type cyclones in the western Pacific are known as typhoons.

Hurricanes originate within the doldrums, a narrow equatorial belt characterized by the intermittent calms, light variable breezes, and frequent squalls, and lying between the northeast and southeast trade winds.

Hurricanes occur in the South and North Pacific Oceans.
Hurricanes consist of high-velocity winds blowing circularly around a low-pressure center, known as the eye of the storm. The atmospheric pressure drops sharply and the wind velocity rises.

The diameter of the area affected by winds of destructive force may exceed 240 km and gale winds prevail over a larger area.

The strength of a hurricane is rated from 1 to 5.

In the northern hemisphere the storms usually travel first in a north westerly direction.

In the southern hemisphere the usual path of the hurricane is initially to the southwest.

There are areas which are pronest to the maximum destructive violence of the hurricane.

A coordinated system of tracking hurricanes was developed in the mid 1950s, and periodic improvements have been made over the years. Some devices are: radar, sea based recording devices, geosynchronous weather satellites, etc.

Improved systems of prediction and communication have been able to help minimize loss of life in hurricanes, but property damage is still heavy, especially in coastal regions.

TORNADO: violent whirling wind, characteristically accompanied by a funnel-shaped cloud extending down from a cumulonimbus cloud.

Commonly known as a twister or cyclone.

It has an average width of a few hundred metres. It can move over land for distances ranging from short hops to many kilometres, causing great damage wherever it descends.

Waterspouts are weaker sea-going tornadoes that occur most frequently in tropic waters.

Most tornadoes spin counterclockwise in the northern hemisphere and clockwise

in the southern, but occasional tornadoes reverse this behaviour.

The funnels are always associated with violent motions in the atmosphere.

Tornadoes are most common and strongest in temperate latitudes.

Published by José at 11:02 AM 2 comments

María said...

Very interesting entry guys! and great pics ;) Very precise and useful information... Great blog!

I've never heard about Waterspouts, sea-going tornadoes that occur most frequently in tropic waters... they must be similar to Tsunamis I guess...

Thanks for sharing ;)

9 October 2007 01:00

Cecilia said...

I think this summery, as well as the former, will be very usefull for us.. thank you very much for including this... Very good work!!

9 October 2007 10:48

TUESDAY, 2 OCTOBER 2007

IT'S VOCABULARY TIME ON NATURAL DISASTERS!: TEXT SKIMMING

FLOYD WHIPS FLORIDA INTO A PANIC

[whip]:to move or to make sth move , quickly and suddenly or violently in a particular direction.
e.g: The waves were being whipped by 50-mile-an-hour winds.
In this sense, the verb is used figuratively.

- Hurricane Floyd, one of *the most ferocious hurricanes* ever **to loom over** the United States,**took a sideswipe** at Florida sending 2m people **fleeing inland** as it **barrelled north** towards Georgia and South Carolina.

FACTS

Heavy Bands of Rain **swept over** eastern Florida's deserted beaches in the afternoon.

Roads heading west and north **were jammed with** coastal residents and holidaymakers belatedly *obeying evacuation orders*.

Hurricane Floyd **vented its fury** on the Bahamas **toppling** trees and power lines and **stripping** roofs **off** homes

In Nassau, authorities **lost telephone links** with points throughout the lowlying archipelago where *winds reached 110 mph* and *damage was feared to be extensive*.

In a *driving rain [violent, intense, or forceful]* on New Providence rescuers were trying to reach residents whose homes lost their roofs.

The island of Eleuthera **took the full force of the hurricane.**

Floyd could prove even more disastrous than hurricane Andrew. Floyd was described as more powerful and bigger than Andrew.

As it **thundered** over the Bahamas, it **whipped up** 20 ft seas, **snapping** trees and **bringing down** phone lines.

There were fears that the American space programme could become *one of Floyd's casualties*. NASA said the buildings were designed **to withstand** hurricanes to a certain point.

Floyd was producing winds on its inner ring of about 145mph and its *computer-predicted path* showed the eye passing within 50 miles of Cape Kennedy.

NASA's 12500 workers **had evacuated** the space centre on Monday.

The Atlantic was beginning **to churn** with waves of four to five feet and a dark grey mass filling the eastern horizon promising more to come.

Towers were only built only to withstand *winds of up to 120mph*.

The eye of the storm was expected to move northwards before **hitting** land late tonight in Georgia or North Carolina. However, meteorologists said a small deviation could bring Floyd's *landfall* early, across central Florida.

Some districts are *more vulnerable* to the storm.

The Florida governor ***declared*** *a state of emergency*, and **announced** that *crisis shelters* had been opened all along the coast.

Hurricanes can:

- **rip doors, windows and roofs off buildings.**
- **overturn and destroy buildings.**

And according to the category:
Category 1. Minimal, 74-95 mph (119-153 km/hr): Some damage is expected, with most of it limited to shrubbery, unanchored houses and items. Some minor flooding will cause pier damage.
Category 2. Moderate, 96-110 mph (154-177 km/hr): Considerable damage can be expected to shrubbery and some trees may be blown down; there will be damage to mobile homes, signs, roofs, windows and doors. Small craft may be torn from moorings and marinas will probably flood. Some low-lying areas and shoreline residences should be evacuated.
Category 3. Extensive, 111-130 mph (178-209 km/hr): Large trees and most signs may be blown down; there may be structural damage to small buildings; mobile homes will be destroyed. Serious flooding will occur at the coast, with severe damage to shoreline structures and flooding up to eight miles (13 km) inland at elevations of five feet (1.5 m) or less.
Category 4. Extreme, 131-155 mph (210-250 km/hr): Expect trees, signs and traffic lights to be blown down, and extensive damage done to roofs, windows and doors. Mobile homes will be completely destroyed. Beaches will be eroded and there will be flooding as far as 6 miles (9.5 km) inland for anything under 10 feet (3 m) above sea level. Anyone staying within 500 yards (457 m) of shore will be evacuated, as will all single-story residences within 2 miles (4 km) of shore.
Category 5. Catastrophic, 156+ mph (251+ km/hr): Trees, signs, traffic lights will be blown down. There will be extensive damage to buildings and major damage to lower floors of structures less than 15 feet (4.5 m) above sea level within 500 yards (457 m) of shore. Massive evacuation of residential areas 5-10 miles (8-16 km) from shore will be required.
Taken from: http://www.answers.com/topic/hurricane

COLLOCATIONS FOR HURRICANE:

The fiercest/most catastrophic/ disastrous/devastating/dreadful/terrible/tragic/ferocious/violent/ tempestuous/deadly/destructive **hurricane**.

GLOSSARY OF VERBS:

- **to loom**: to threaten.
- **to take a sideswipe**: to hit.
- **to flee**: to run away from sth.
- **to barrel**: to move in a high speed.
- **to sweep**: to move swiftly with strong, steady force: The wind swept over the plain.
- **to be jammed with**: A crush or congestion of people or things in a limited space.
- **to vent**: To release or discharge with force.
- **to topple**: to cause to totter and fall.
- **strip off**: to remove sth of sth.
- **to take the full force**: to be hit most intensively.
- **to thunder**:(figurative)To express violently, commandingly, or angrily; roar
- **to whip sth up**: if the wind whips up dust, waves, etc. it makes it/them rise quickly.
- **to snap**:To pull apart or break with a snapping sound
- **to bring down**: to make sth fall down.
- **to withstand**: To be successful in resisting.
- **to evacuate**:To withdraw or send away (troops or inhabitants) from a threatened area
- **to churn**:To shake or agitate vigorously
- **to hit** (land): to reach.

Published by José at 08:03 AM 2 comments

Sofía said...

Great Glossary and interesting Collocations!!! These will be very useful when studying!! I think you all did an excellent hard work! Great Blog!

9 October 2007 22:09

Belén said...

Hi people!! I just wanted to tell you that the comment I wrote before should be here :) Sorry!!!

9 October 2007 22:29

SATURDAY, 29 SEPTEMBER 2007

Tropical Cyclone Larry

Cyclone Larry was a tropical cyclone that made landfall in Australia during the 2005-06 Southern Hemisphere tropical cyclone season. Larry originated as a low pressure system over the eastern Coral Sea on March 16 and was monitored by the Australian Bureau of Meteorology in Brisbane, Australia. The low-pressure area formed into a tropical cyclone two days later and quickly strengthened into a Category 5 storm on the Austrian tropical cyclone scale. Larry made landfall in Far North Queensland close to Innisfail on Marcg 20 as a Category 4 with wind gusts reaching 240km/h(150mph) and dissipated over land soon after. Cyclone Larry is considered to be the worst cyclone to hit the coast of Queensland since 1931.

Predictions could not list the level of destruction, devastation and despair that Larry brought in its wake, the most powerful cyclone in almost a century. Roofs torn off houses, wrapped around teetering power poles with their jangled powerless lines draped across streets, fields flattened crops destroyed, tourist destinations thrashed, wildlife nesting sites destroyed, institutions mangled, rows of construction were destroyed in a few minutes at 300km/h. Cairns airport and harbour were closed, and all flights were suspended. Innisfail suffered severe damage , being the town where Larry made landfall. The banana´s region industry , which employs up to 6000 people, has also suffered extreme losses crops. These losses account for more than 80% of the total banana crop for Australia. The Atherton Tablelands also received a great deal of damage from Cyclone Larry, with damage to buildings and major disruptions to power, water and telephone services.

The remains of Tropical Cyclone Larry moved over north-western Queensland on 22-23 March, dumping heavy rain across the region. Gereta Station, north of Mount Isa, recorded 583mm of rain in the 48 hours. As a result of the rains, heavy flooding was reported along the Leichhardt River downstream, resulting in the flooding of some cattle properties. This caused several townships to be isolated for several days. A group of around 150 tradesmen from aroun Australia arrived in Innisfail around 26 March. These people worked to reopen the schools and other public buildings and reinstate and make habitable

private dwelling.

Taken from: http://en.wikipedia.org/wiki/Tropical-Cyclone-Larry

This is an interesting video about cyclones, take a look at it:
http://www.youtube.com/watch?v=7eV8uE4-Gk4&feature=player_embedded&noredirect=1#!

Published by Ana at 05:55 0 comments
Etiquetas: Cyclones

FRIDAY, 28 SEPTEMBER 2007

Cyclones

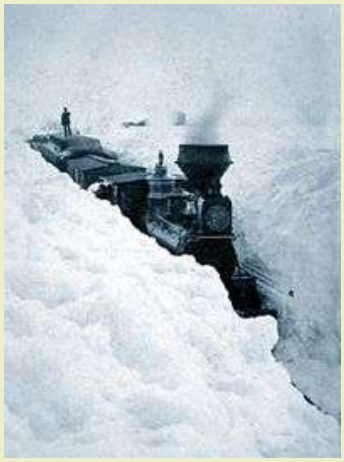
Cyclone, in strict meteorological terminology, is an area of low atmospheric pressure surrounded by a wind system blowing that rotate counter clockwise in the northern hemisphere and clockwise in the southern hemisphere of the Earth. There are six main types of cyclones: Polar cyclone, Polar low, Extratropical, subtropical, tropical and Mesoscale.
A tropical cyclone is a storm system fueled by the heat released when moist air rises and the water vapor in it condenses. The term describes the storm's origin in the tropics and its cyclonic nature, which means that its circulation is counterclockwise in the northern hemisphere and clockwise in the southern hemisphere. Depending on their location and strength, there are various terms by which tropical cyclones are known, such as hurricane, typhoon, tropical storm, cyclonic storm and tropical depression.
Tropical cyclones can produce extremely strong winds, tornadoes, torrential rain, high waves, and storm surges. The heavy rains and storm surges can produce extensive flooding. Although their effects on human populations can be devastating, tropical cyclones also can have beneficial effects by relieving drought conditions.
Cyclone categories:

Category one
Wind speeds: 74 to 95 miles an hour (119 to 153 kilometers an hour)
Typical effects: Minimal. No significant damage to buildings. Damage will be mainly to mobile homes, trees, and shrubbery.
Category two
Wind speeds: 96 to 110 miles an hour (154 to 177 kilometers an hour)
Typical effects: Moderate. Damages to some roofs, doors and windows. Considerable damage to trees, shrubbery and mobile homes. Some flooding damages to piers and small craft. Some small craft may break their moorings. Risk of power failure.
Category three
Wind speeds: 111 to 130 miles an hour (179 to 209 kilometers an hour)
Typical effects: Extensive. Some damage to samall residences and utility buildings. Mobile homes destroyed. Coastal flooding destroys smaller structures, and larger structures damaged by floating debris. Flooding may occur far inland.
Category four
Wind speeds: 131 to 155 miles an hour (211 to 249 kilometers an hour)
Typical effects: Extreme. Heavy damage to many residences, with roofs completely destroyed on small residences. Major erosion of beaches. Flooding may occur far inland. Many caravans destroyed and blown away. Dangerous airbone debris. Widespread power failures.
Category five
Wind speeds: Exceeding 155 miles an hour (249 kilometers an hour)
Typical effects: Catastrophic. Roofs completely destroyed on many residences and larger buildings. Some buildings completely destroyed. Major flood damage to lower floors of buildings near the shore. Massive evacuation may be required.

Published by Ana at 05:58 PM 0 comments
Etiquetas: Cyclones

TUESDAY, 25 SEPTEMBER 2007

What are blizzards?



Blizzards are severe winter storms characterized by extreme cold, strong winds, and a heavy snowfall. According to the U.S National Weather service, winds of 35mph (56.3km/h) or more and visibility of 0.25mi (0.40km) or less are conditions that, if they endure for three hours, define a blizzard. There must also be sufficient falling or blowing snow in the air that will frequently reduce visibility to 1/4 mile or less for a duration of at least 3 hours. Sometimes strong winds pick up snow that has already fallen, creating a blizzard.

An extreme form of blizzard is a whiteout, when downdrafts coupled with snowfall become so severe that it is impossible to distinguish the ground from the air. People caught in a whiteout can quickly become disoriented, losing their sense of direction.

Blizzards can create a variety of dangerous conditions. Travelling by automobile can become difficult or even impossible due to whiteout conditions and drifting snow. Blizzards can also cause power outages due to strong winds and heavy snow. Pipes can freeze and regular fuel sources may be cut off. Another dangerous condition is the exposure to low wind chill values which can result in frostbite or hypothermia. The loss of feeling , pale appearance in fingers, toes, or nose and ear lobes are symptoms of frostbite, while uncontrolled shiver, slow speech, memory lapses, drowsiness and exhaustion are symptoms of hypothermia.

If you want to learn more about blizzards visit:

http://en.wikipedia.org/wiki/Blizzards

Published by Ana at 08:41 PM 0 comments

Etiquetas: Blizzards

Tsunamis: a frightening reality...

A **tsunami** is a series of very long ocean waves created when a large body of water is displaced. Tsunami, pronounced soo-NAH-mee, comes from a Japanese word that means "harbour wave." Tsunamis can be generated by any disturbance that displaces a large amount of water, including earthquakes, volcanic eruptions, meteorites or landslides into the water or below its surface.
In the deep ocean, tsunamis might have wavelengths as long as several hundred kilometres and reach speeds of up to 720 kilometres per hour. Yet the waves may be less than a metre tall, letting them pass unnoticed beneath ships at sea.
When these waves enter the shallower water approaching shore, their speeds drop and their heights increase dramatically. They tend to get bigger if they roll over gentling sloping shores and underwater ridges, towering as high as 30 metres.

When tsunamis slam into shore, they can flood up to two kilometres inland, sweeping people out to sea, flattening buildings and toppling trees.
One of the best ways to predict tsunamis is to monitor earthquakes, which set off most of the waves. Seismograph networks, wave gauges (such as those operated by international Tsunami Warning System) and satellite measurements of sea level changes can help warn of tsunamis.

Video: http://www.youtube.com/watch?v=w9ygYqj4rVM&feature=player_embedded

What was your reaction when you saw this devastating phenomenon?

Leave your comment!

Published by Gloria at 09:34 AM 3 comments

Alejandra said...

> This is a very scary phenomenon! This poor people must feel helpless, all they can do is see the water advance more and more...
>
> 9 October 2007 09:56

Sofía said...

I have just seen the video and I think that the power of nature is really impressive...the consequences after one of these destructive forces of nature are so devastating that I cannot imagine being close to one of them!! Finally, I consider this video very important to be informed and realise about the tsunami effects on people...

9 October 2007 10:37

YG said...

Very good choice of video! A most frightening event.
Your description of the nature and effects of tsunamis is clearly developed and it's very complete and well summarised. Good job!

Etiquetas: Tsunamis

The Forces of Nature: Tornadoes

A tornado is defined as a violently whirling wind, a rotating column of air which is in contact with both a cumulonimbus cloud base and the surface of the earth. They are typically in the form of a visible condensation funnel, whose narrow end touches the ground. A tornado can be a few meters to about a kilometer wide where it touches the ground, with an average width of a few hundred meters. Although tornadoes occur in many parts of the world, they are usually found in the United States east of the Rocky Mountains during the spring and summer months.

Initially, the tornado has a good source of warm, moist inflow to power it, so it grows until it reaches the mature stage. During this process, a tornado often causes the most damage. Meanwhile, the inflow of warm air which feeds the tornado is cut off. The formation of funnels is always associated with violent motions in the atmosphere. They develop within low-pressure areas of high winds; the speed of the funnel winds themselves is often placed at more than 480 km/h.

Though tornadoes can strike in an instant, there are precautions and preventative measures that people can take to increase the chances of surviving a tornado. When a tornado warning is issued, going to a basement or an interior first-floor room of a sturdy building greatly increases chances of survival. These underground refuges have saved thousands of lives. Unless the tornado is far

away and highly visible, meteorologists advise that drivers park their vehicles far to the side of the road (so as not to block emergency traffic), and find a sturdy shelter.

Take a look at this video and tell me, would you like to be one of those people that chase tornadoes?
http://www.youtube.com/watch?v=xCI1u05KD_s&feature=player_embedded

Would you like to see some pics, I strongly recommend you to visit this website:
http://www.chaseday.com/

Published by Silvia at 09:31 AM 1 comments

María said...

I think this is a clear explanation of how tornadoes are developed and the video it´s quite shocking.
I personally wouldn't like to witness such an experience!

Etiquetas: Tornadoes

TUESDAY, 11 SEPTEMBER 2007

What´s a volcano?

A volcano is a geological formation, usually a conical mountain, that forms when molten rock, called magma, flows up from the interior of the Earth to the surface. Magma finds its way upwards along fissures or cracks in the planet's crust and bursts out onto the surface, resulting in a volcano.
A volcano erupts in one of two ways: either the magma is forced up to the surface or the rising magma heats water trapped within the surface, causing an explosion of steam. In either case, the eruption can eject rocks, volcanic ash, cinders and hot gases into the air. The rapidly cooling lava can form volcanic glass. Many volcanoes produce a cloud of gas in the stratosphere containing heavy concentrations of sulphur dioxide.

Until relatively recently, when an orbiting satellite was used in a test to monitor hot spots on the planet's surface, scientists did not have a reliably accurate method to predict volcanoes.

The new monitoring system processes data from two geo-stationary environmental satellites, enabling scientists to monitor volcano-prone areas up to four times per hour.

If you want to know more, please visit:
http://www.cbc.ca/news/background/forcesofnature/
How do you feel after seeing the eruption of the volcano Etna?

Leave your comment here!

Published by Gloria at 06:46 PM 2 comments

Luciana said...

> This is an interesting video. It`s very impressive. It`s the first time I watch a video about this topic and I liked it very much. By watching this clip I could realize how impressive a volcano eruption is and its huge magnitude!!
>
> 9 October 2007 10:37

Carolina said...

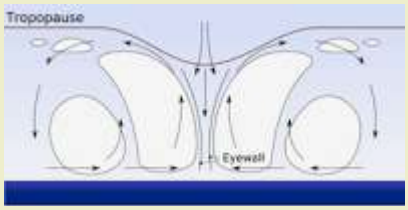
> That was very impressive!!!I think that seeing a volcano eruption "personally" must be kind of terrifying, but it may be an unforgettable experience as well
>
> 9 October 2007 10:37

Etiquetas: Volcano

MONDAY, 10 SEPTEMBER 2007

What you need to know: Hurricanes

Hurricanes are migratory tropical cyclones. A hurricane has its origins in the North Atlantic Ocean, the Northeast Pacific Ocean, the South Pacific Ocean and in certain regions near the equator, including the Caribbean Sea and the Gulf of Mexico. Hurricanes need warm tropical oceans, moisture and light winds above them to be formed. Most hurricanes originate within the doldrums, a narrow equatorial belt characterized by intermittent calms, light variable breezes, and frequent squalls, and lying between the northeast and southeast trade winds.



Hurricanes consist of high-velocity winds blowing circularly around a low-pressure center, known as the eye of the storm and generally move in a path resembling the curve of a parabola. All tropical hurricanes are areas of low atmospheric pressure near the Earth's surface. Tropical cyclones are characterized and driven by the release of large amounts of latent heat of condensation, which occurs when moist air is carried upwards and its water vapor condenses. This heat is distributed vertically around the center of the storm. From the edge of the storm toward its center, the atmospheric pressure drops sharply and the wind velocity rises. The winds attain maximum force close to the point of lowest pressure. The strength of a hurricane is rated from 1 to 5. The mildest (Category 1) has winds of at least 120 km/h (a tropical storm becomes a hurricane when winds reach 74 mph), while the strongest (Category 5) has winds that exceed 250 km/h.

Tropical hurricanes develop over large bodies of warm water. Tropical cyclones out at sea cause large waves, heavy rain, and high winds, disrupting international shipping and, at times, causing shipwrecks. The storm surge (heavy waves), or the increase in sea level due to the cyclone, is typically the worst effect from

land falling tropical cyclones. The broad rotation of a land falling tropical cyclone, and vertical wind shear at its periphery, spawns tornadoes. When they move over land, they lose their strength, but the can still damage buildings, trees vehicles, and other outside objects, turning loose debris into deadly flying projectiles. This is the reason coastal regions can receive significant damage from a tropical cyclone, while inland regions are relatively safe from receiving strong winds.

Have you ever been near a hurricane? Would you like to be near one? Let me know what you think :)

Published by Silvia at 06:38 PM 5 comments

Alejandra said...

I have never been near a hurricane and I don´t think I want to! It causes so much destruction so I don´t think you could be save near one.

9 October 2007 10:03

Carolina said...

Thanks God I`ve never been near a hurricane, but I think It must be a terrifying experience that might have ever lasting effects on you...
By the way, the blog is great!!!! You really did great work!!

9 October 2007 10:34

Luciana said...

Fortunately, I`ve never been near a hurricane and I`d never like to be near one, because I think that it could be dangerous!!! I hope I never experience their terrible consequences.

9 October 2007 10:46

Soledad said...

haha! Definitely I would not like to be near a hurricane! My best friend, though, was in Cuba in 2005 when in a hurricane season (sept-oct). Luckily, Cuban people were very organised and a week before it stroke Havana, they evacuated the city and no one died :)

9 October 2007 10:50

YG said...

> I've never been in a hurricane. After reading your detailed account of its nature and devastating effects, I certainly wouldn't like to be a victim of this catastrophe. However, this makes me think of those who cannot (or could not) avoid this experience and I realize we should all become more sensitive to these people's needs.
>
> 20 October 2007 10:19

Etiquetas: Hurricanes

(Note: The following items appear on the right-hand side of the webpage.)

- - Blizzards - - Synonyms

- blast
- gale
- precipitation
- snowfall
- tempest

- - Cyclones - - Synonyms

- hurricane
- tempest
- tropical cyclone
- typhoon
- violent rain storm

- - Hurricanes - - Synonyms

- blow
- cyclone
- gale
- line storm
- monsoon
- storm
- tempest
- tornado
- tropical cyclone

- tropical storm
- twister
- typhoon
- whirlwind

- - Tornadoes - - Synonyms

- cyclone
- hasty
- headlong
- hurricane
- swift
- twister
- whirlwind

- - Tsunamis - - Synonyms

- giant sea swell
- giant wave
- seismic sea wave
- surface wave
- tidal bore
- tidal wave

Blog Archive

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Useful links

- Cambridge Dictionary
- CBC News: Forces of Nature
- Longman Dictionary of Contemporary English
- MSN Encarta
- National Geographic: Videos
- The BBC News
- Wikipedia